

LABORATORY REPORT

May 25, 2010

Data Coordinator
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

RE: 17131

Dear Data Coordinator:

Enclosed are the results of the samples submitted to our laboratory on May 22, 2010. For your reference, these analyses have been assigned our service request number P1001793.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 610 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA; Washington State Department of Ecology, ELAP Lab ID: C946. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.



Kate Aguilera
Project Manager

Client: Environmental Health & Engineering, Inc.
Project: 17131

CAS Project No: P1001793

CASE NARRATIVE

The samples were received intact under chain of custody on May 22, 2010 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Aldehyde Analysis

The samples were analyzed for aldehydes according to EPA Method TO-11A using high performance liquid chromatography (HPLC).

The upper control criterion was exceeded for isovaleraldehyde and valeraldehyde in one of the Continuing Calibration Verification (CCV) analyzed on May 25, 2010. All associated samples were either re-analyzed, reported from dilutions bracketed by in control continuing calibration verifications or were not detected for the analytes in question.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Client: Environmental Health & Engineering, Inc.
Project: 17131

Service Request: P1001793

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
P1001793-001	110523	5/21/10	00:00
P1001793-002	110524	5/21/10	00:00
P1001793-003	110525	5/21/10	00:00
P1001793-004	110526	5/21/10	00:00
P1001793-005	110527	5/21/10	00:00
P1001793-006	110340	5/21/10	00:00
P1001793-007	110341	5/21/10	00:00
P1001793-008	110342	5/21/10	00:00
P1001793-009	110343	5/21/10	00:00
P1001793-010	110344	5/21/10	00:00
P1001793-011	110391	5/21/10	00:00
P1001793-012	110397	5/21/10	00:00
P1001793-013	110398	5/21/10	00:00
P1001793-014	110399	5/21/10	00:00
P1001793-015	110400	5/21/10	00:00
P1001793-016	110294	5/21/10	00:00
P1001793-017	110301	5/21/10	00:00
P1001793-018	110302	5/21/10	00:00
P1001793-019	110303	5/21/10	00:00
P1001793-020	110304	5/21/10	00:00
P1001793-021	110453	5/21/10	00:00
P1001793-022	110454	5/21/10	00:00
P1001793-023	110455	5/21/10	00:00
P1001793-024	110456	5/21/10	00:00
P1001793-025	110457	5/21/10	00:00
P1001793-026	110496	5/21/10	00:00
P1001793-027	110497	5/21/10	00:00
P1001793-028	110498	5/21/10	00:00
P1001793-029	110499	5/21/10	00:00
P1001793-030	110511	5/21/10	00:00

CHAIN OF CUSTODY FORM

DATE: 5/21/10

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

91001793

TO: CAS

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17131

The cost of this analysis will be covered by EH&E Purchase Order # 17131

For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
① 110523	AIR/PASSIVE	ALDEHYDE ANALYSIS	12 DAYS 4 HRS 5 MIN
② 110524	↓	↓	↓
③ 110525	↓	↓	↓
④ 110526	↓	↓	↓
⑤ 110527	↓	↓	0
⑥ 110340	↓	↓	14 DAYS 20 HR 45 MIN
⑦ 110341	↓	↓	↓
⑧ 110342	↓	↓	↓
⑨ 110343	↓	↓	↓
⑩ 110344	↓	↓	0
⑪ 110391	↓	↓	12 DAYS 17 HR 45 MIN
⑫ 110397	↓	↓	0
⑬ 110398	↓	↓	12 DAYS 17 HR 35 MIN
⑭ 110399	↓	↓	↓
⑮ 110400	↓	↓	↓

Special instructions:

- ☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____
☐ Fax results 781-247-4305 ☒ Electronic transfer - datacoordinator@eheinc.com
☐ RETURN SAMPLES ☒ Additional report recipient BBAKER@EHEINC.COM 40C

Each signatory please return one copy of this form to the above address

Relinquished by: [Signature] of Environmental Health & Engineering, Inc. Date: 5/21/10
Received by: [Signature] of (company name) CAS Date: 5/21/10
Relinquished by: _____ of (company name) _____ Date: _____
Received by: _____ of (company name) _____ Date: _____
Relinquished by: _____ of (company name) _____ Date: _____
Received by: _____ of (company name) _____ Date: _____
Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 1 of 2

CHAIN OF CUSTODY FORM

DATE: 5/21/10

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

P1001793

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In all correspondence regarding this matter, please refer to EH&E Project # 17131

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For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
16 110294	AIR/PASSIVE	ALDEHYDE ANALYSIS	14 DAYS 21 HRS 30 MIN
17 110301			
18 110302			
19 110303			
20 110304			0
21 110453			14 DAYS 5 HRS 18 MIN
22 110454			
23 110455			
24 110456			
25 110457			0
26 110496			14 DAYS 2 HRS 39 MIN
27 110497			
28 110498			
29 110499			
30 110511			0

Special instructions:

- ☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____
☐ Fax results 781-247-4305 ☒ Electronic transfer - datacoordinator@eheinc.com
☐ RETURN SAMPLES ☒ Additional report recipient DBAKER@EHEINC.COM

Each signatory please return one copy of this form to the above address

Relinquished by: [Signature] of Environmental Health & Engineering, Inc. Date: 5/21/10
Received by: [Signature] of (company name) CAS Date: 5/21/10 1000
Relinquished by: _____ of (company name) _____ Date: _____
Received by: _____ of (company name) _____ Date: _____
Relinquished by: _____ of (company name) _____ Date: _____
Received by: _____ of (company name) _____ Date: _____
Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 2 of 2

Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Environmental Health & Engineering, Inc.

Work order: P1001793

Project: 17131

Sample(s) received on: 05/22/10

Date opened: 05/22/10

by: MZAMORA

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were sample containers properly marked with client sample ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Container(s) supplied by CAS ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Did sample containers arrive in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Was a chain-of-custody provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Was the chain-of-custody properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Did sample container labels and/or tags agree with custody papers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Was sample volume received adequate for analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Are samples within specified holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Was proper temperature (thermal preservation) of cooler at receipt adhered to?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Cooler Temperature _____ °C Blank Temperature <u>4</u> °C			
10	Was a trip blank received?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Trip blank supplied by CAS: _____			
11	Were custody seals on outside of cooler/Box?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Location of seal(s)? _____ Sealing Lid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were signature and date included?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were custody seals on outside of sample container?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Location of seal(s)? _____ Sealing Lid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were signature and date included?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Do containers have appropriate preservation , according to method/SOP or Client specified information?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is there a client indication that the submitted samples are pH preserved?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were VOA vials checked for presence/absence of air bubbles?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	Tubes: Are the tubes capped and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Do they contain moisture?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14	Badges: Are the badges properly capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Are dual bed badges separated and individually capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1001793-001.01	Passive (Radiello DNPH)					
P1001793-002.01	Passive (Radiello DNPH)					
P1001793-003.01	Passive (Radiello DNPH)					
P1001793-004.01	Passive (Radiello DNPH)					
P1001793-005.01	Passive (Radiello DNPH)					

Explain any discrepancies: (include lab sample ID numbers): _____

*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12);
Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12) RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH.5-8); Sulfur (pH>4)

Sample Acceptance Check Form

Work order: P1001793

Sample(s) received on: 05/22/10

Date opened: 05/22/10

by: MZAMORA

[illegible]

Explain any discrepancies: (include lab sample ID numbers):

*Required pH: Phenols/COD/NH₃/TOC/TOX/NO₃+NO₂/TKN/T.PHOS, H₂SO₄ (pH<2); Metals, HNO₃ (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12);

Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12)

RSK - MEEPP, HCL (pH<2); RSK - CO₂, (pH 5-8); Sulfur (pH>4)

RESULTS OF ANALYSIS

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated

Client Sample ID: 110523

Client Project ID: 17131

CAS Project ID: P1001793

CAS Sample ID: P1001793-001

Test Code: EPA TO-11A

Instrument ID: HP1050/UV_Vis 360/LC2

Analyst: Madeleine Dangazyan

Sampling Media: Radiello Tube

Test Notes: BC

Date Collected: 5/21/10

Date Received: 5/22/10

Date Analyzed: 5/25/10

Desorption Volume: 2.0 ml

Sampling Time: 17525 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	110	66	0.12	53	0.094	
75-07-0	Acetaldehyde	13	8.6	0.14	4.8	0.075	
123-38-6	Propionaldehyde	2.8	4.1	0.29	1.7	0.12	
123-72-8	Butyraldehyde	2.5	13	1.0	4.3	0.35	
100-52-7	Benzaldehyde	7.3	4.5	0.12	1.0	0.029	M
590-86-3	Isovaleraldehyde	1.2	1.1	0.19	0.32	0.053	
110-62-3	Valeraldehyde	5.2	11	0.42	3.1	0.12	
66-25-1	n-Hexaldehyde	28	89	0.63	22	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

M = Matrix interference; results may be biased high.

NA = Not applicable.

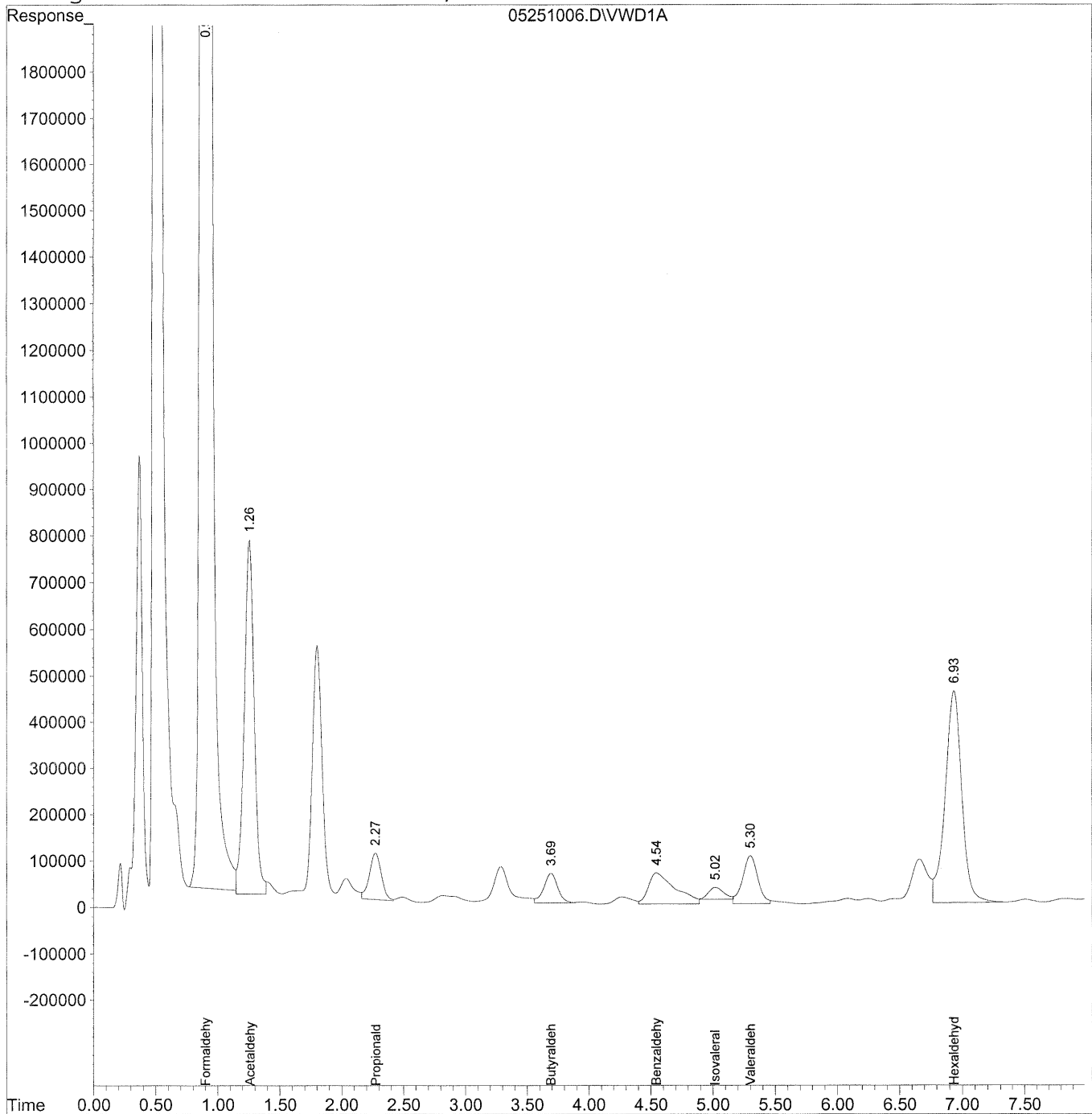
Verified By: Ro Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 4 10:17 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 4 10:17 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

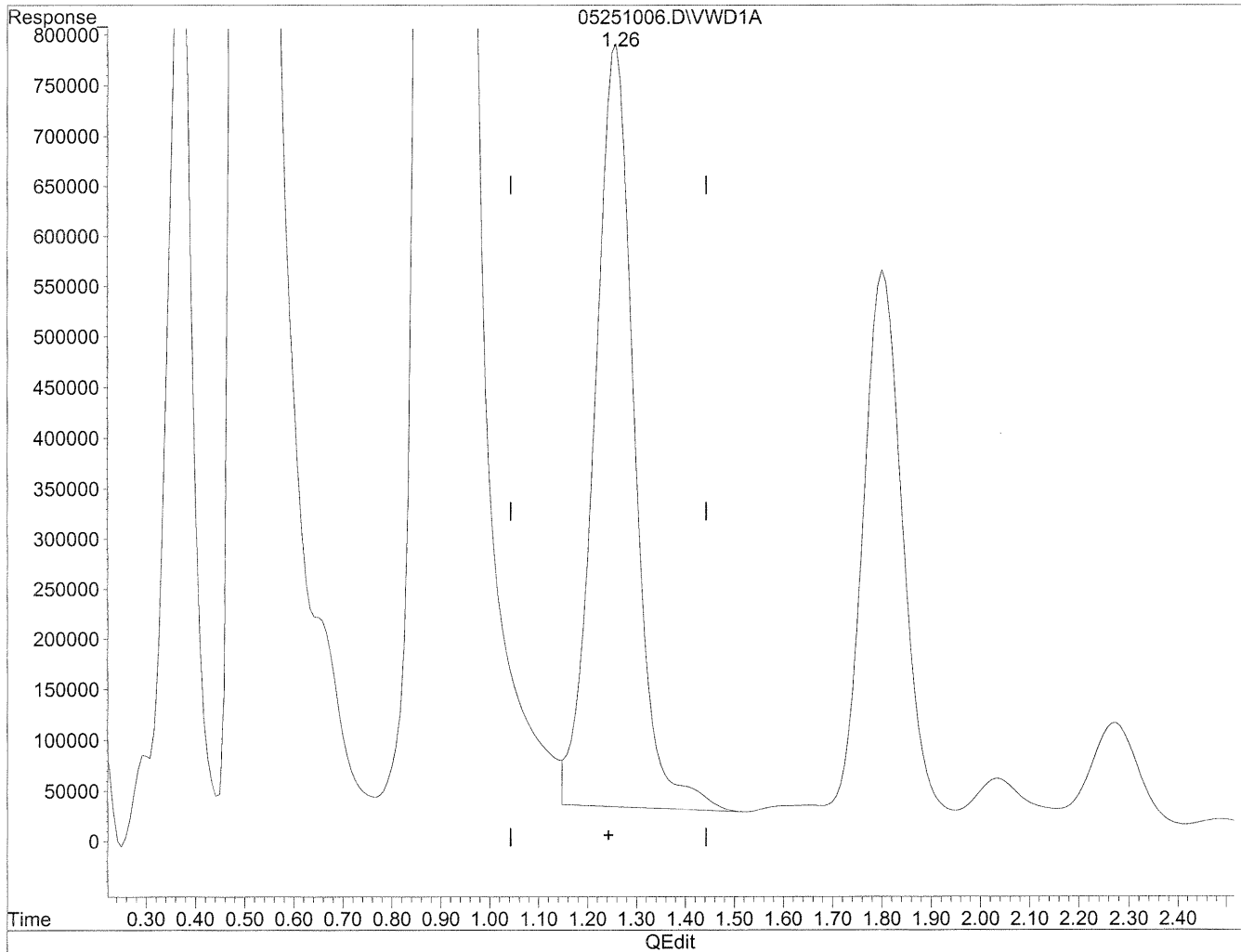
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.90	528279768	56604.186 ng/ml <i>see oil</i>
2)	Acetaldehyde	1.26	42669261	6335.237 ng/mlm
3)	Propionaldehyde	2.27	6767125	1391.833 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.69	4954715	1229.670 ng/mlm
6)	Benzaldehyde	4.55	9913103	3662.400 ng/ml
7)	Isovaleraldehyde	5.02	2162735	609.615 ng/mlm
8)	Valeraldehyde	5.30	8792238	2620.938 ng/mlm
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11)	Hexaldehyde	6.94	41302596	14364.256 ng/ml <i>see oil</i>
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
 Acq On : 25-May-2010, 12:21 Operator: MD
 Sample : P1001793-001 2ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 10:22 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Tue Oct 13 11:33:26 2009
 Response via : Multiple Level Calibration



(2) Acetaldehyde

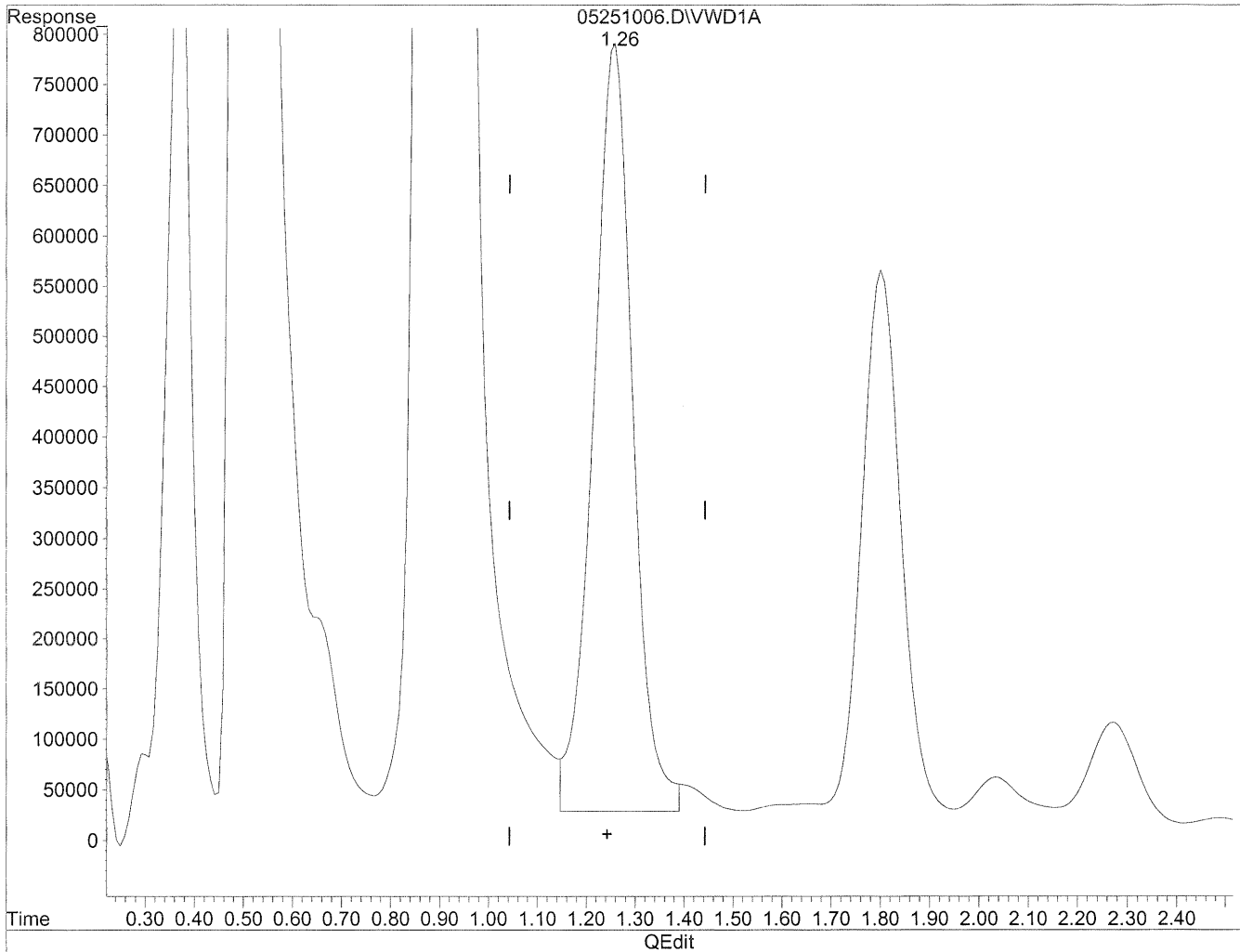
1.26min 6358.008ng/ml

response 42822632

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:22 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Oct 13 11:33:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.26min 6335.237ng/ml m

response 42669261

HL
6/4/10

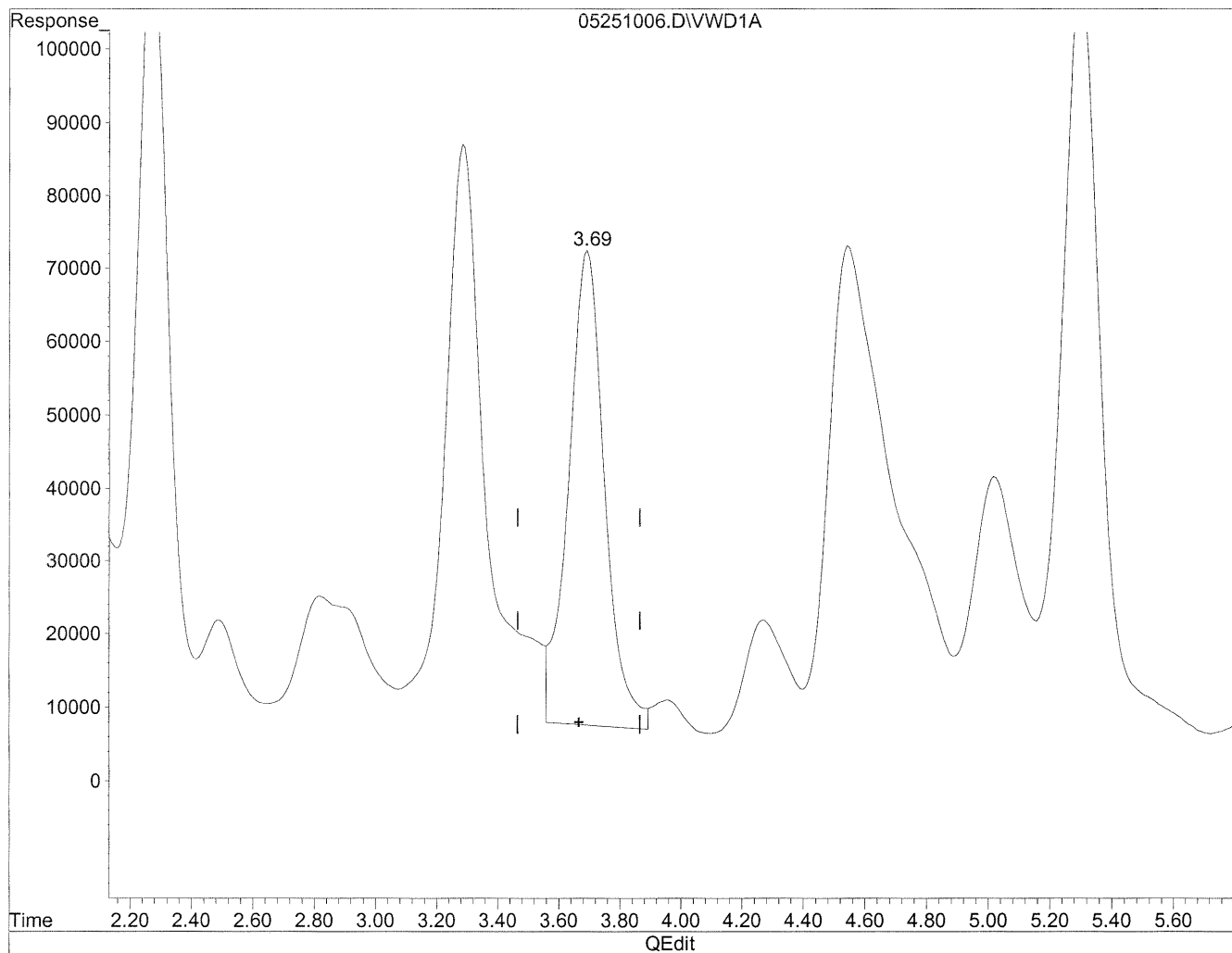
sl
mm
6/4/10

(+) = Expected Retention Time
05251006.D TO110510.M Fri Jun 04 10:17:53 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
Misc : , Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.69min 1323.311ng/ml

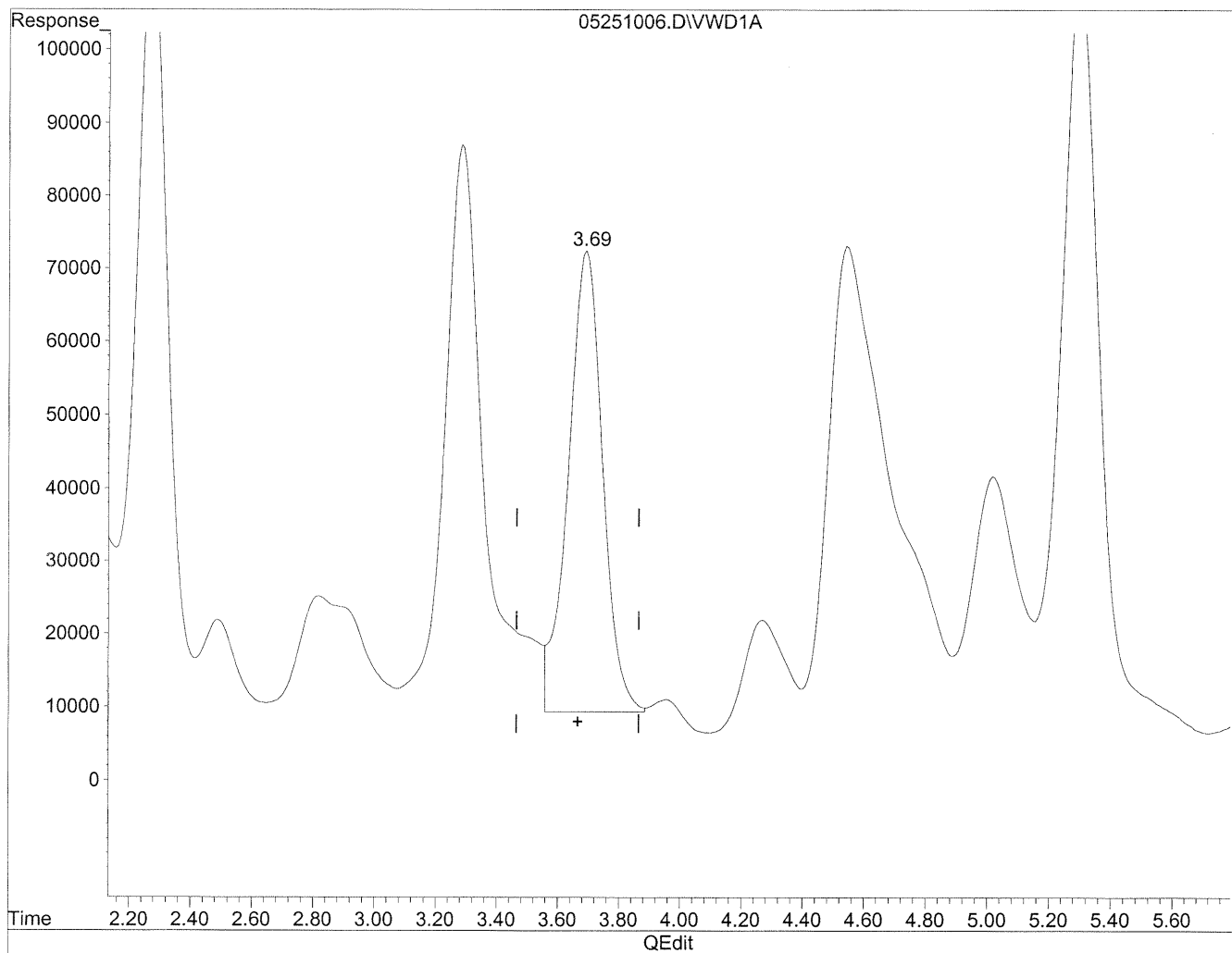
response 5332024

(+) = Expected Retention Time
05251006.D TO110510.M Fri May 28 10:20:12 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.69min 1229.670ng/ml m

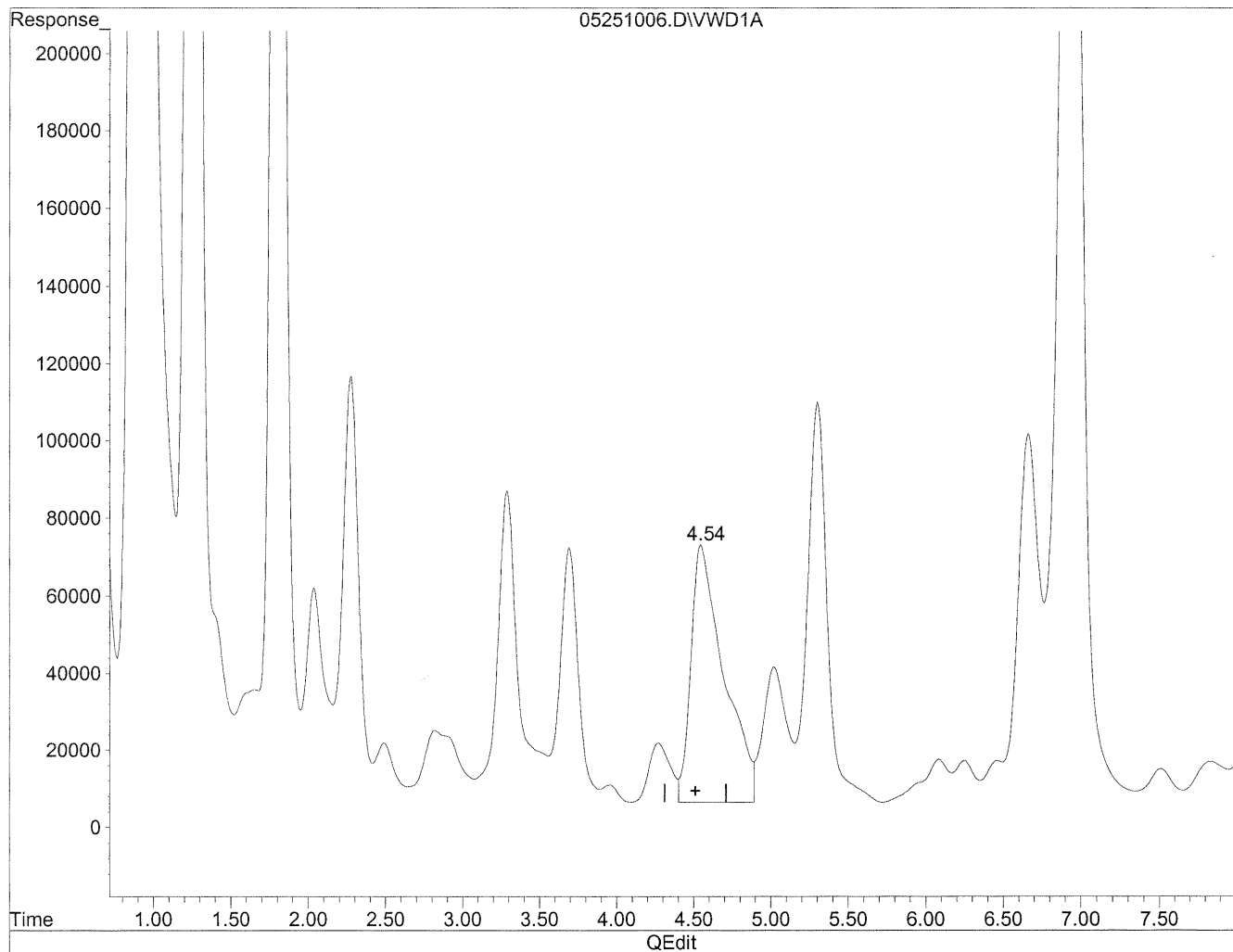
response 4954715

HC
6/4/10
BC
MD
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
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Sample : P1001793-001 2ml Inst : VWD
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(6) Benzaldehyde

4.55min 3662.400ng/ml

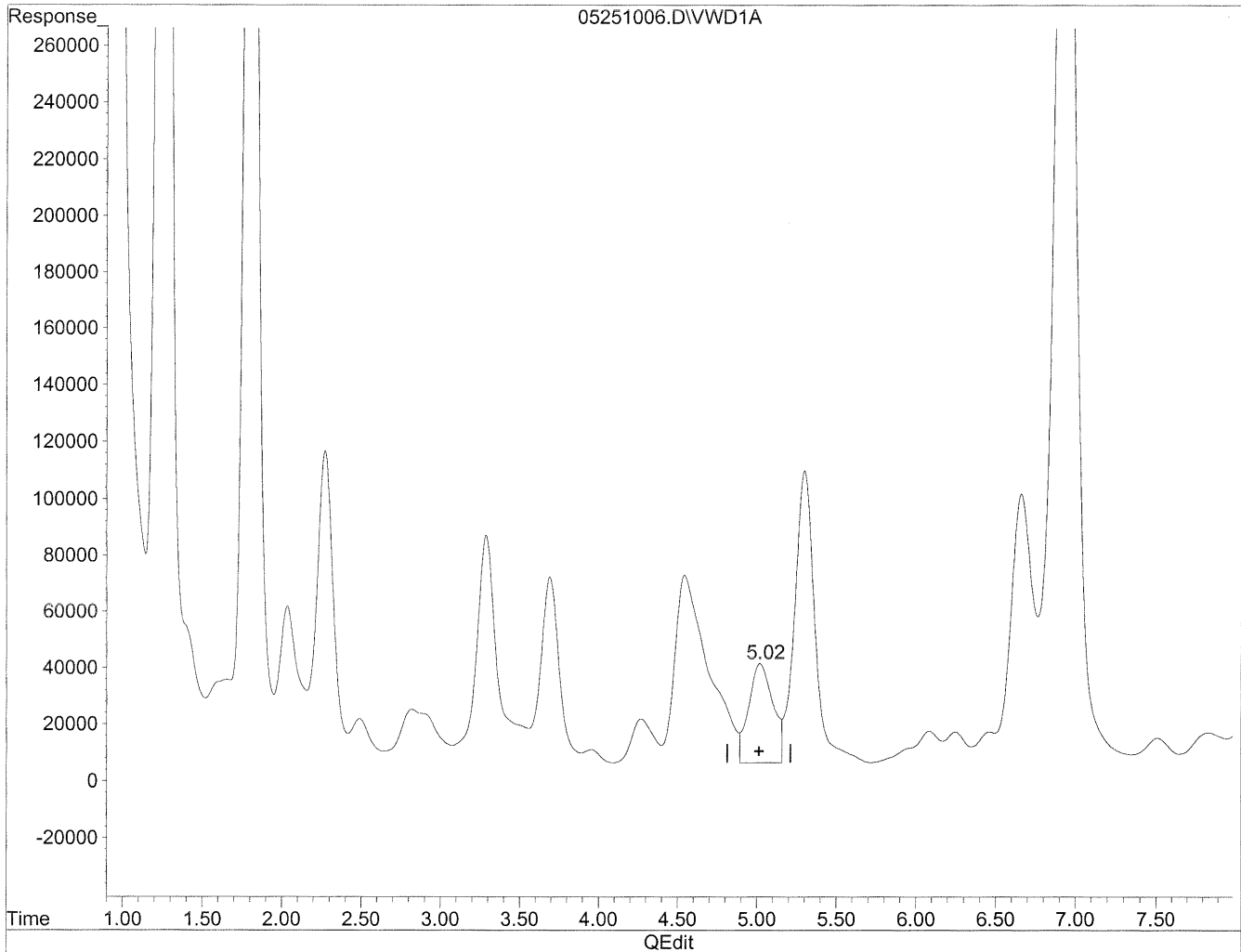
response 9913103

*matrix
interference,
bias high*

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

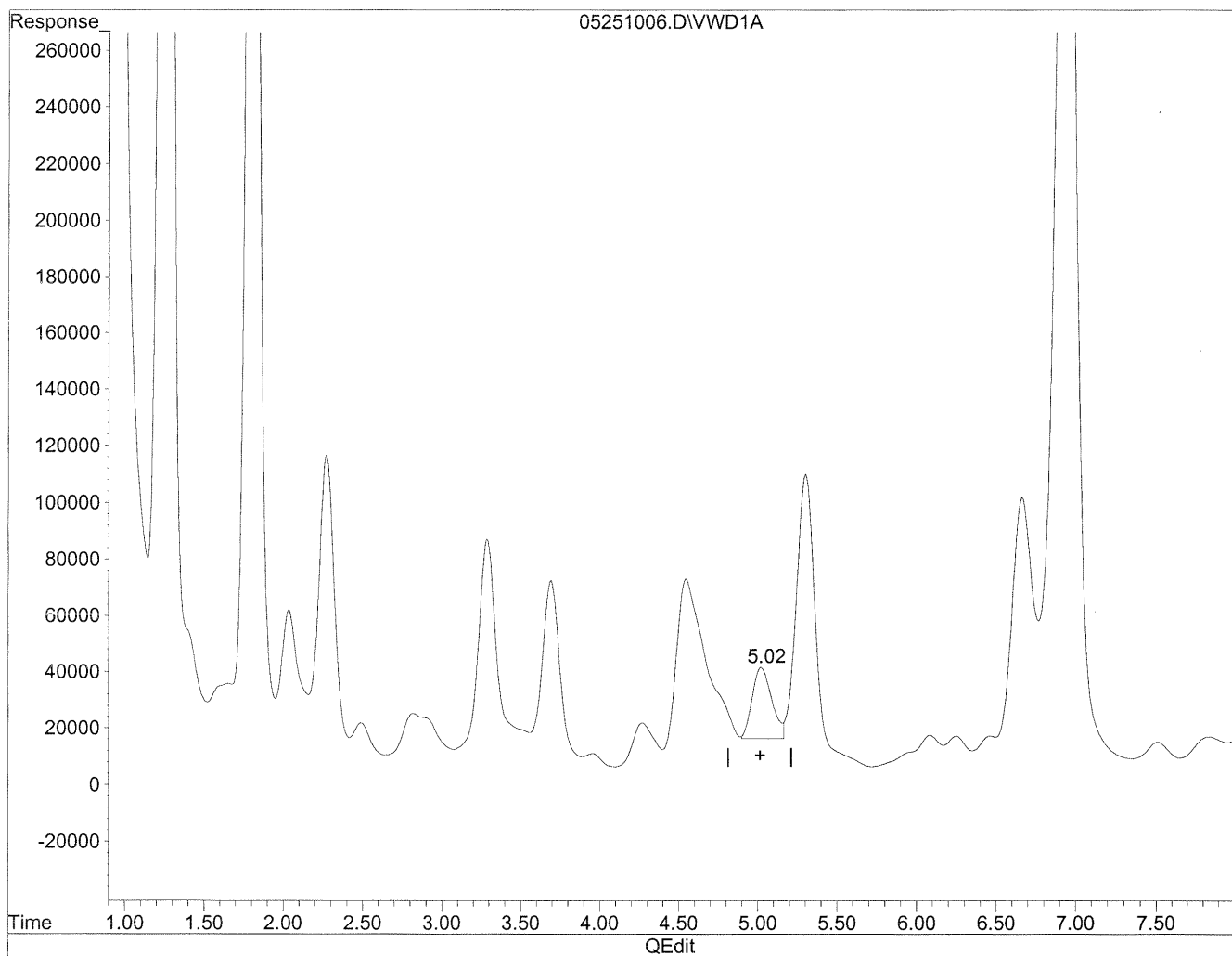
5.02min 1047.299ng/ml

response 3715509

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
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Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
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Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.02min 609.615ng/ml m

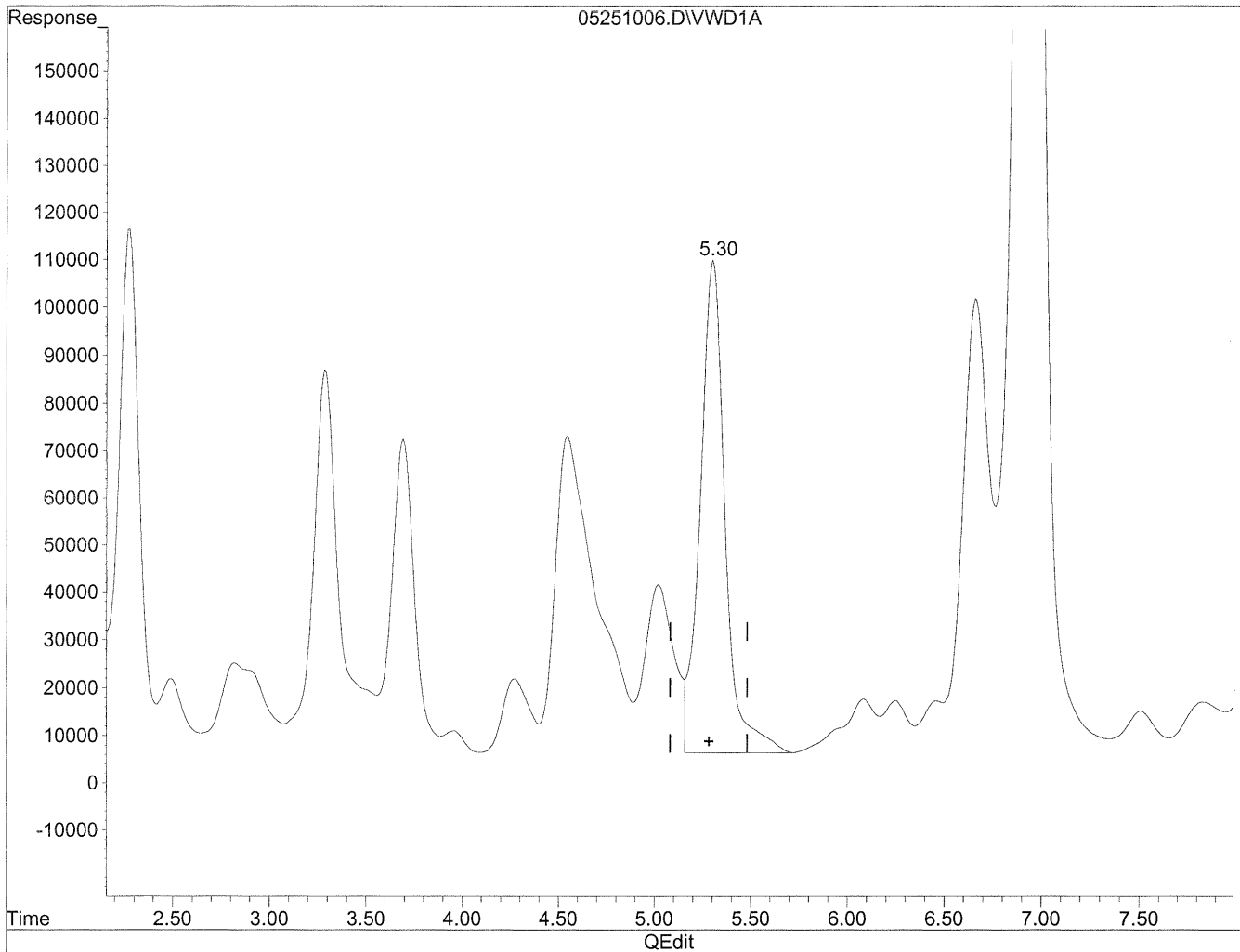
response 2162735

TC
mm
6/4/10
HC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
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Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

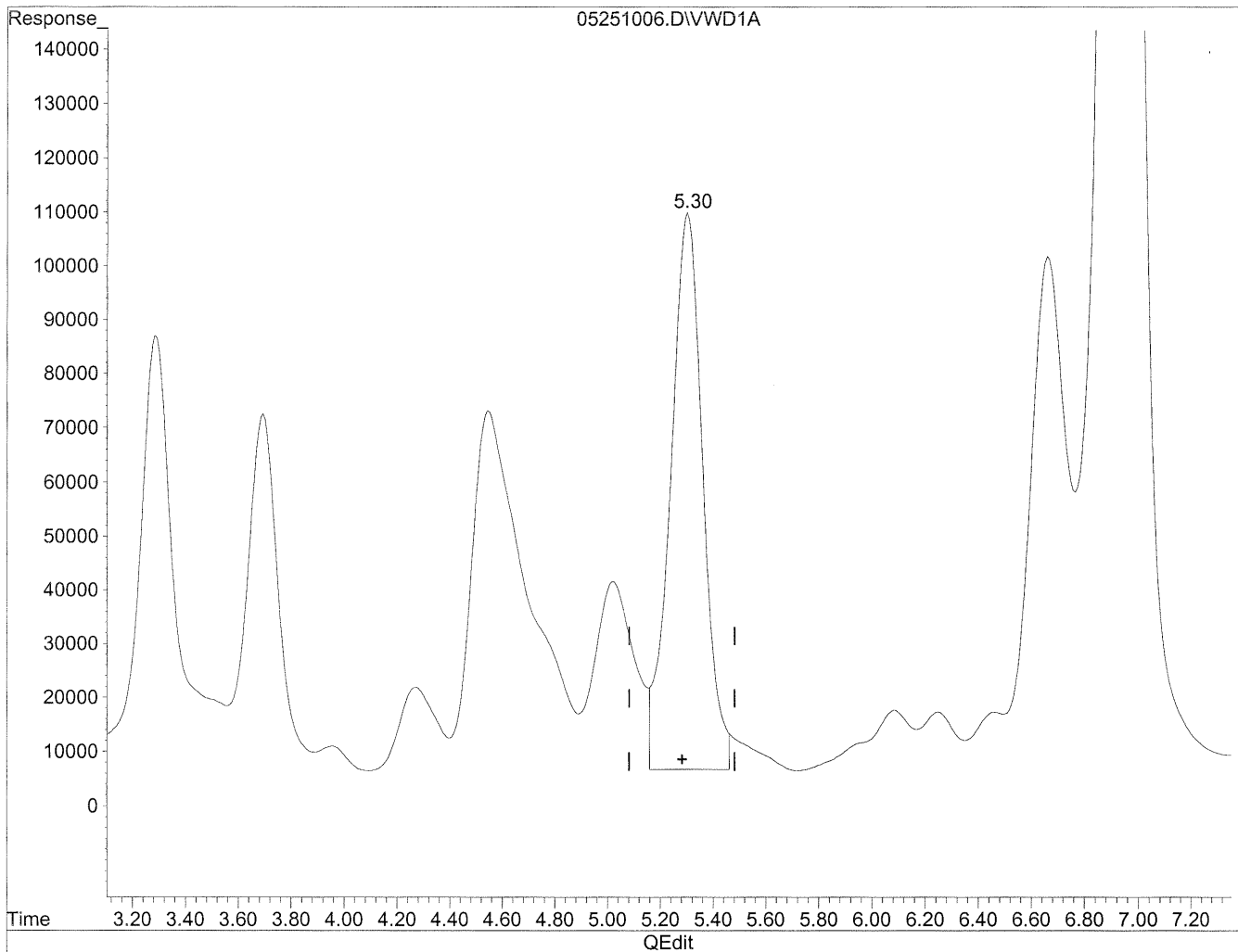
5.30min 2785.455ng/ml

response 9344127

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.30min 2620.938ng/ml m

response 8792238

PC,
sh
MD
6/4/10
HC
6/4/10

(+) = Expected Retention Time

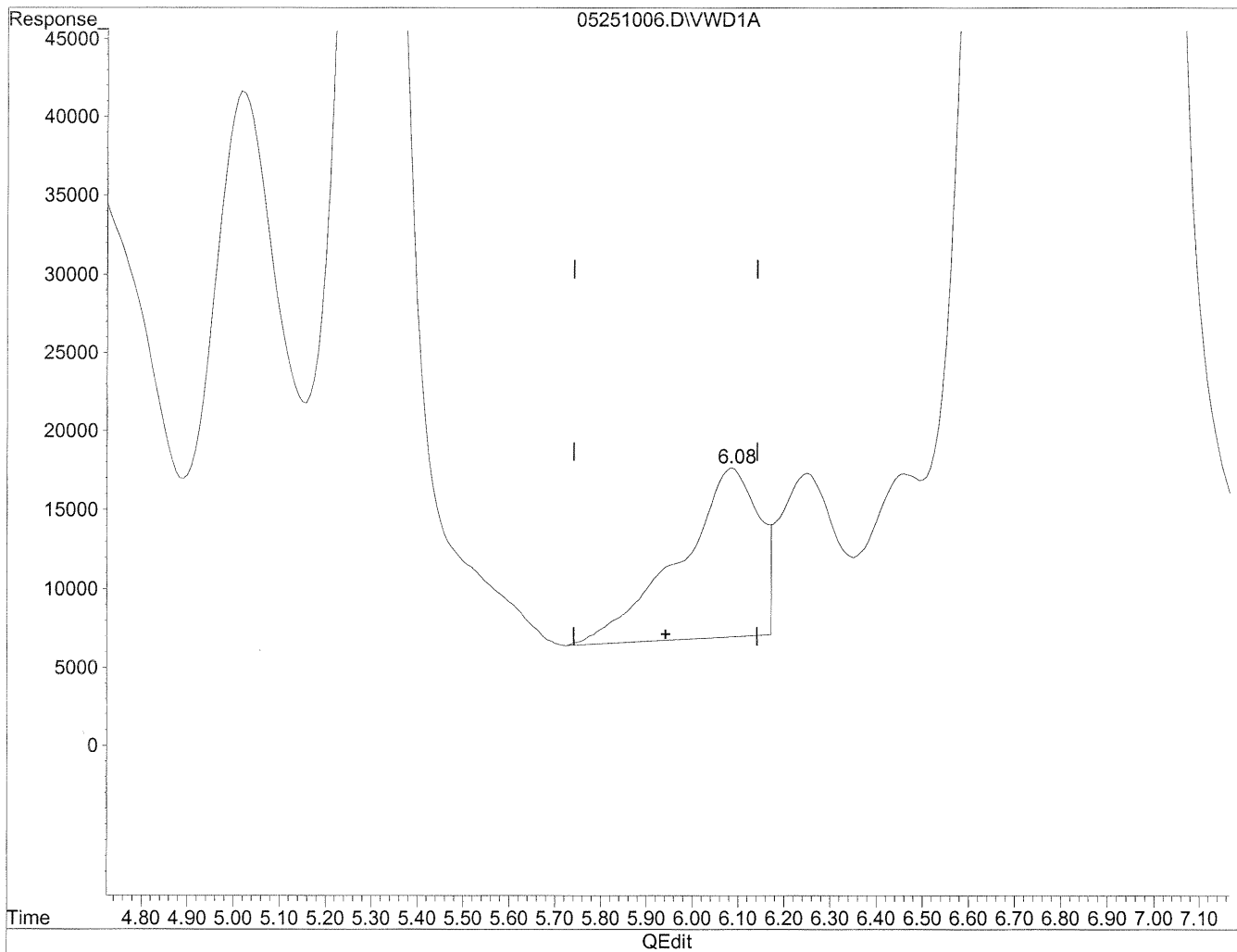
05251006.D TO110510.M

Fri May 28 10:21:48 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

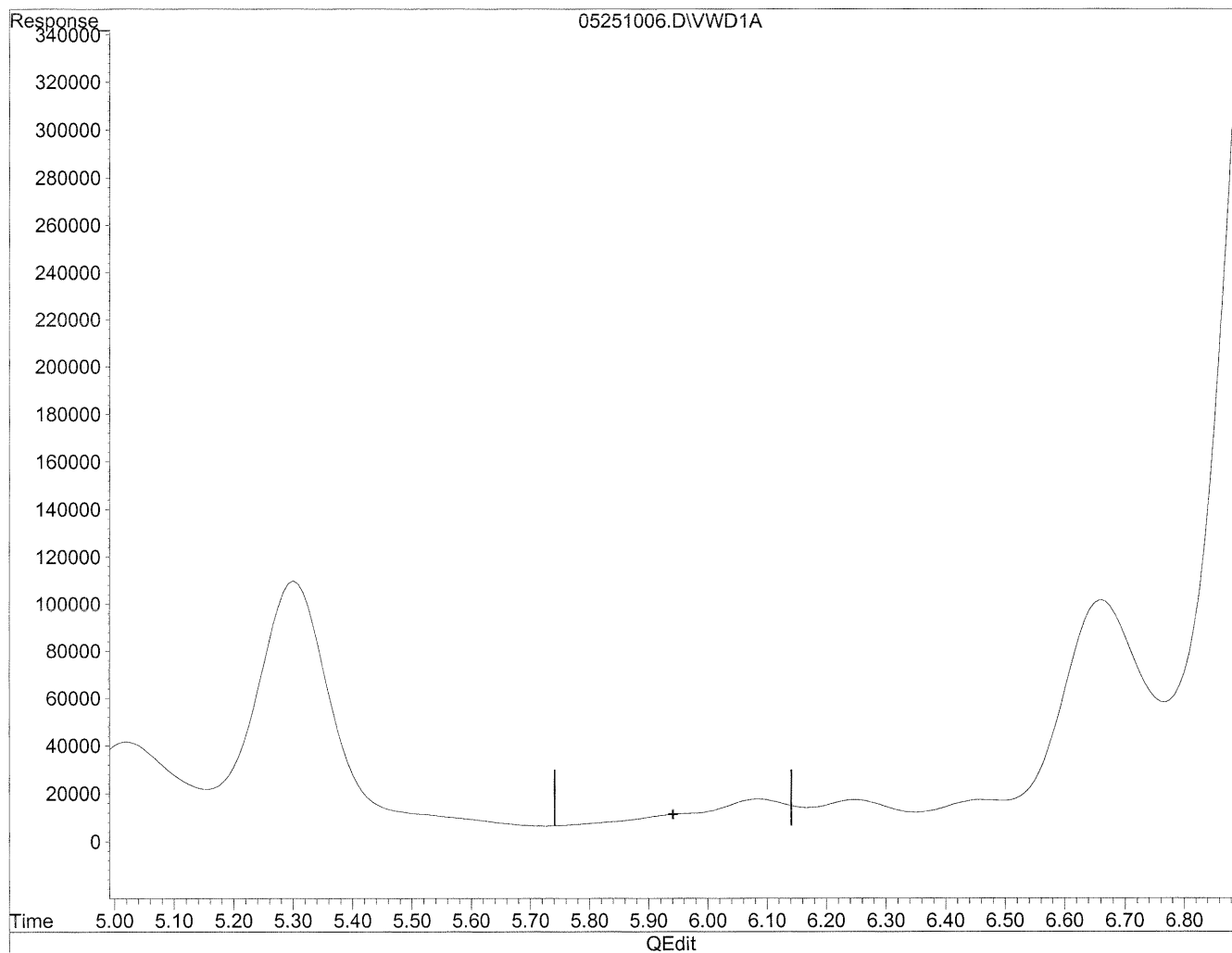
6.09min 541.570ng/ml

response 1268687

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251006.D Vial: 103
Acq On : 25-May-2010, 12:21 Operator: MD
Sample : P1001793-001 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

0.00min 0.000ng/ml d

response 0

mp
mm
6/4/10

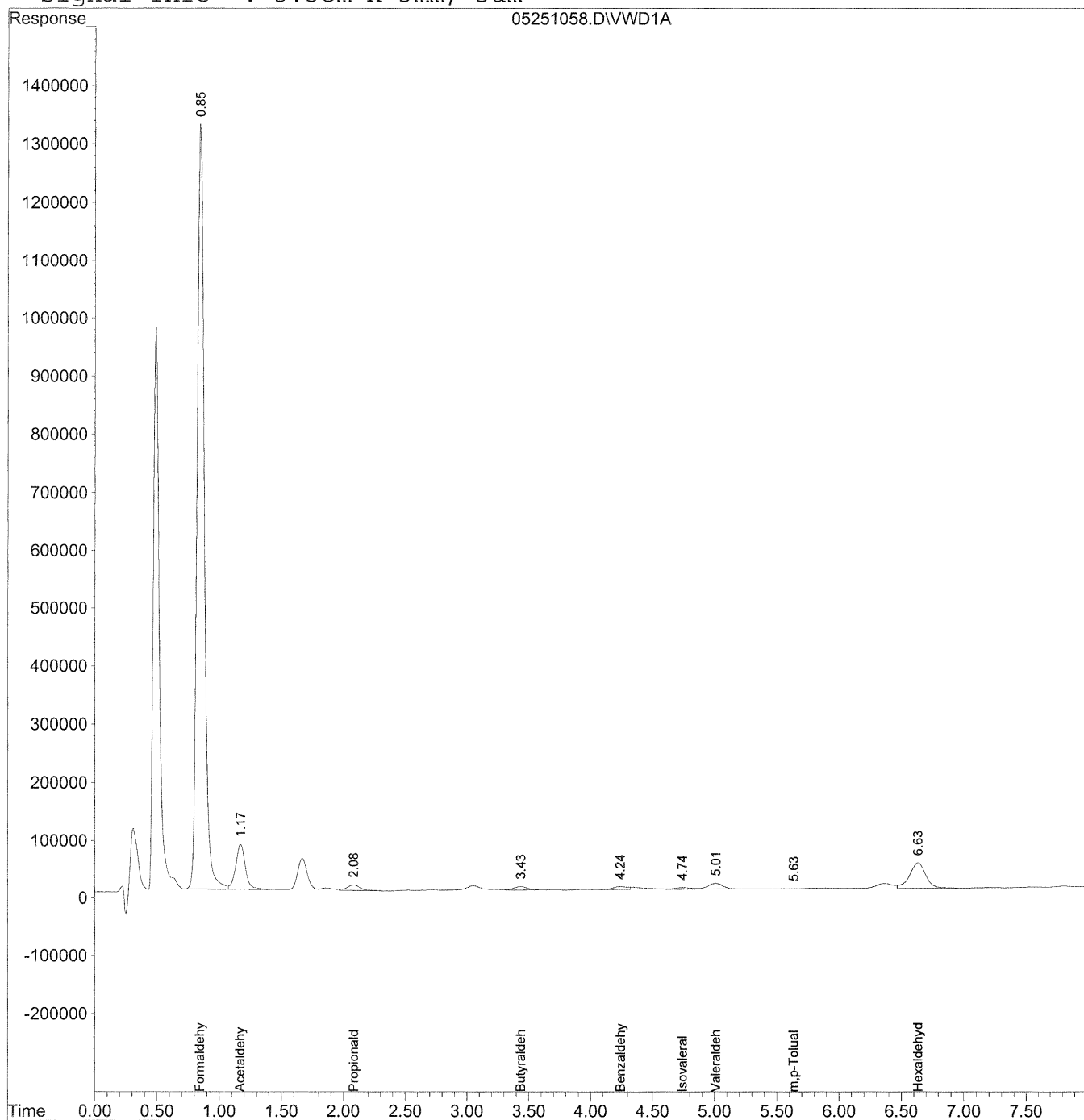
HC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251058.D Vial: 139
Acq On : 25-May-2010, 21:22 Operator: MD
Sample : P1001793-001 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:11 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 08:07:45 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251058.D Vial: 139
Acq On : 25-May-2010, 21:22 Operator: MD
Sample : P1001793-001 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:11 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 08:07:45 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.85	53164459	5696.472 ng/ml
2)	Acetaldehyde	1.17	4208502	624.849 ng/ml
3)	Propionaldehyde	2.08	696006	143.151 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.44	485383	120.463 ng/ml
6)	Benzaldehyde	4.24	398506	147.228 ng/ml
7)	Isovaleraldehyde	4.74	278910	78.617 ng/ml
8)	Valeraldehyde	5.01	869098	259.075 ng/ml
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	5.64	28300	12.080 ng/ml
11)	Hexaldehyde	6.63	4021346	1398.547 ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110524
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-002

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: 17525 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	93	54	0.12	44	0.094	
75-07-0	Acetaldehyde	6.8	4.6	0.14	2.5	0.075	
123-38-6	Propionaldehyde	1.8	2.7	0.29	1.1	0.12	
123-72-8	Butyraldehyde	2.0	11	1.0	3.6	0.35	
100-52-7	Benzaldehyde	5.3	3.3	0.12	0.76	0.029	M
590-86-3	Isovaleraldehyde	1.1	1.0	0.19	0.29	0.053	
110-62-3	Valeraldehyde	4.6	9.7	0.42	2.8	0.12	
66-25-1	n-Hexaldehyde	25	80	0.63	20	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

M = Matrix interference; results may be biased high.

NA = Not applicable.

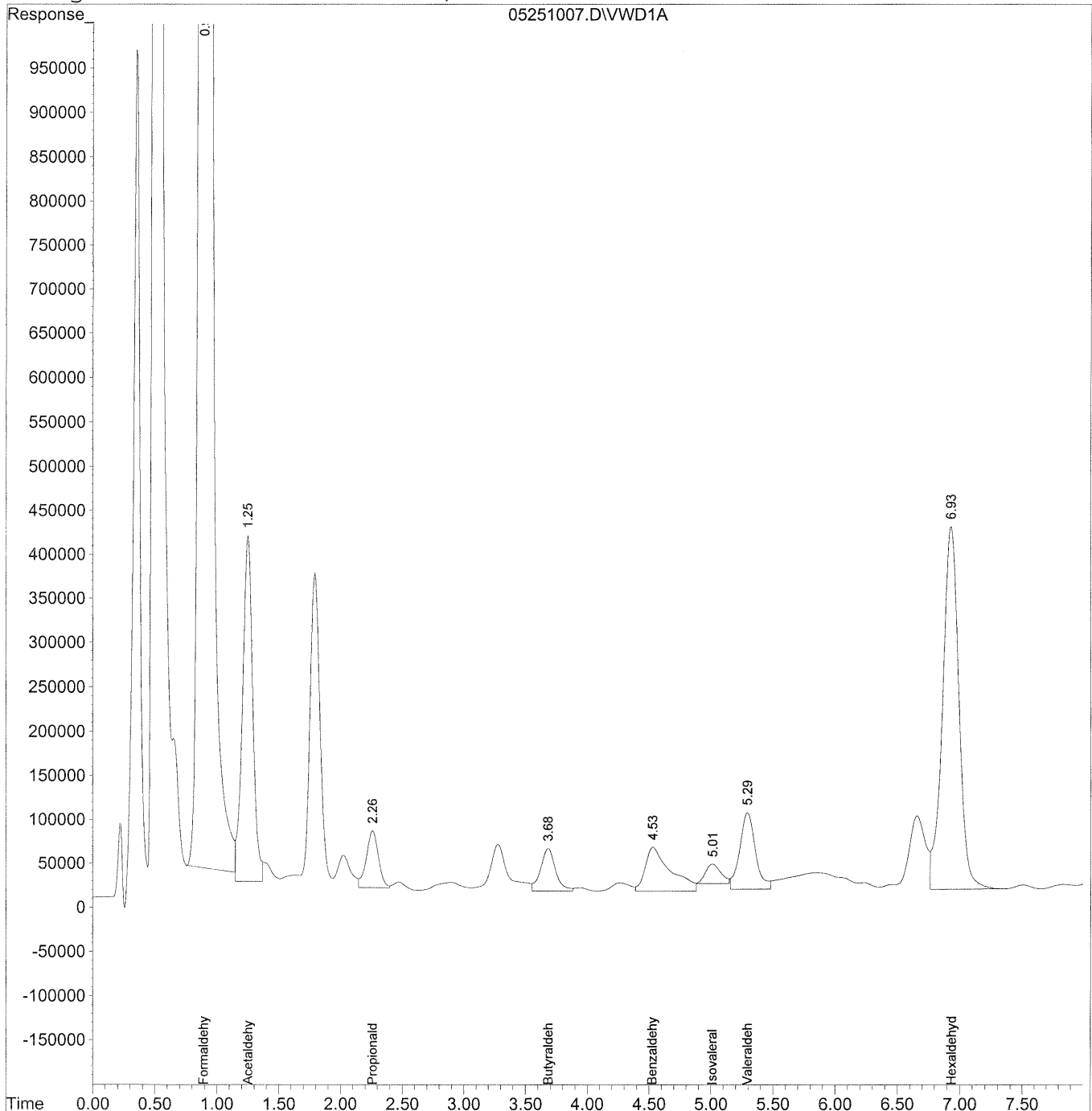
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:34 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:34 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

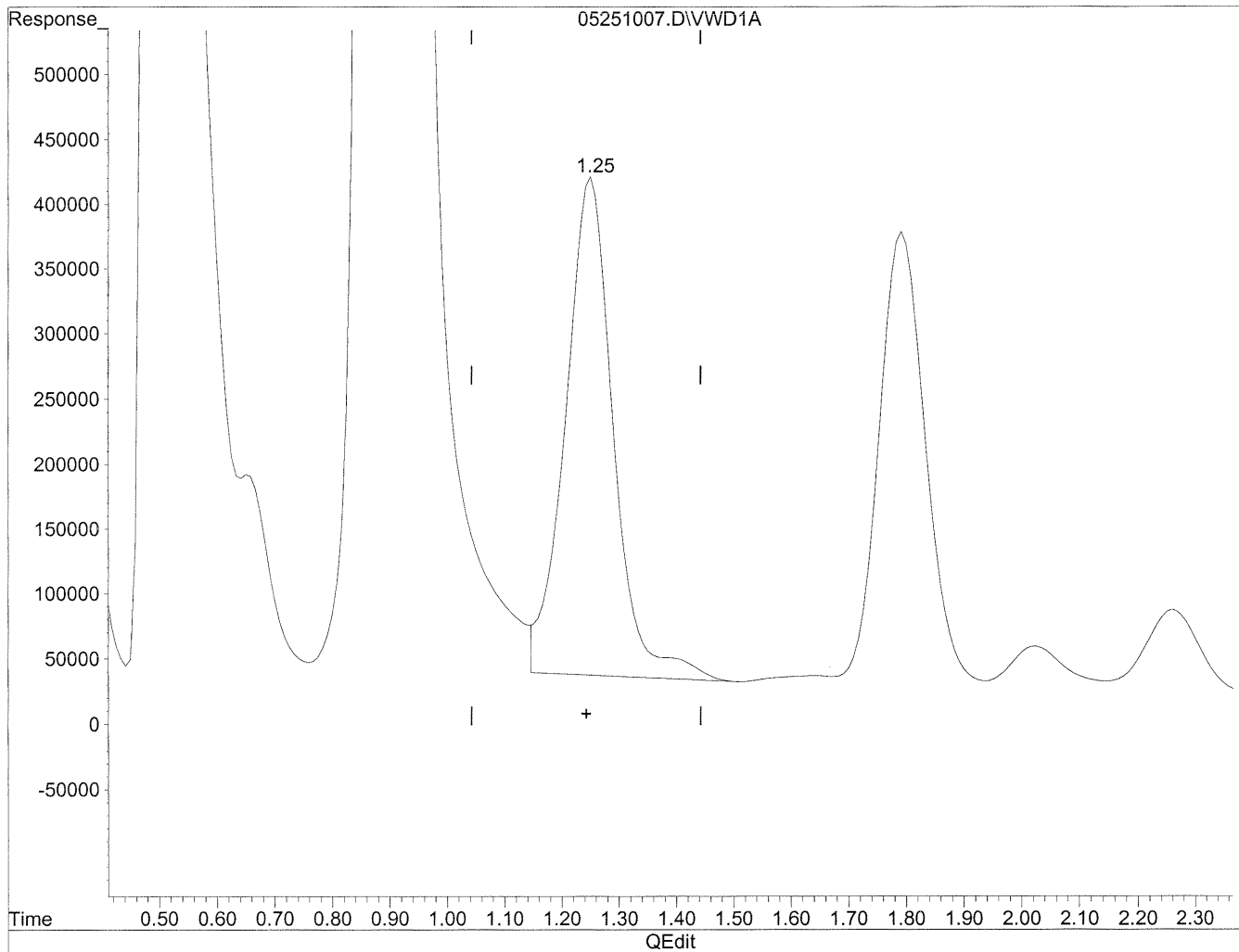
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.90	439024778	47040.682 ng/ml <i>see dil</i>
2)	Acetaldehyde	1.25	22745080	3377.032 ng/mlm
3)	Propionaldehyde	2.26	4487362	922.942 ng/mlm
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.68	4098945	1017.284 ng/mlm
6)	Benzaldehyde	4.53	7151203	2642.015 ng/mlm
7)	Isovaleraldehyde	5.01	1910155	538.420 ng/mlm
8)	Valeraldehyde	5.29	7686990	2291.467 ng/mlm
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11)	Hexaldehyde	6.93	36825719	12807.283 ng/ml <i>dil</i>
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

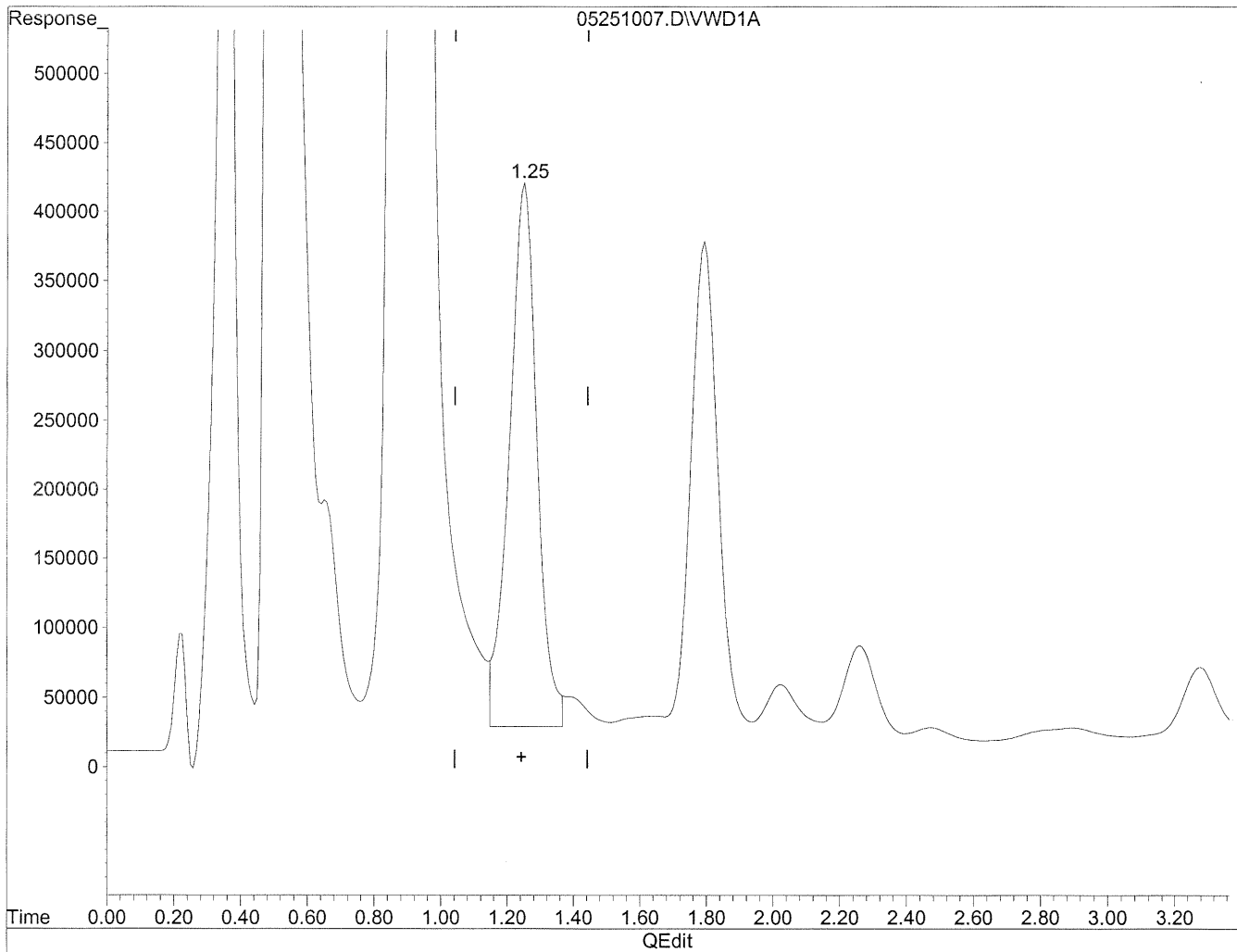
1.25min 3324.505ng/ml

response 22391296

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.25min 3377.032ng/ml m

response 22745080

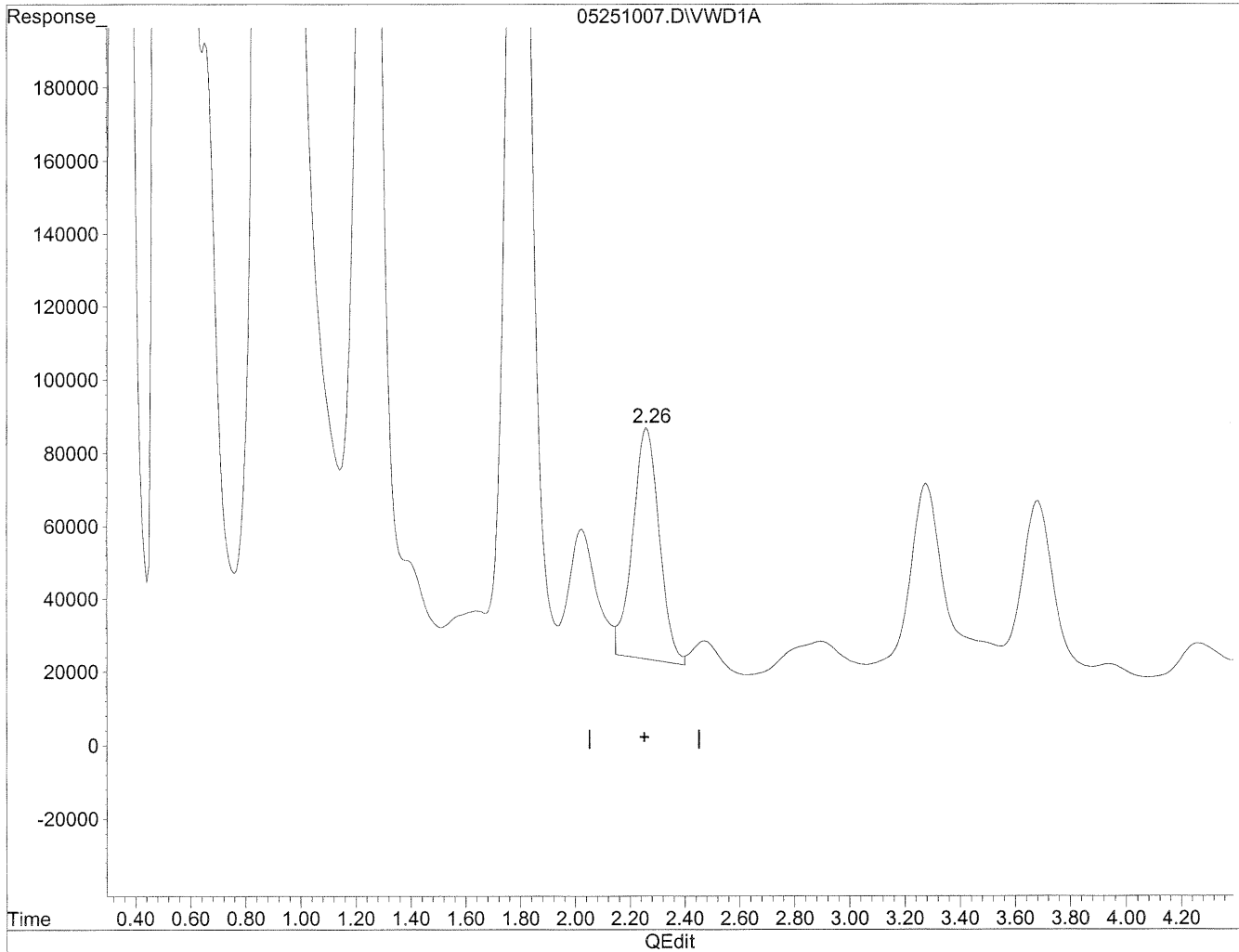
Sh
MP
6/4/10

HIC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration

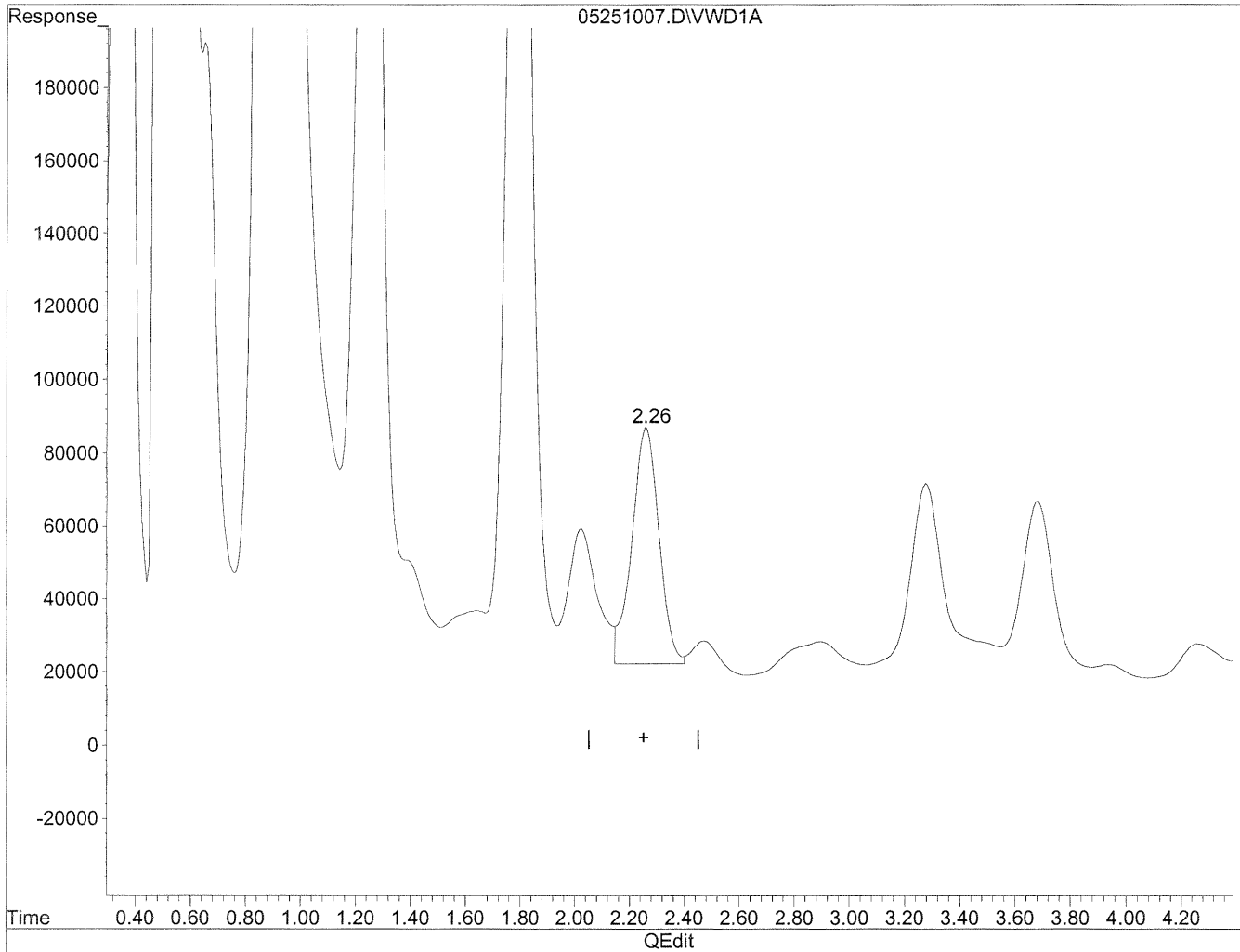


(3) Propionaldehyde
2.26min 887.281ng/ml
response 4313980

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.26min 922.942ng/ml m

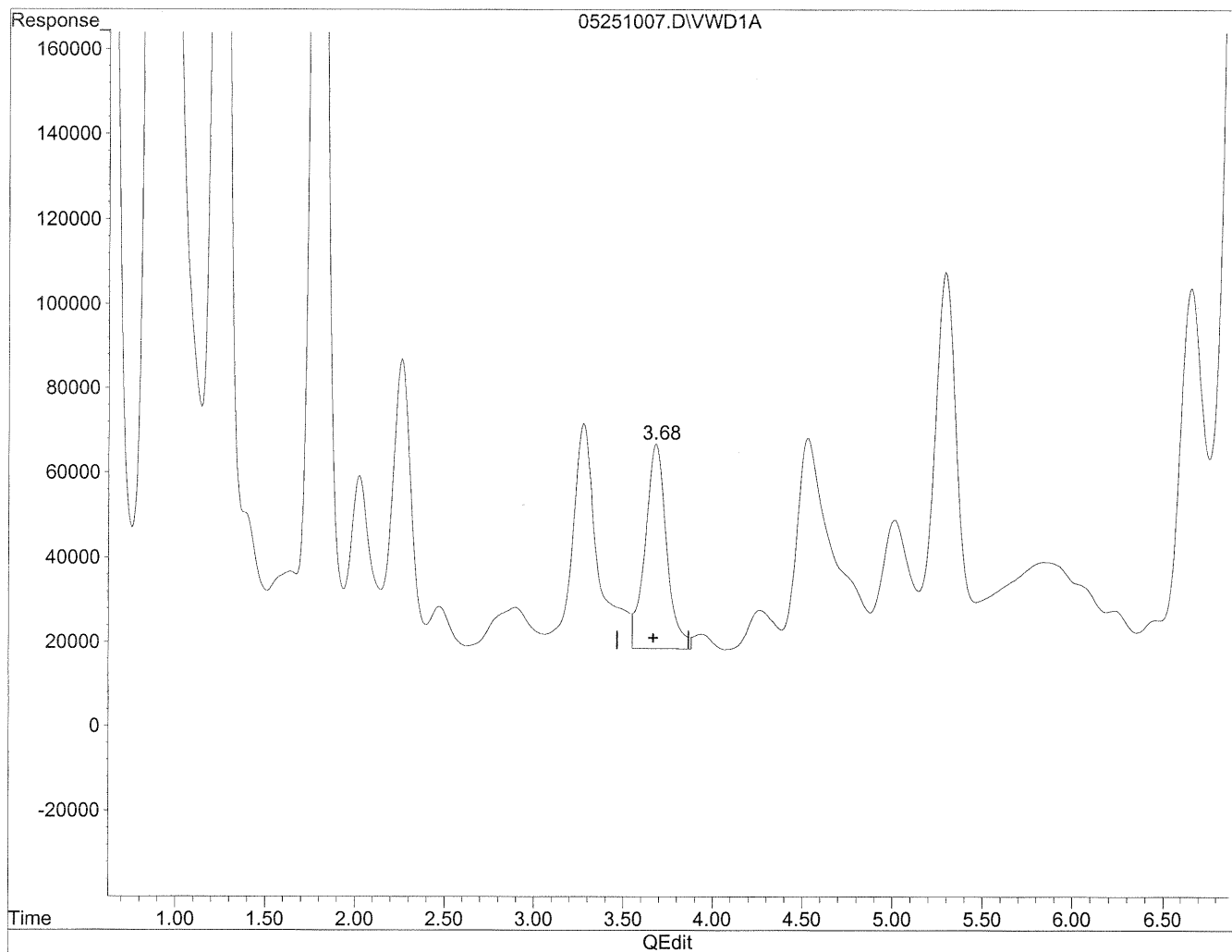
response 4487362

He
6/4/10
Be
MP
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

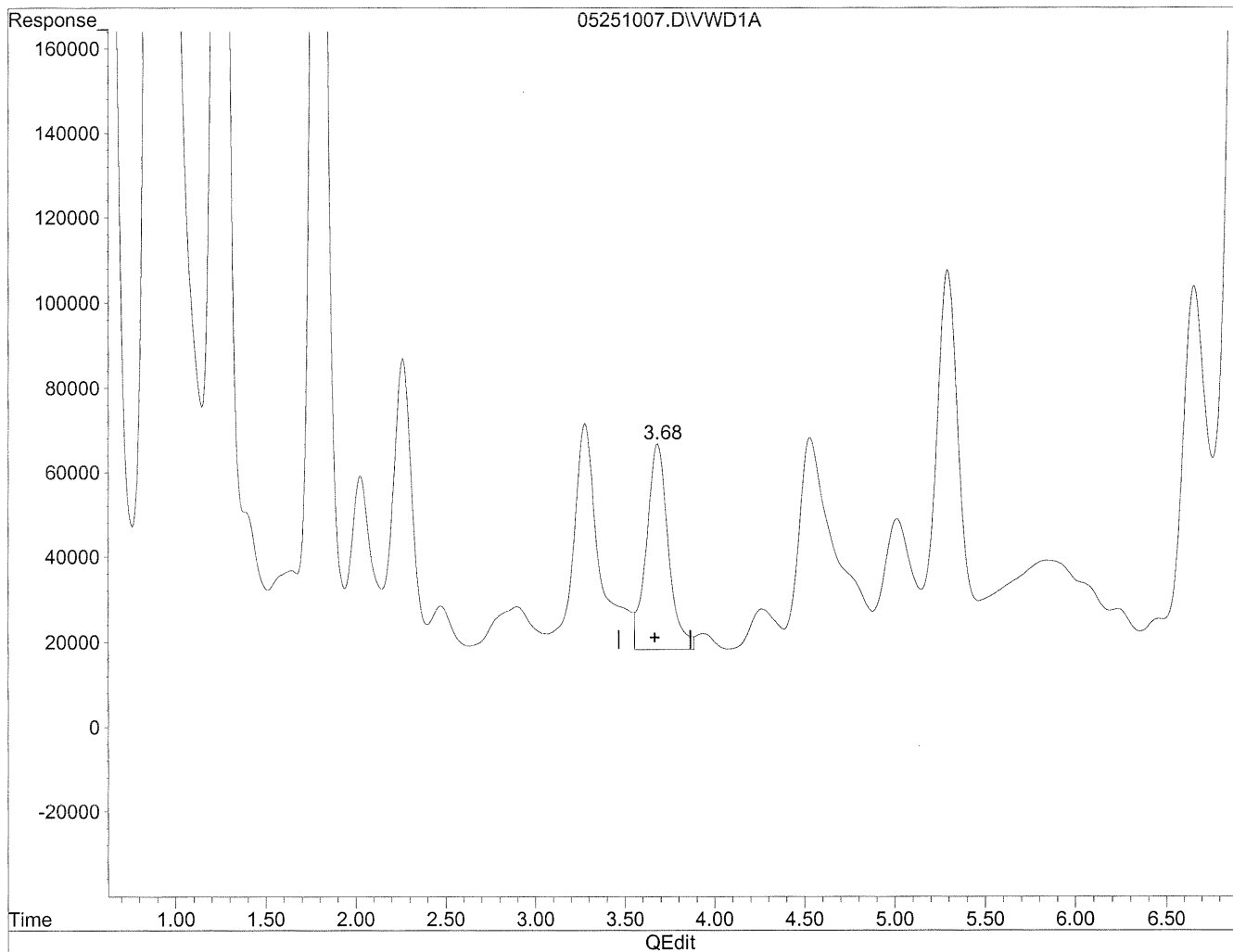
3.68min 1006.487ng/ml

response 4055441

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.68min 1017.284ng/ml m

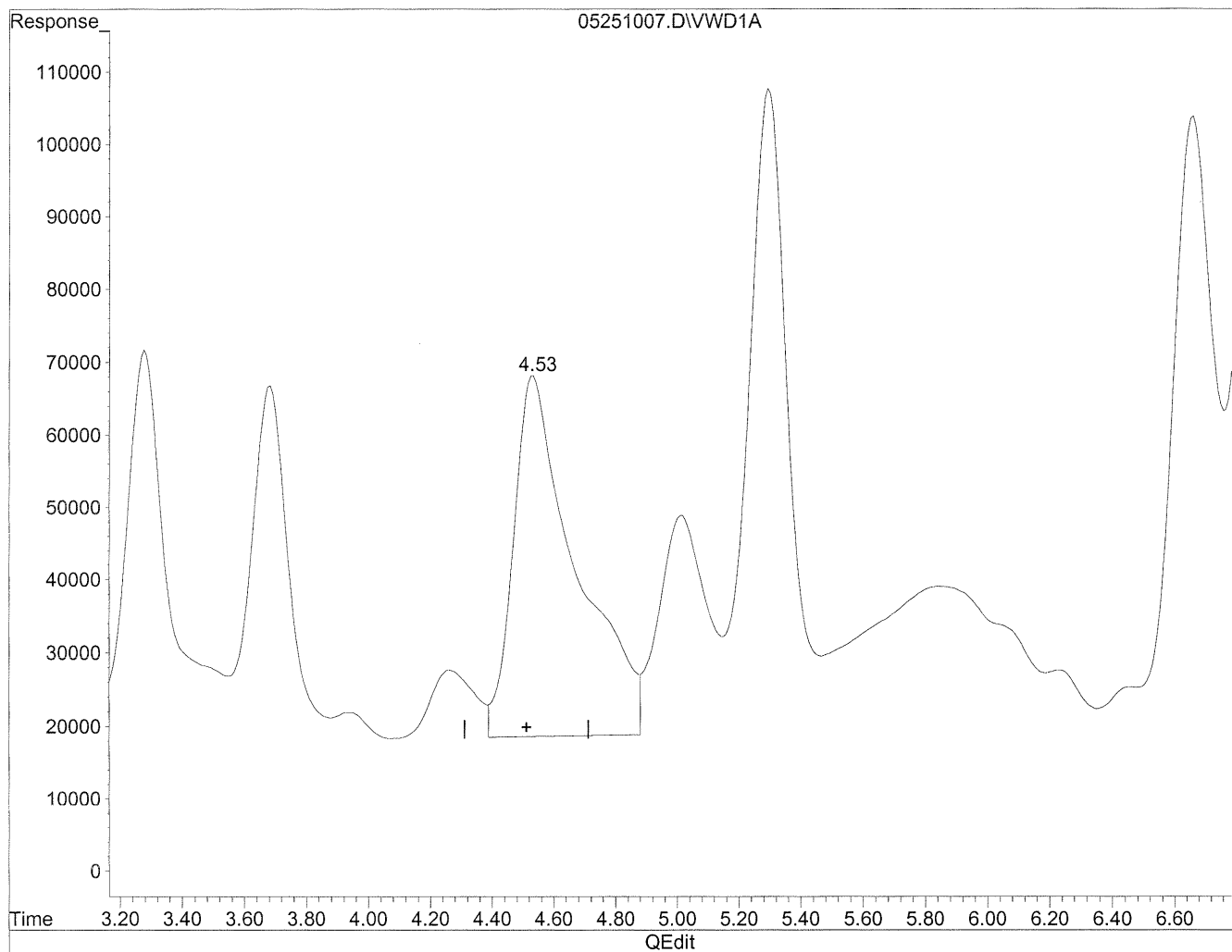
response 4098945

Pr
SM
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

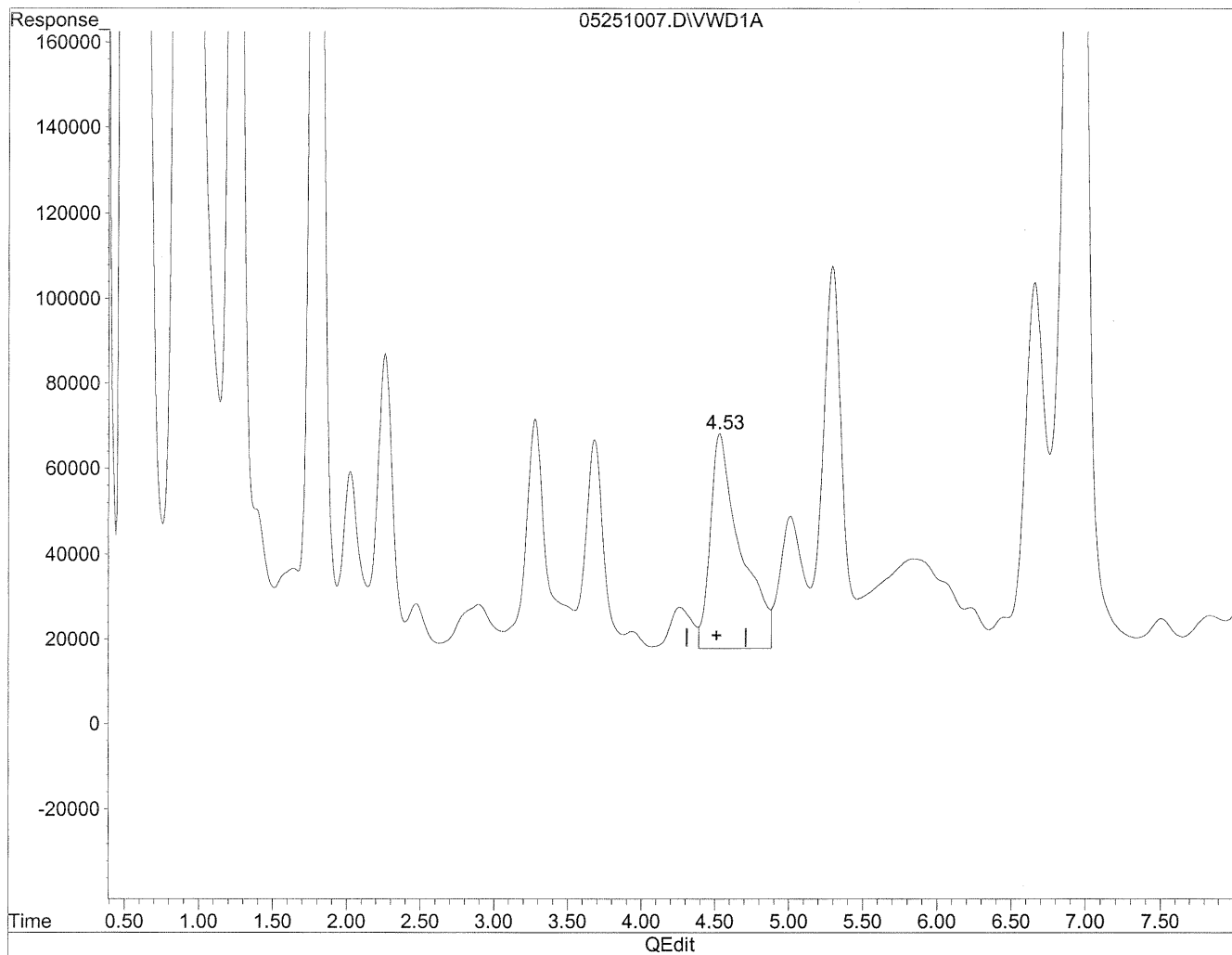
4.53min 2566.646ng/ml

response 6947201

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:26 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.53min 2642.015ng/ml m

response 7151203

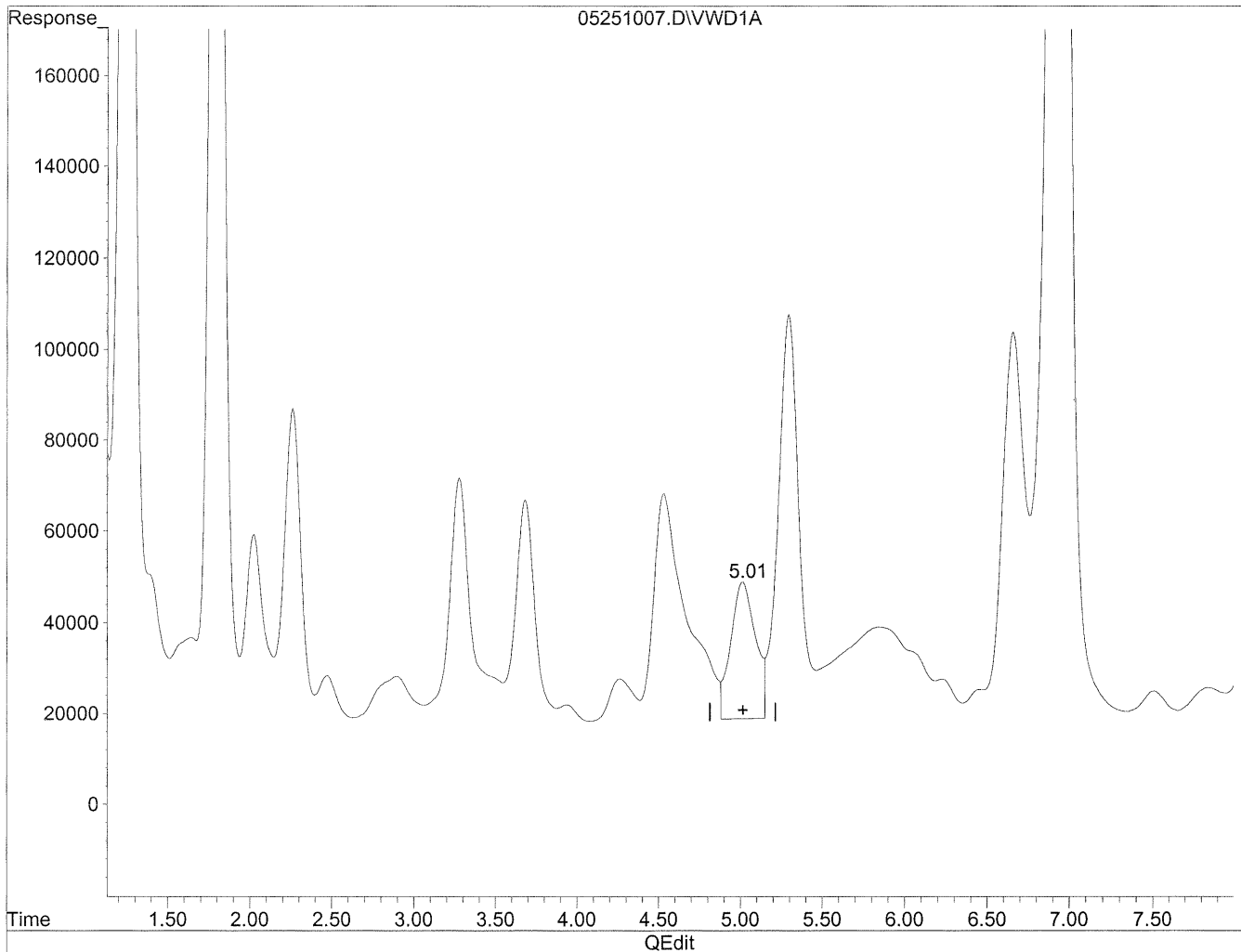
BC, 6/4/10
(m) (m flag)

HC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration

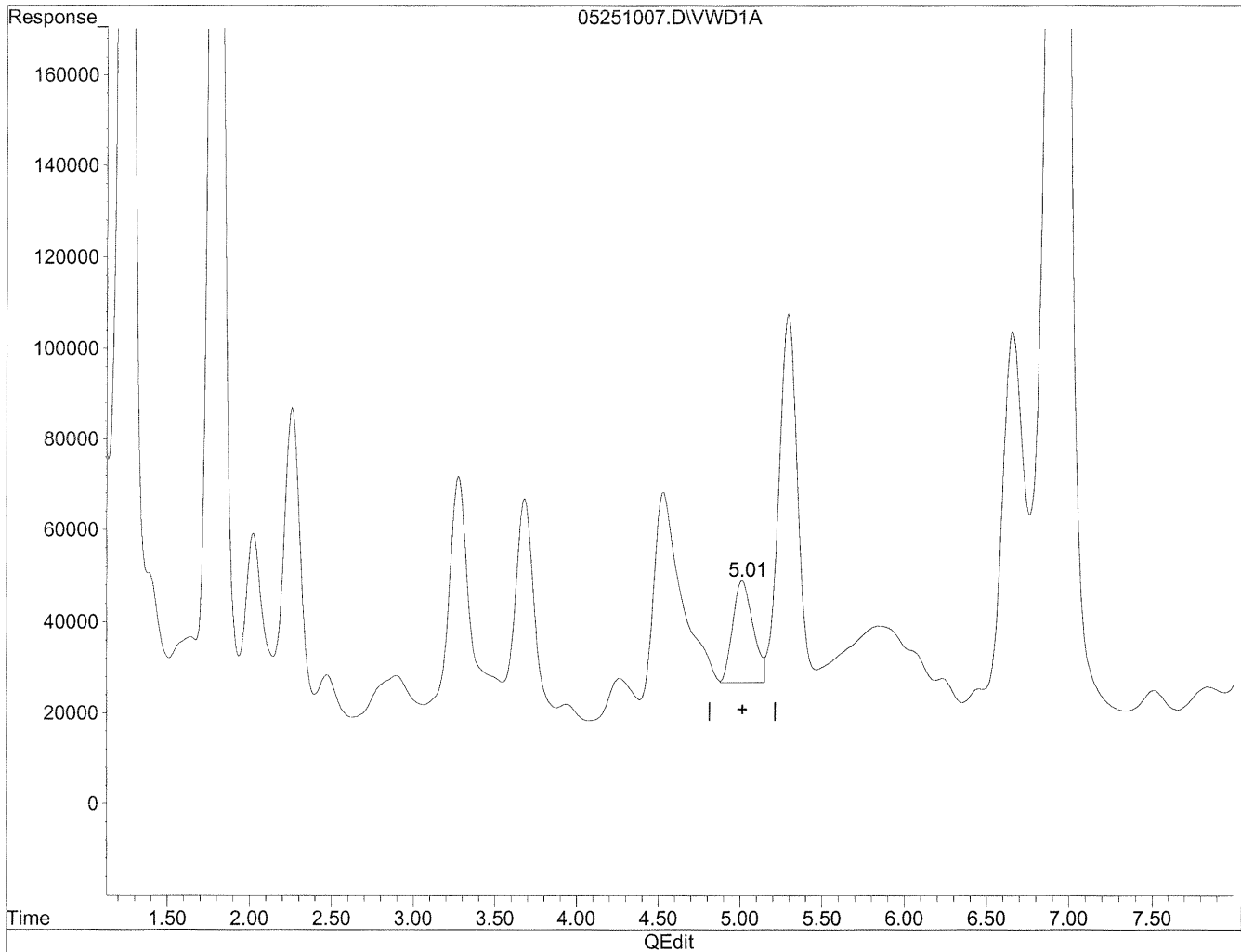


(7) Isovaleraldehyde
5.01min 895.196ng/ml
response 3175892

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.01min 538.420ng/ml m

response 1910155

12
MD
6/4/10
HLC
6/4/10

(+) = Expected Retention Time

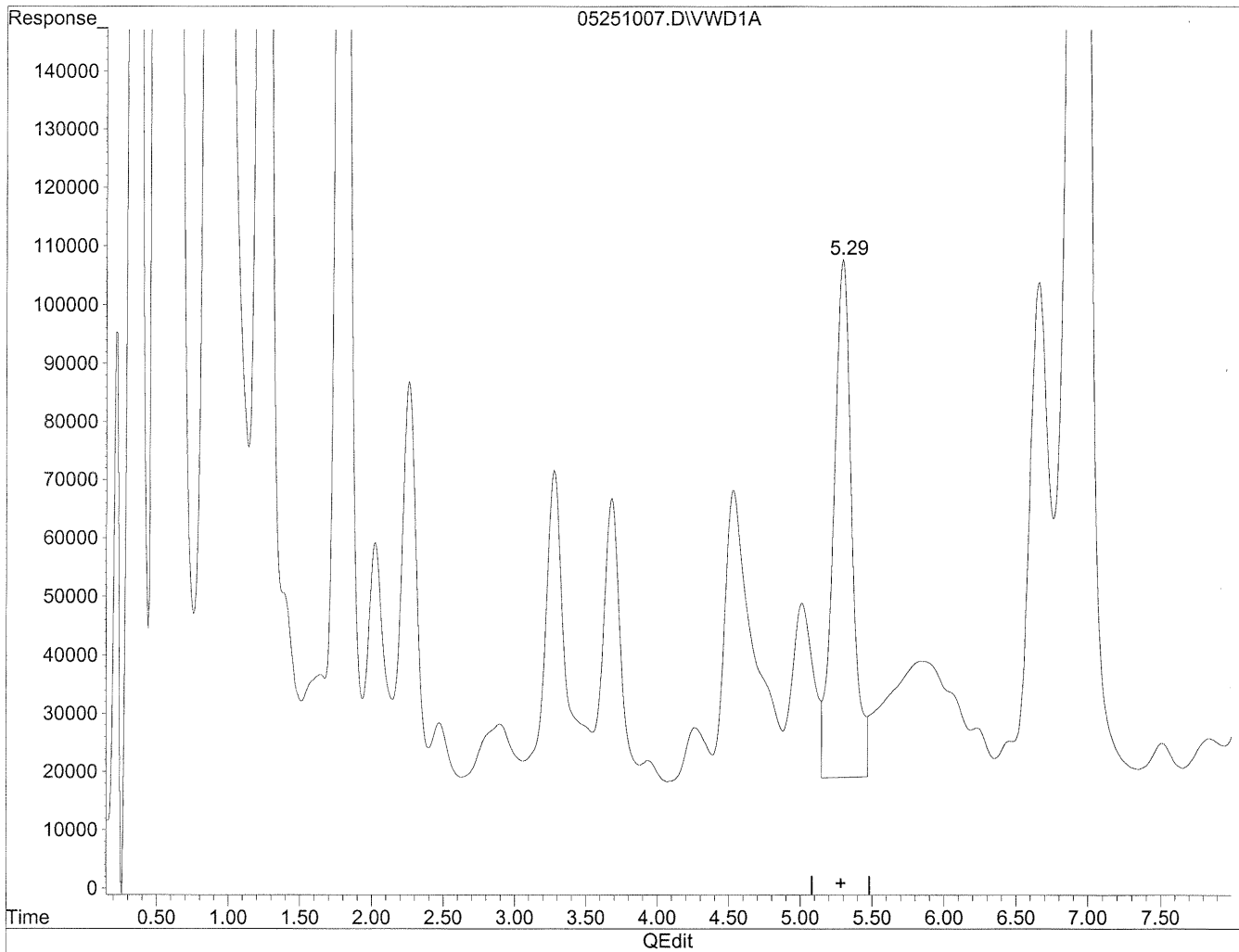
05251007.D TO110510.M

Fri May 28 10:24:46 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.30min 2353.985ng/ml

response 7896714

(+) = Expected Retention Time

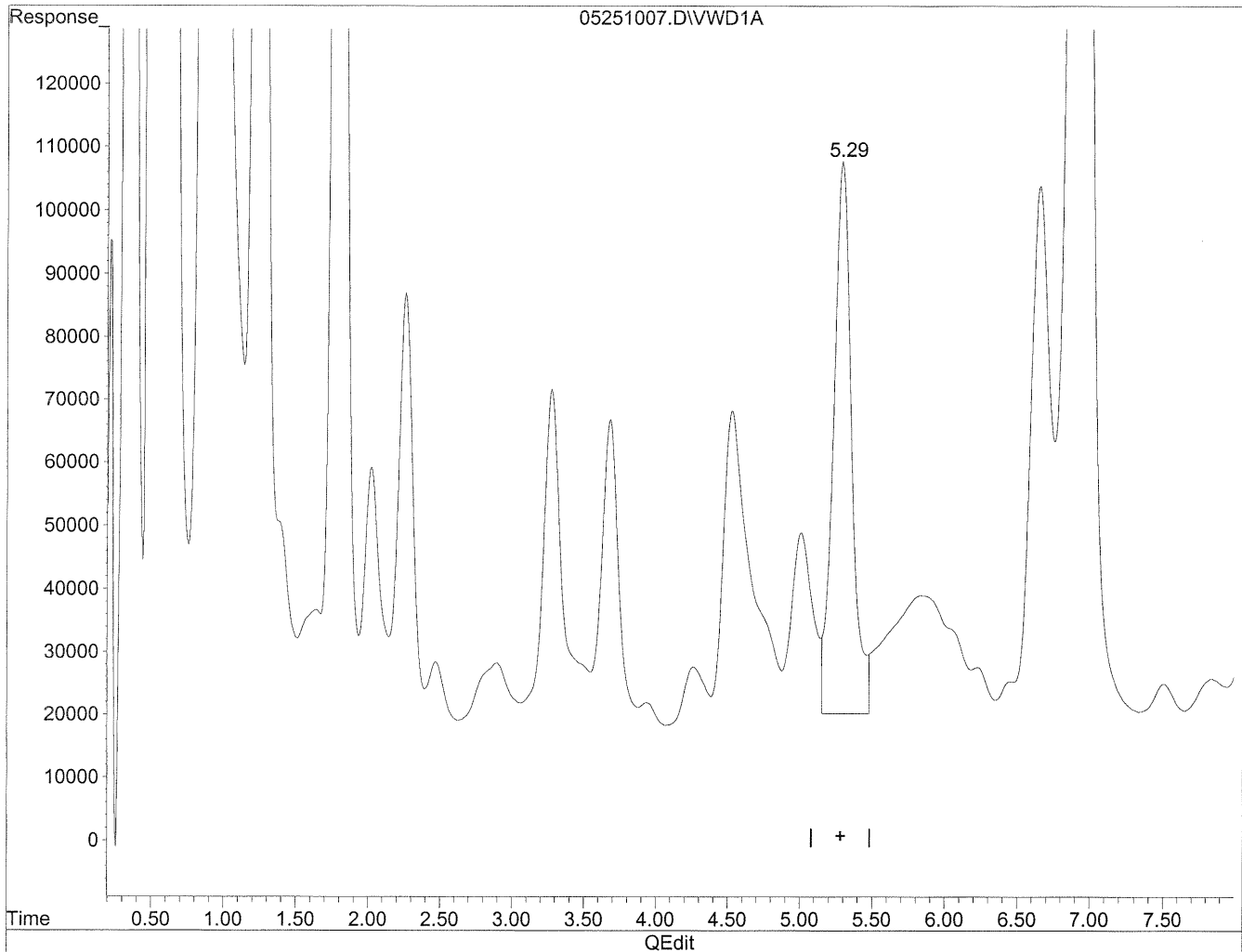
05251007.D TO110510.M

Fri May 28 10:25:07 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104.
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:25 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.29min 2291.467ng/ml m

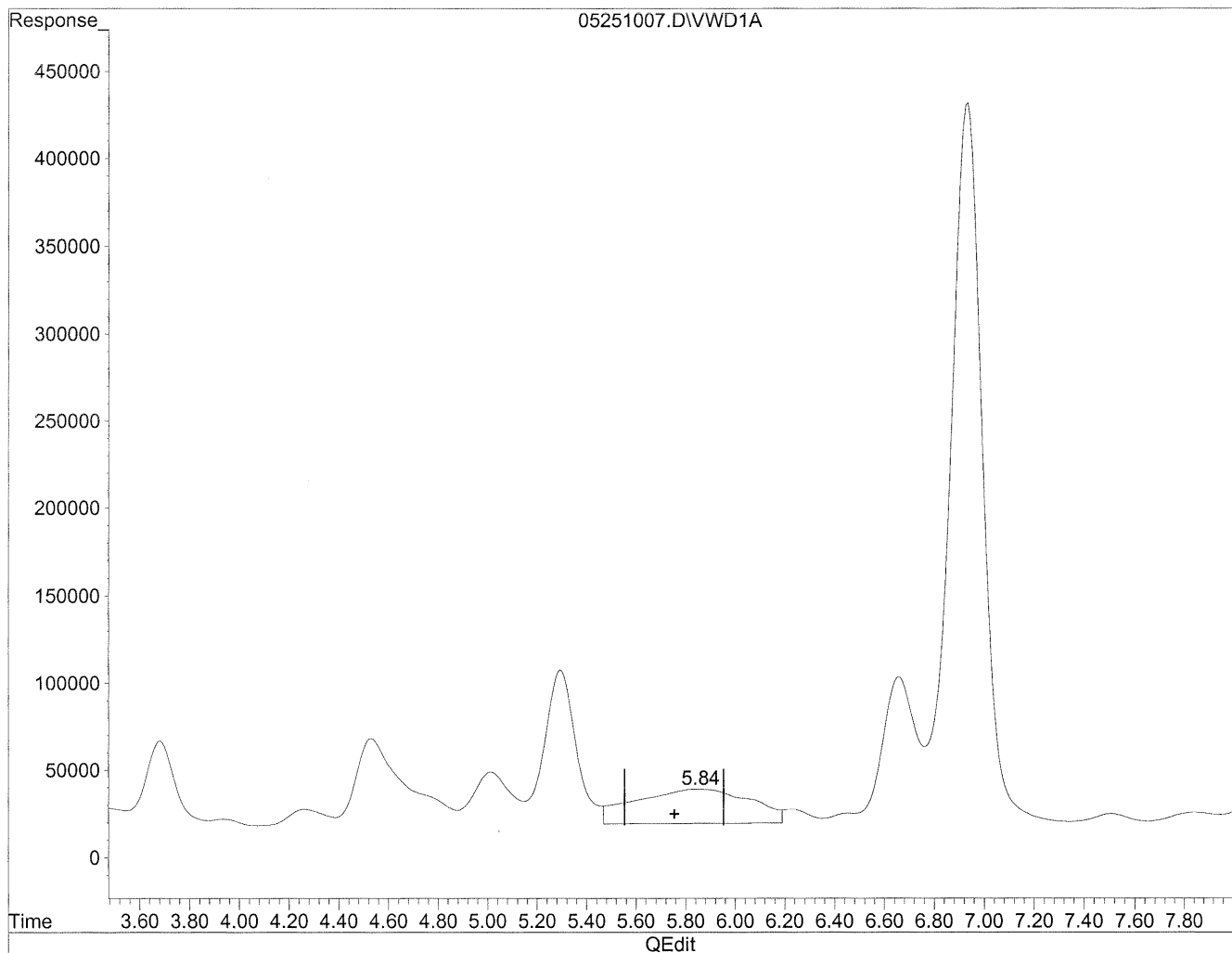
response 7686990

MD
6/4/10
HC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

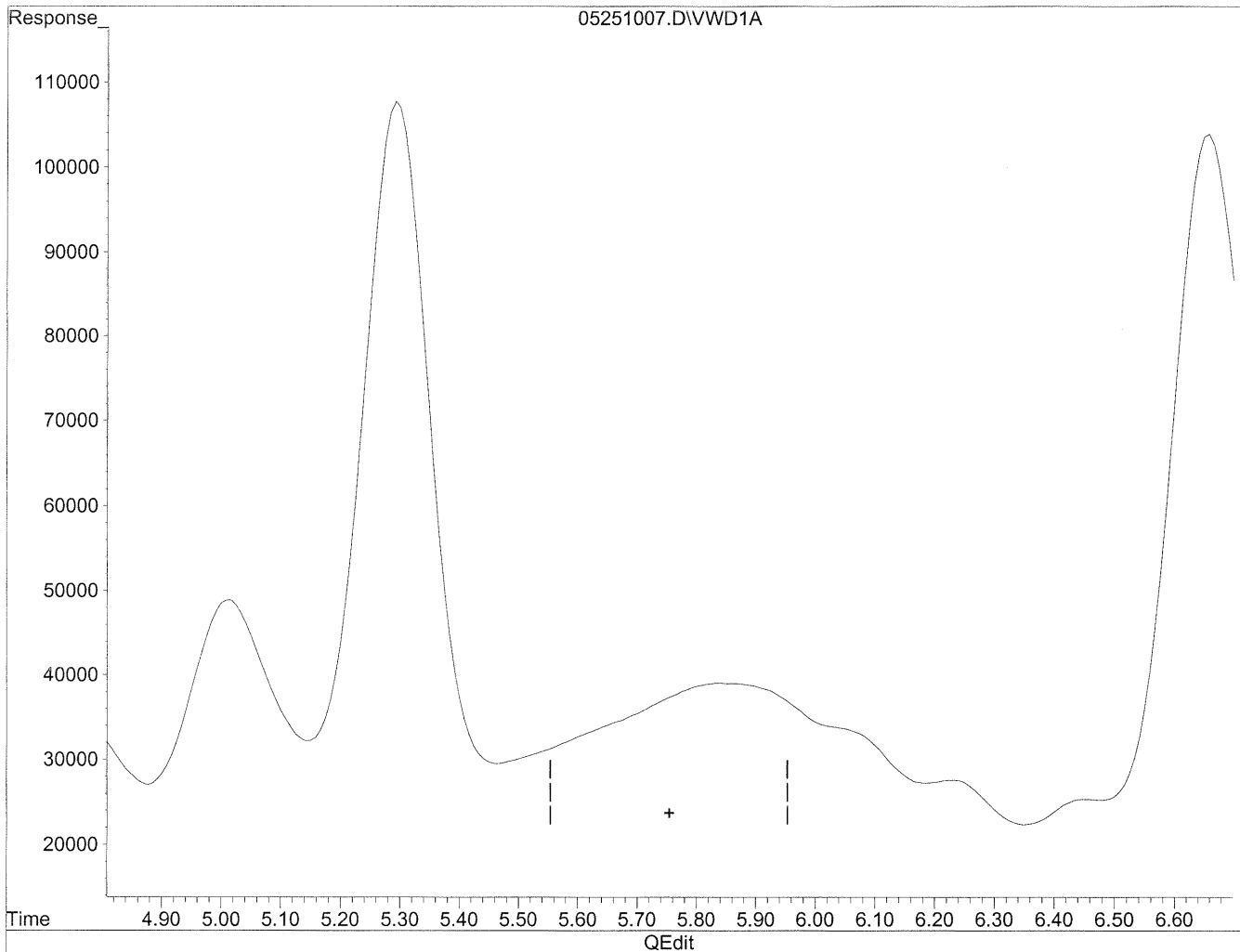
5.84min 3143.284ng/ml

response 6398271

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde
0.00min 0.000ng/ml d
response 0

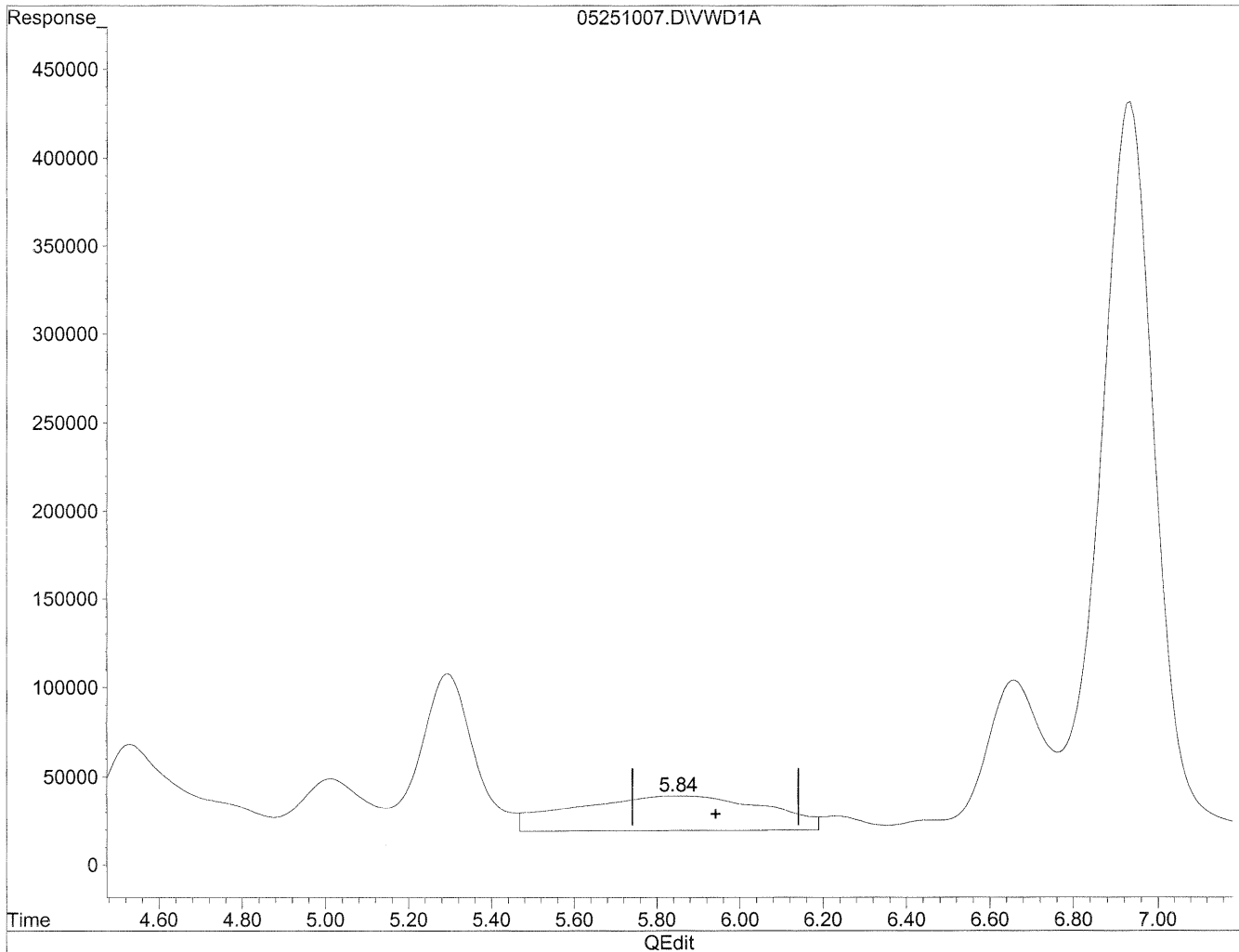
*not
real
MD
6/4/10
+1c
6/14/10*

(+) = Expected Retention Time
05251007.D TO110510.M Fri May 28 10:25:28 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration

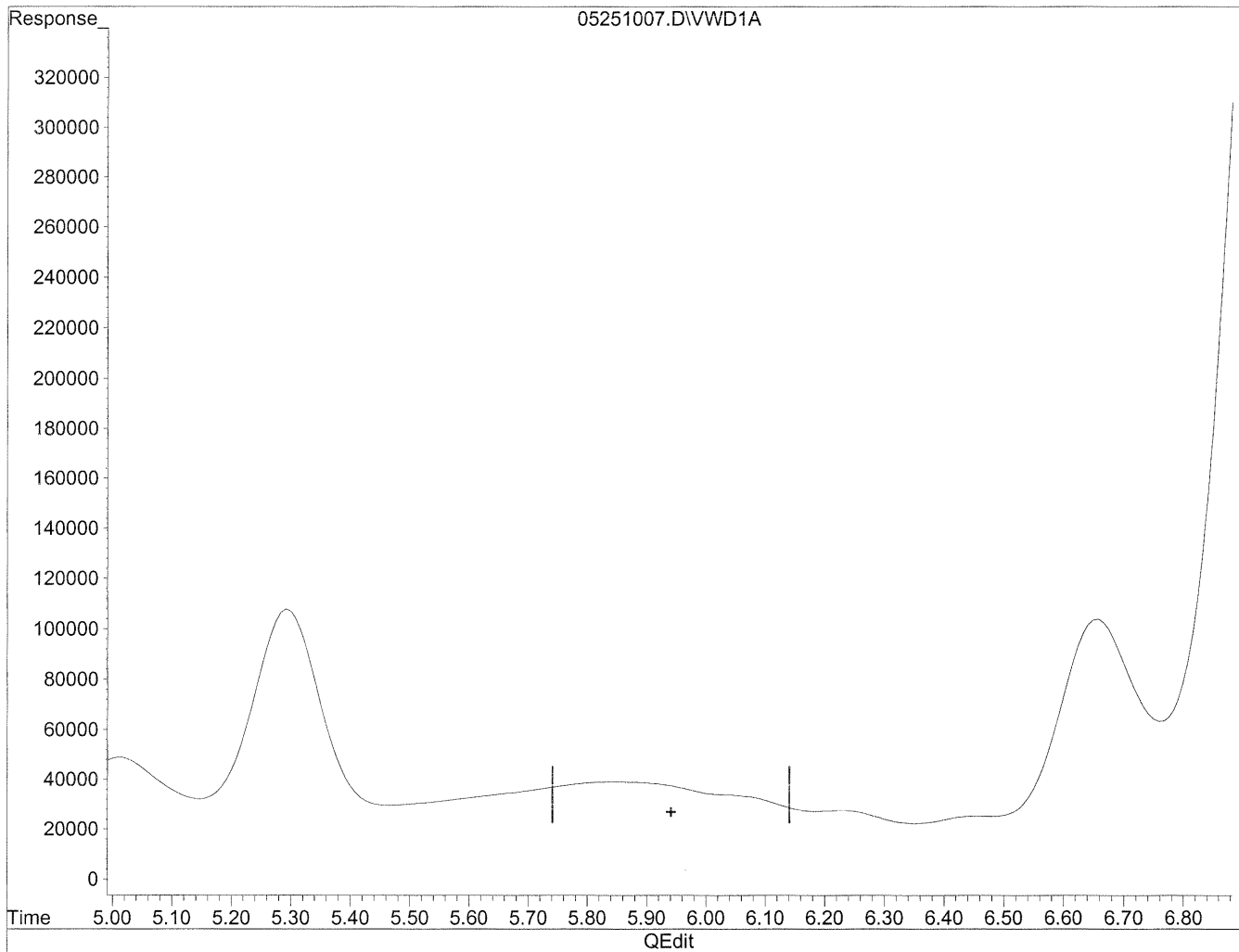


(10) m,p-Tolualdehyde
5.84min 2731.259ng/ml
response 6398271

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251007.D Vial: 104
Acq On : 25-May-2010, 12:31 Operator: MD
Sample : P1001793-002 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 12:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

0.00min 0.000ng/ml d

response 0

not real
mm 6/4/10
HC 6/14/10

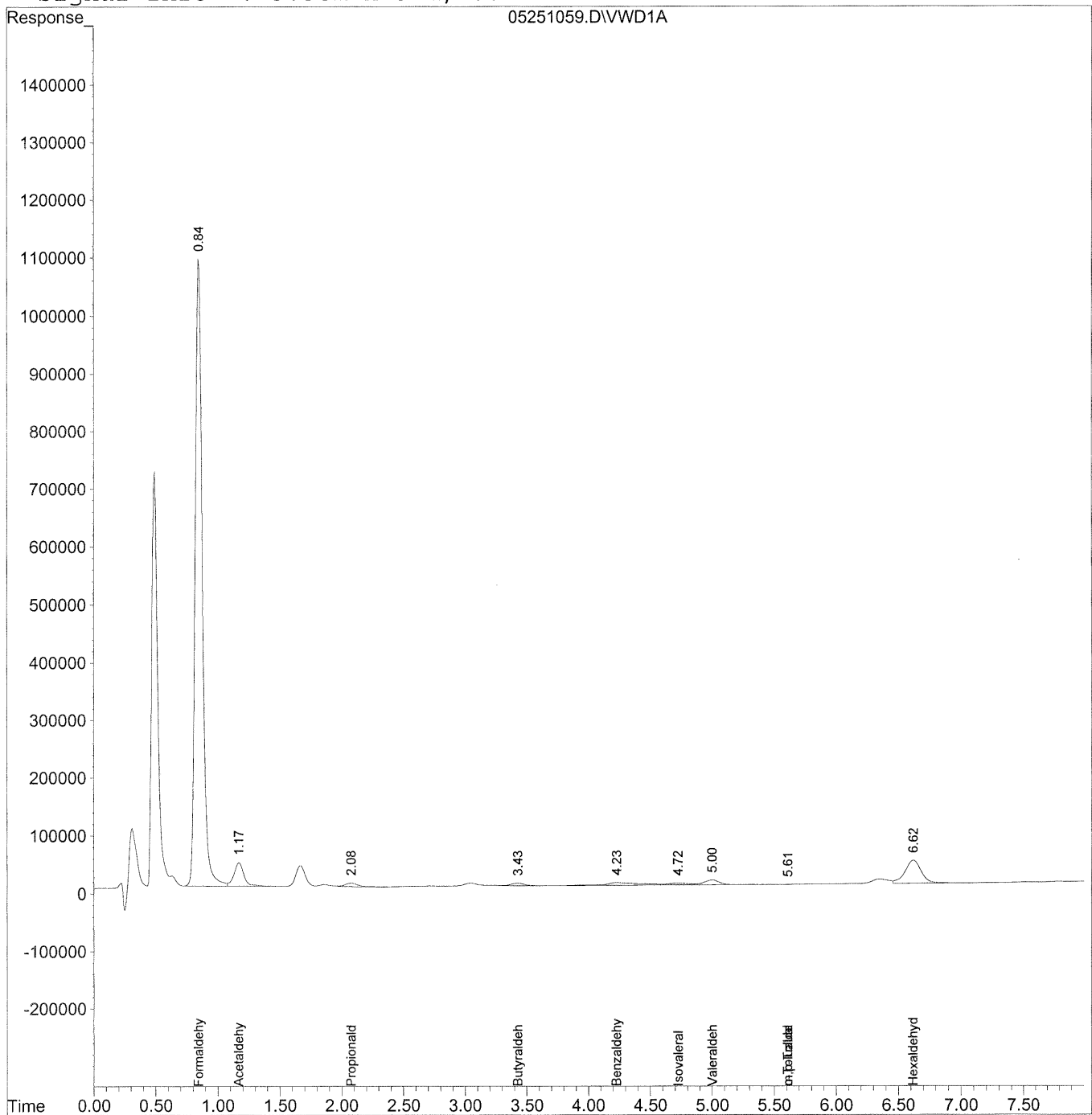
(+) = Expected Retention Time
05251007.D TO110510.M Fri May 28 10:25:34 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251059.D Vial: 140
Acq On : 25-May-2010, 21:33 Operator: MD
Sample : P1001793-002 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:56 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251059.D Vial: 140
Acq On : 25-May-2010, 21:33 Operator: MD
Sample : P1001793-002 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:56 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.85	43511311	4662.155 ng/ml
2) Acetaldehyde	1.17	2212143	328.444 ng/ml
3) Propionaldehyde	2.08	436729	89.825 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.43	325970	80.900 ng/ml
6) Benzaldehyde	4.23	953400	352.234 ng/ml
7) Isovaleraldehyde	4.73	351985	99.215 ng/ml
8) Valeraldehyde	5.00	700436	208.798 ng/ml
9) o-Tolualdehyde	5.61f	8682	4.265 ng/ml
10) m,p-Tolualdehyde	5.61	8682	3.706 ng/ml
11) Hexaldehyde	6.62	3626979	1261.394 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110525
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-003

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: 17525 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	73	42	0.12	34	0.094	
75-07-0	Acetaldehyde	7.3	5.0	0.14	2.8	0.075	
123-38-6	Propionaldehyde	2.1	3.1	0.29	1.3	0.12	
123-72-8	Butyraldehyde	2.3	12	1.0	4.1	0.35	
100-52-7	Benzaldehyde	5.1	3.2	0.12	0.73	0.029	M
590-86-3	Isovaleraldehyde	1.1	1.0	0.19	0.30	0.053	
110-62-3	Valeraldehyde	4.3	9.0	0.42	2.6	0.12	
66-25-1	n-Hexaldehyde	25	79	0.63	19	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

M = Matrix interference; results may be biased high.

NA = Not applicable.

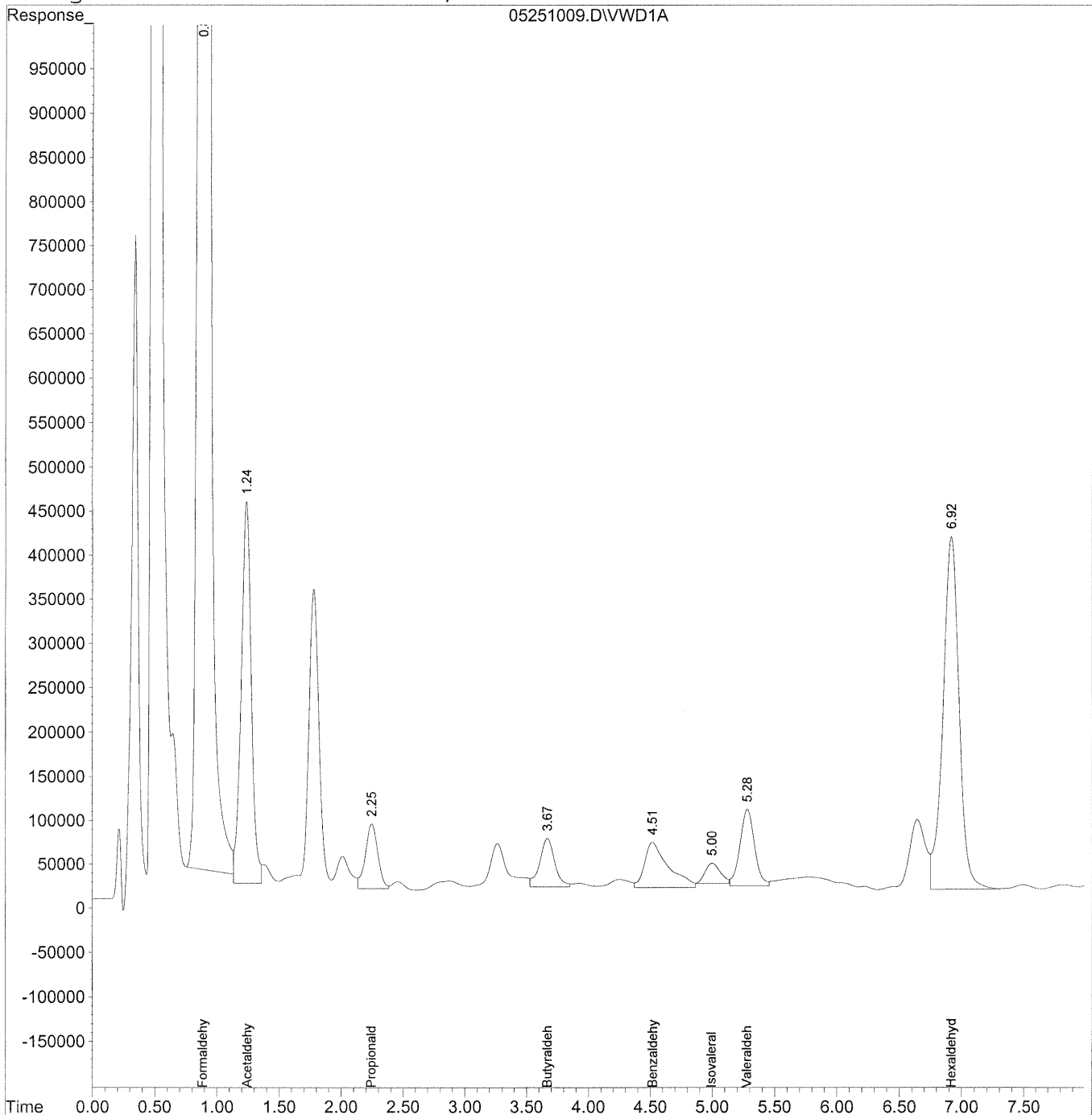
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:38 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:38 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

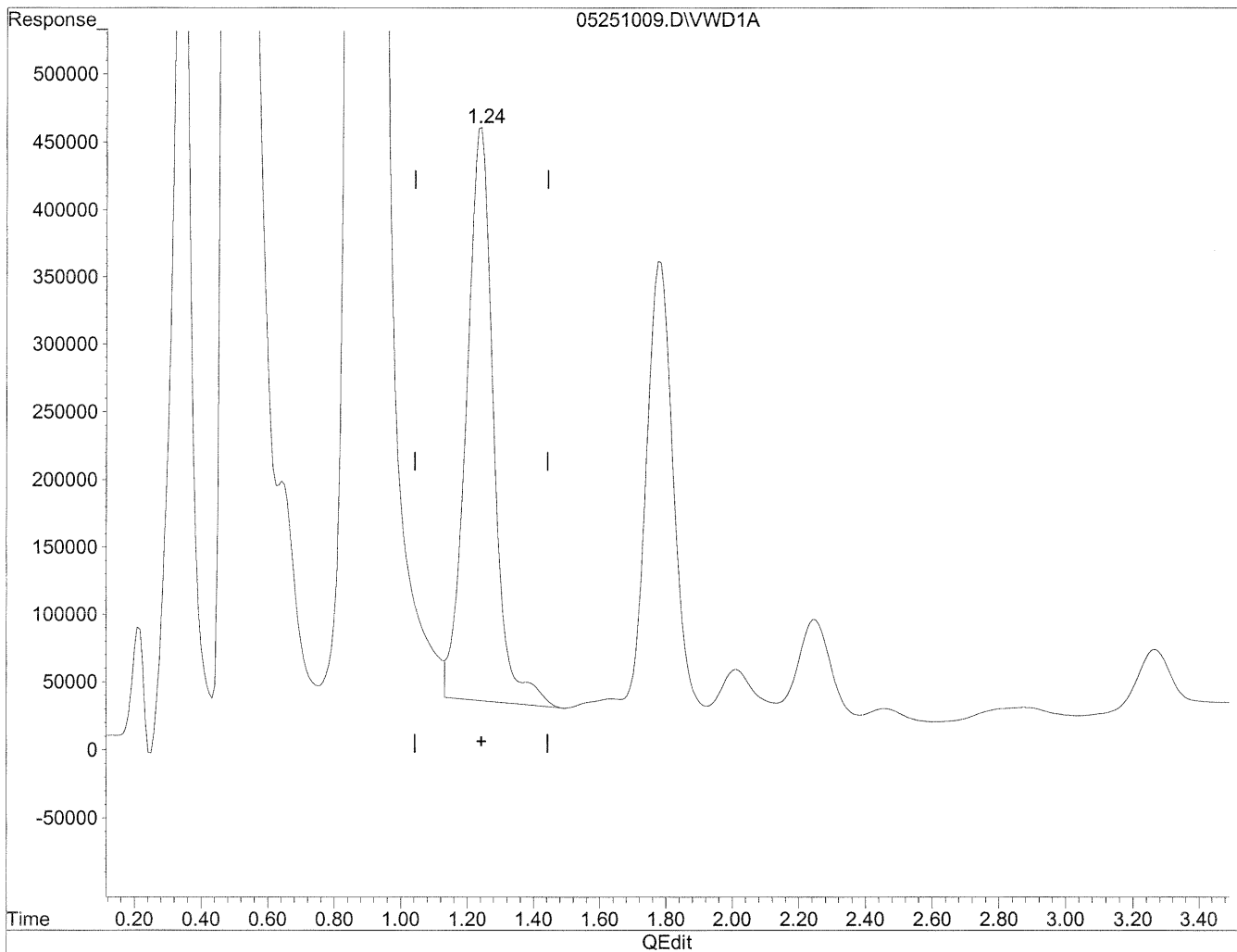
	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.89	343379446	36792.464 ng/ml <i>dil</i>
2)	Acetaldehyde	1.24	24608964	3653.769 ng/mlm
3)	Propionaldehyde	2.25	5125700	1054.232 ng/mlm
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.67	4697125	1165.741 ng/mlm
6)	Benzaldehyde	4.51	6889783	2545.433 ng/mlm
7)	Isovaleraldehyde	5.00	1986686	559.992 ng/mlm
8)	Valeraldehyde	5.28	7146048	2130.214 ng/mlm
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11)	Hexaldehyde	6.92	35654284	12399.881 ng/ml <i>dil</i>
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 3605.212ng/ml

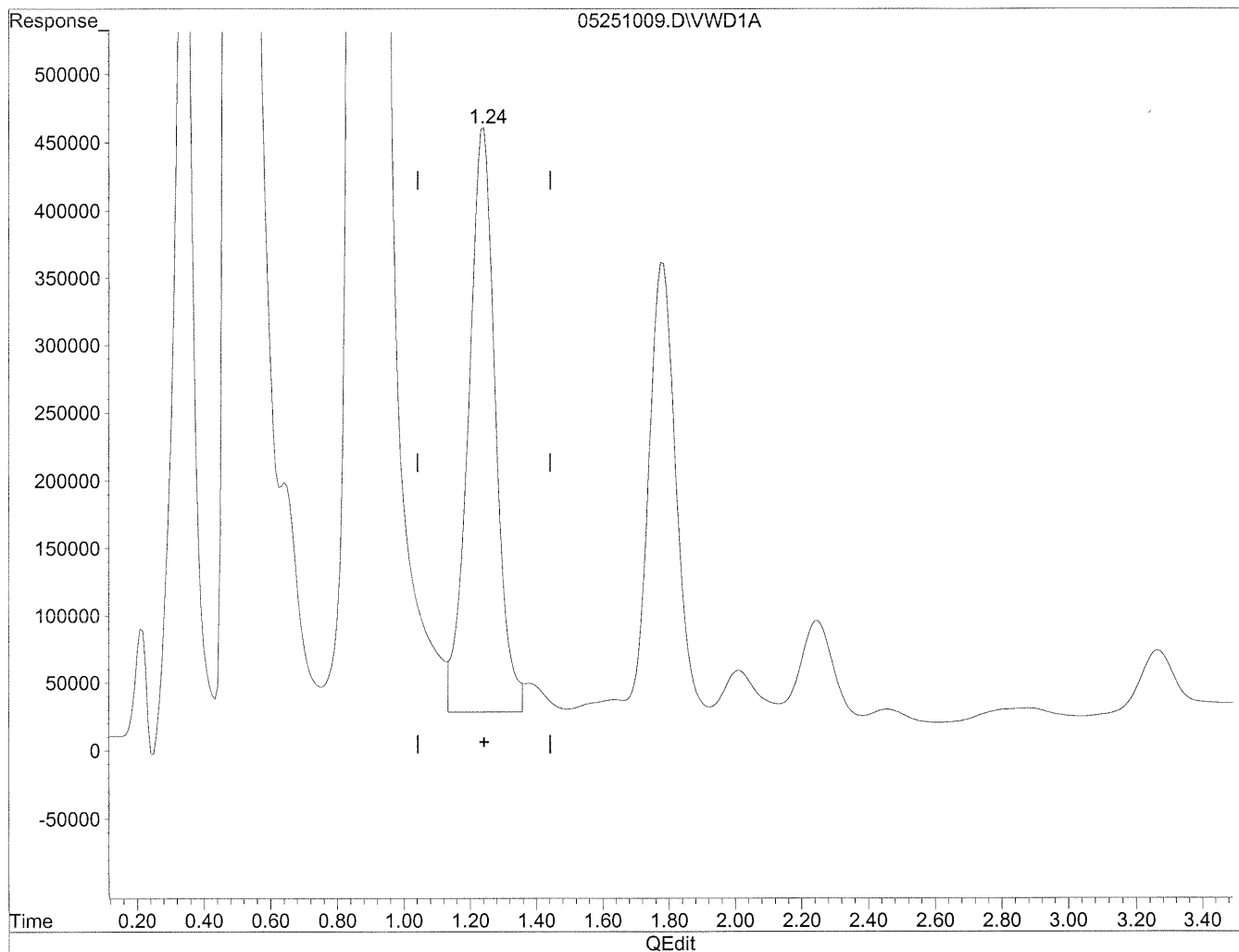
response 24281923

(+) = Expected Retention Time
05251009.D TO110510.M Fri May 28 10:35:47 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 3653.769ng/ml m

response 24608964

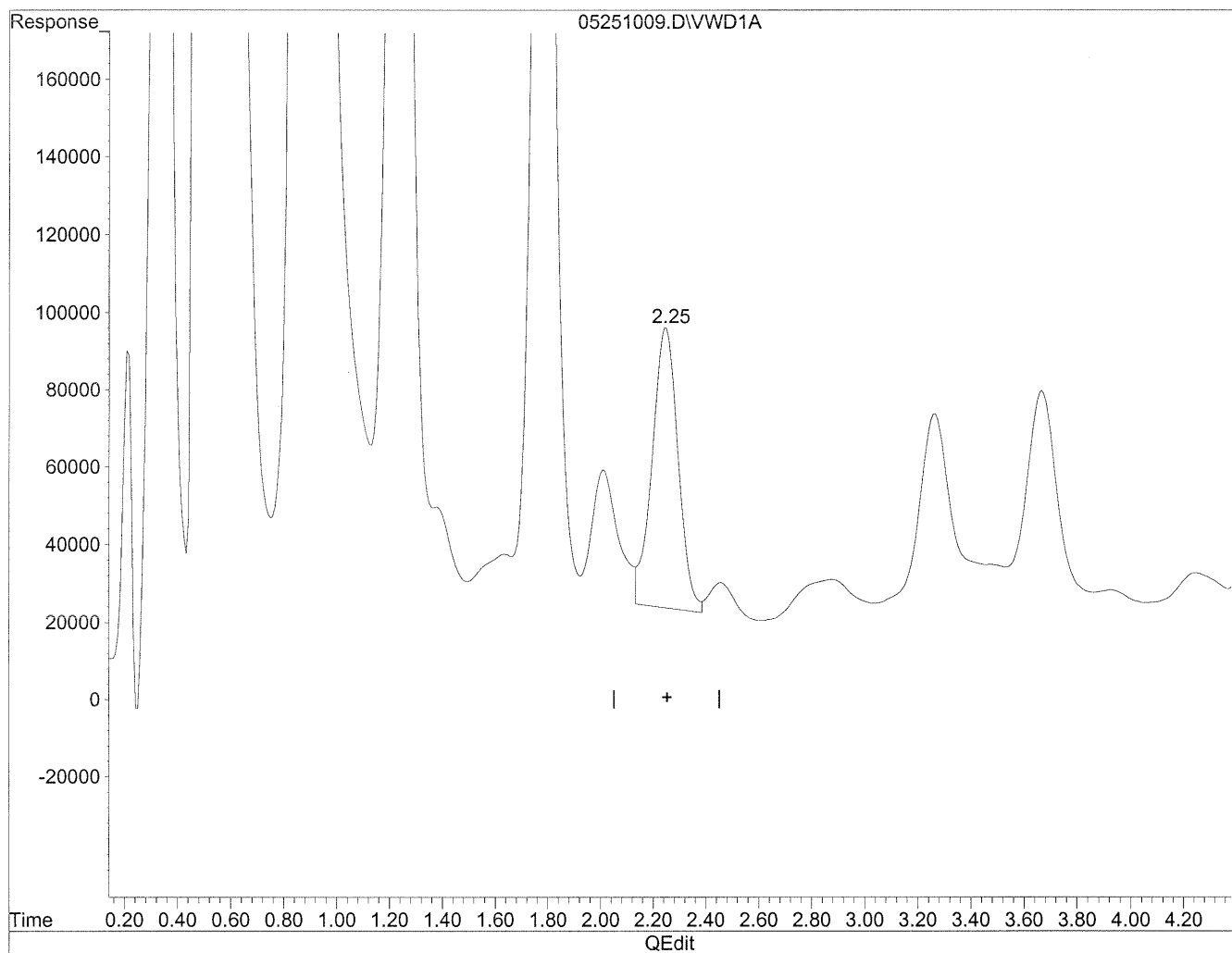
Ph
MD
6/4/10
HLC
6/14/10

(+) = Expected Retention Time
05251009.D TO110510.M Fri May 28 10:35:53 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.25min 1017.925ng/ml

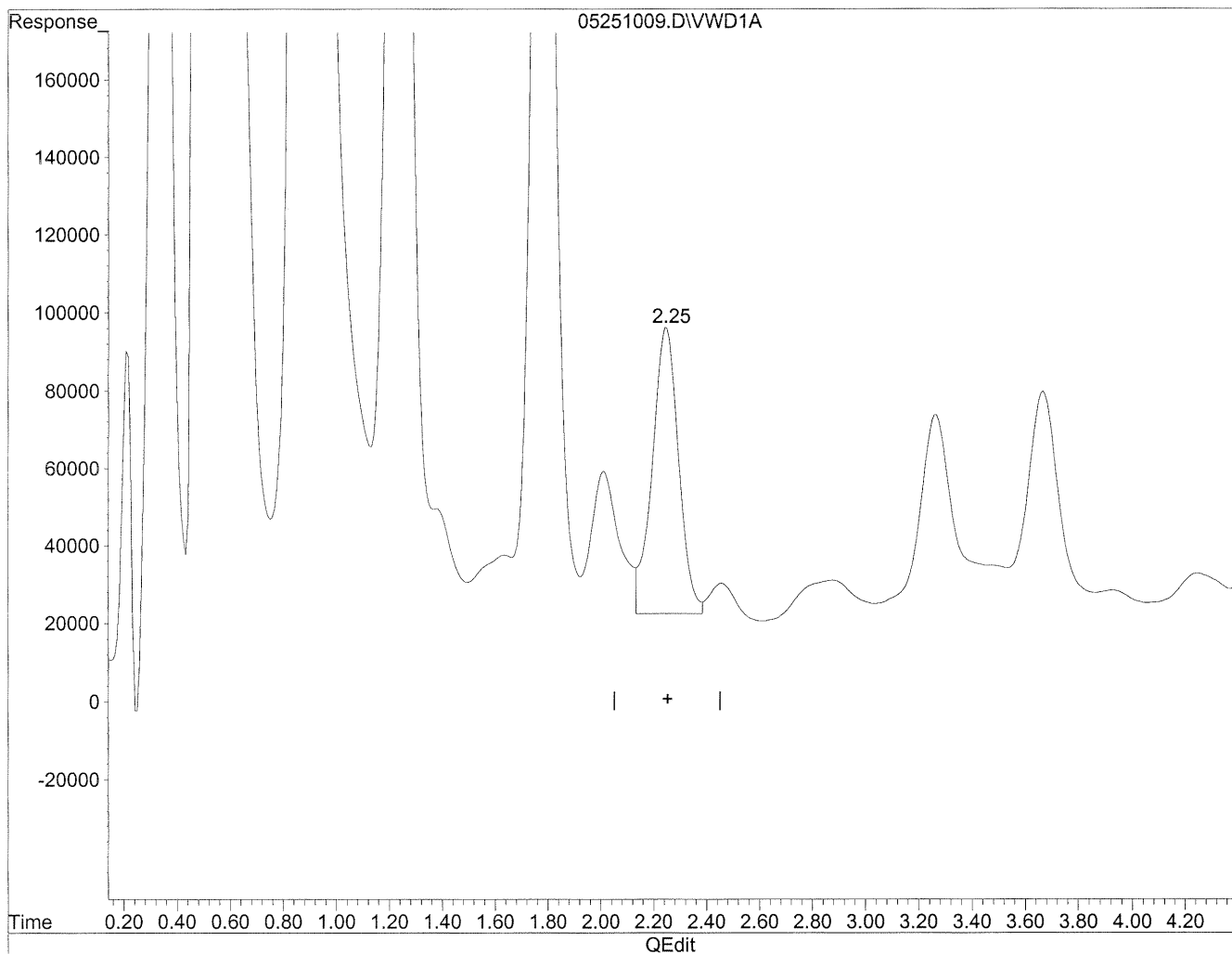
response 4949174

(+) = Expected Retention Time
05251009.D TO110510.M Fri May 28 10:36:03 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.25min 1054.232ng/ml m

response 5125700

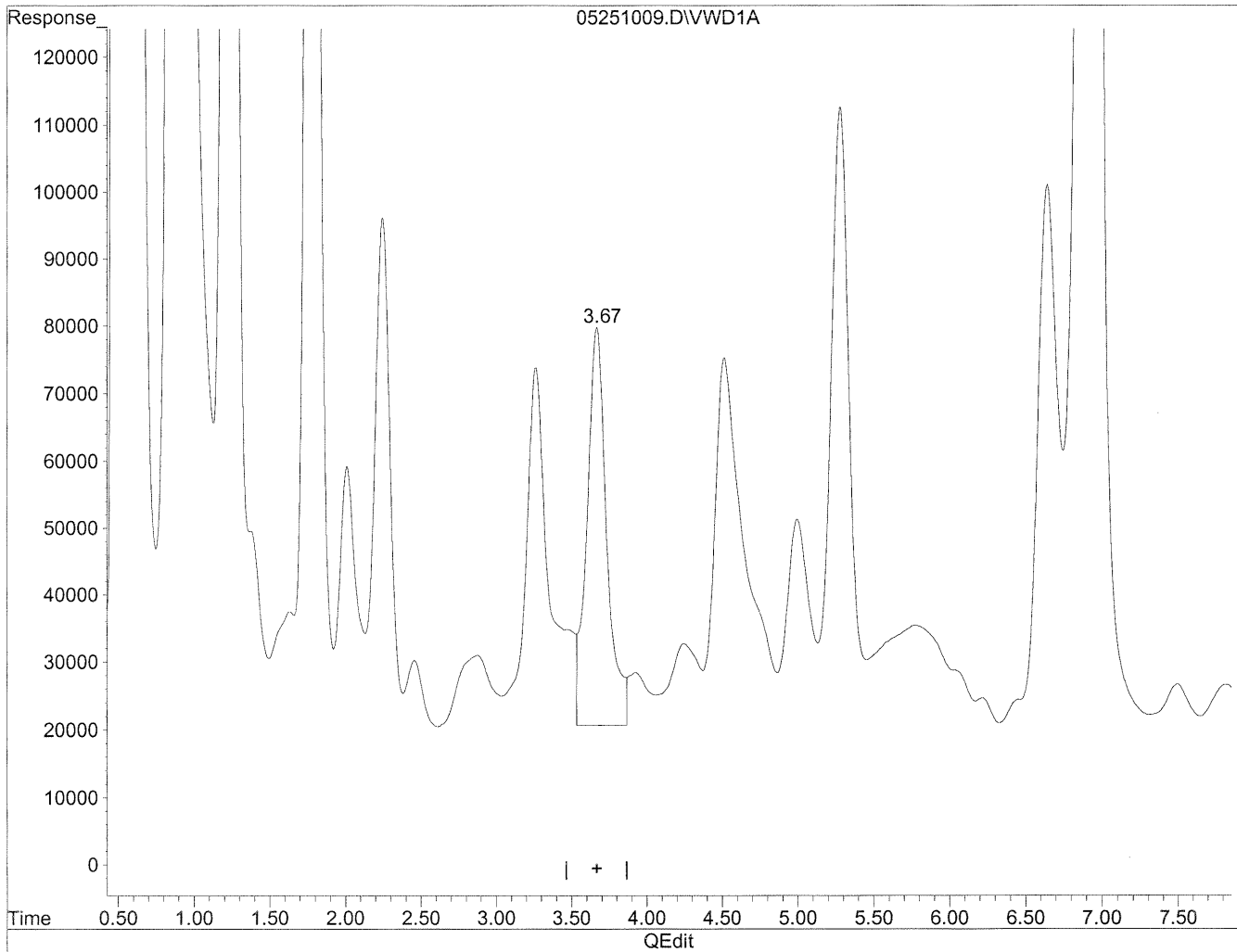
BC
MD
6/4/10

AC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.67min 1345.583ng/ml

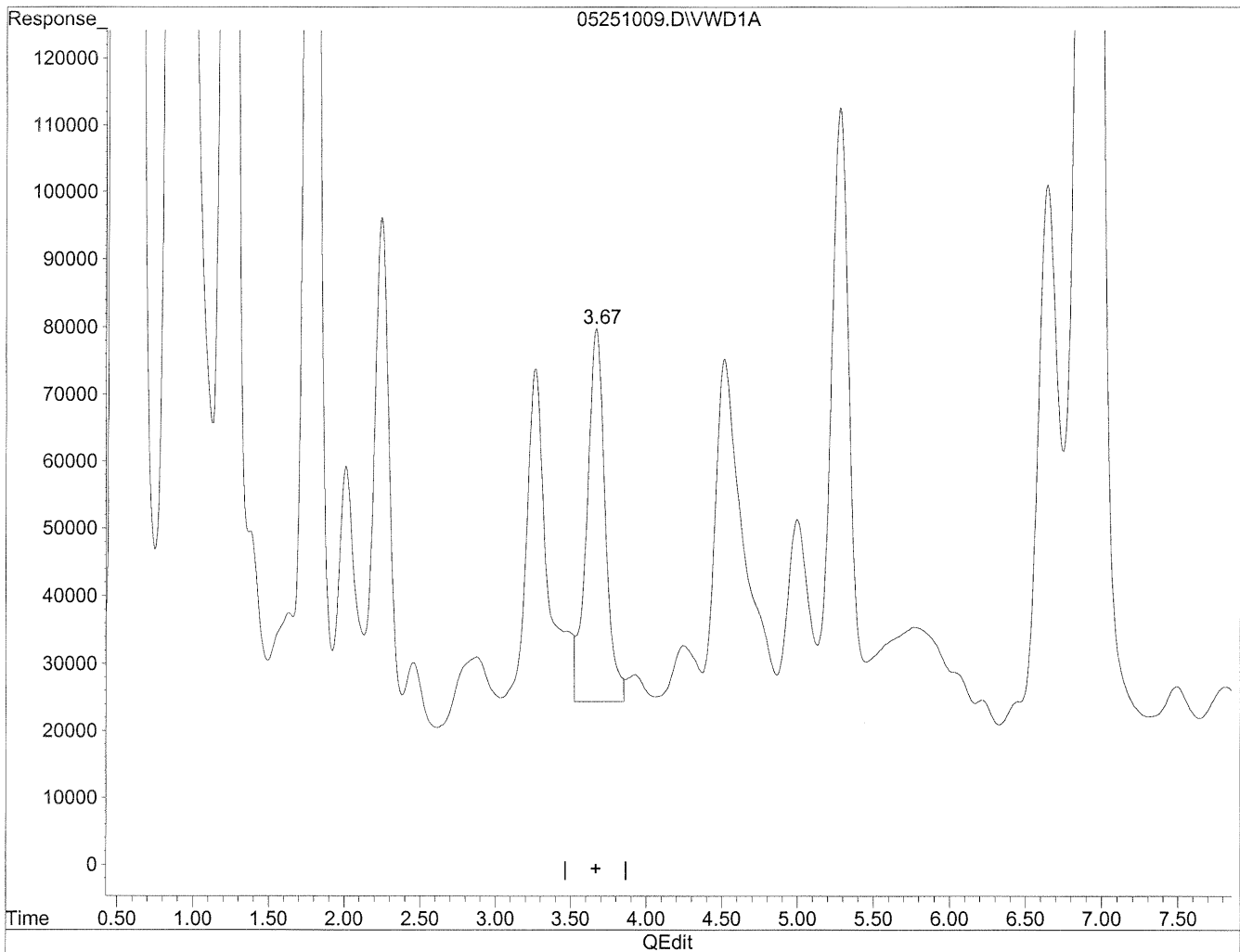
response 5421762

(+) = Expected Retention Time
05251009.D TO110510.M Fri May 28 10:36:33 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.67min 1165.741ng/ml m

response 4697125

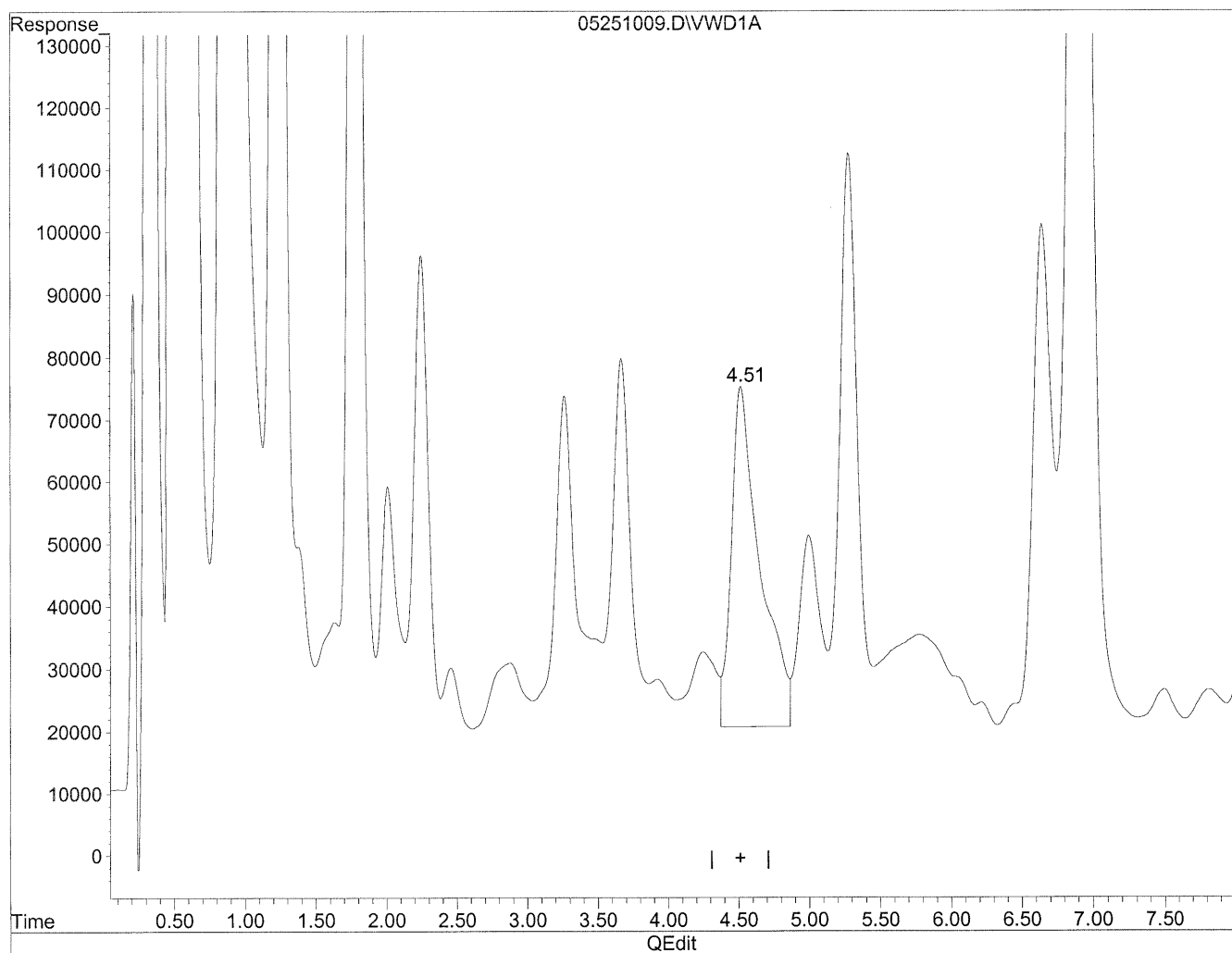
BC
m
6/4/10

HC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.52min 2835.521ng/ml

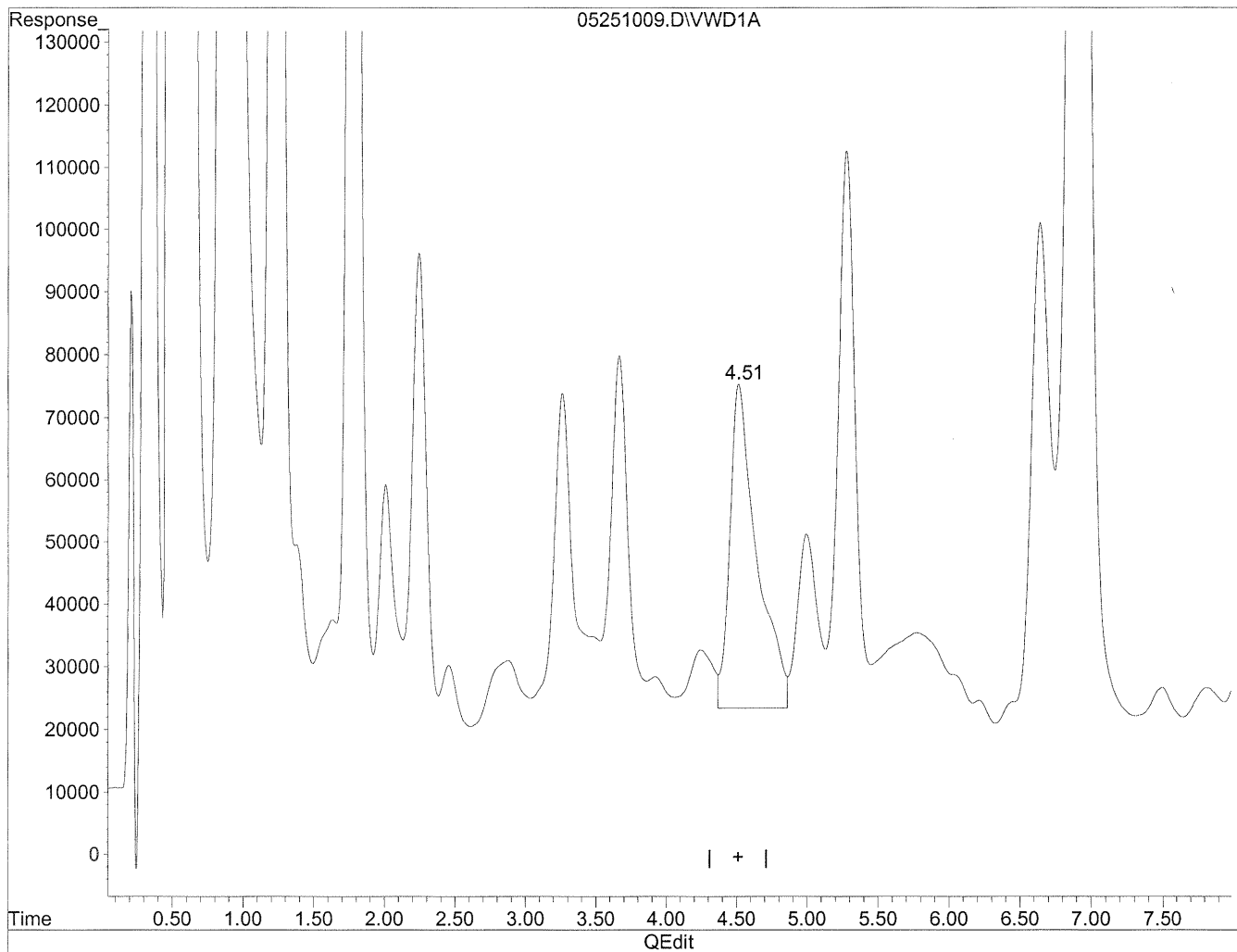
response 7674970

(+) = Expected Retention Time
05251009.D TO110510.M Fri May 28 10:37:08 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.51min 2545.433ng/ml m

response 6889783

PC
m flay
MD
6/4/10

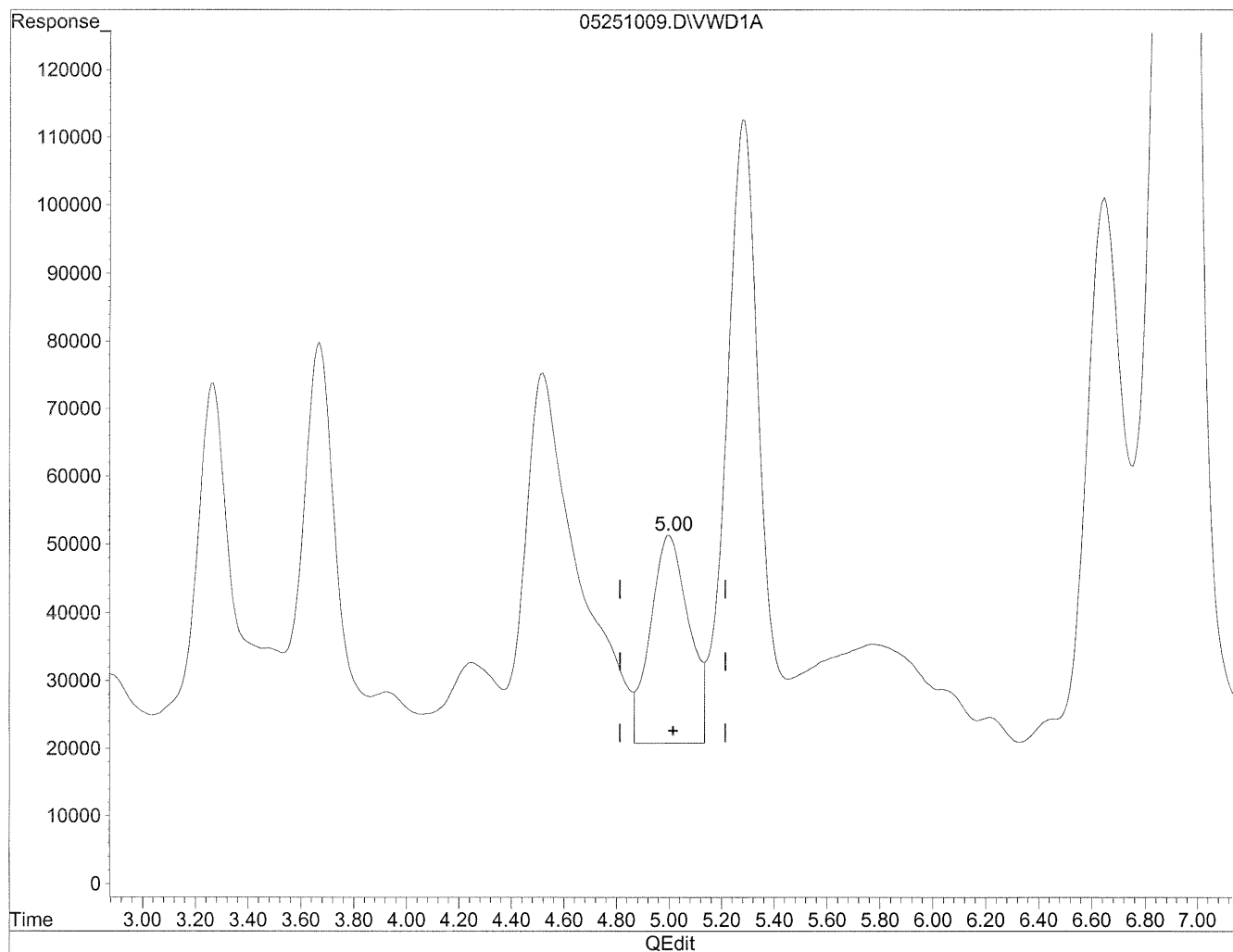
400
6/4/10

(+) = Expected Retention Time
05251009.D TO110510.M Fri May 28 10:37:22 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
 Acq On : 25-May-2010, 12:53 Operator: MD
 Sample : P1001793-003 2ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 10:30:37 2010
 Response via : Multiple Level Calibration

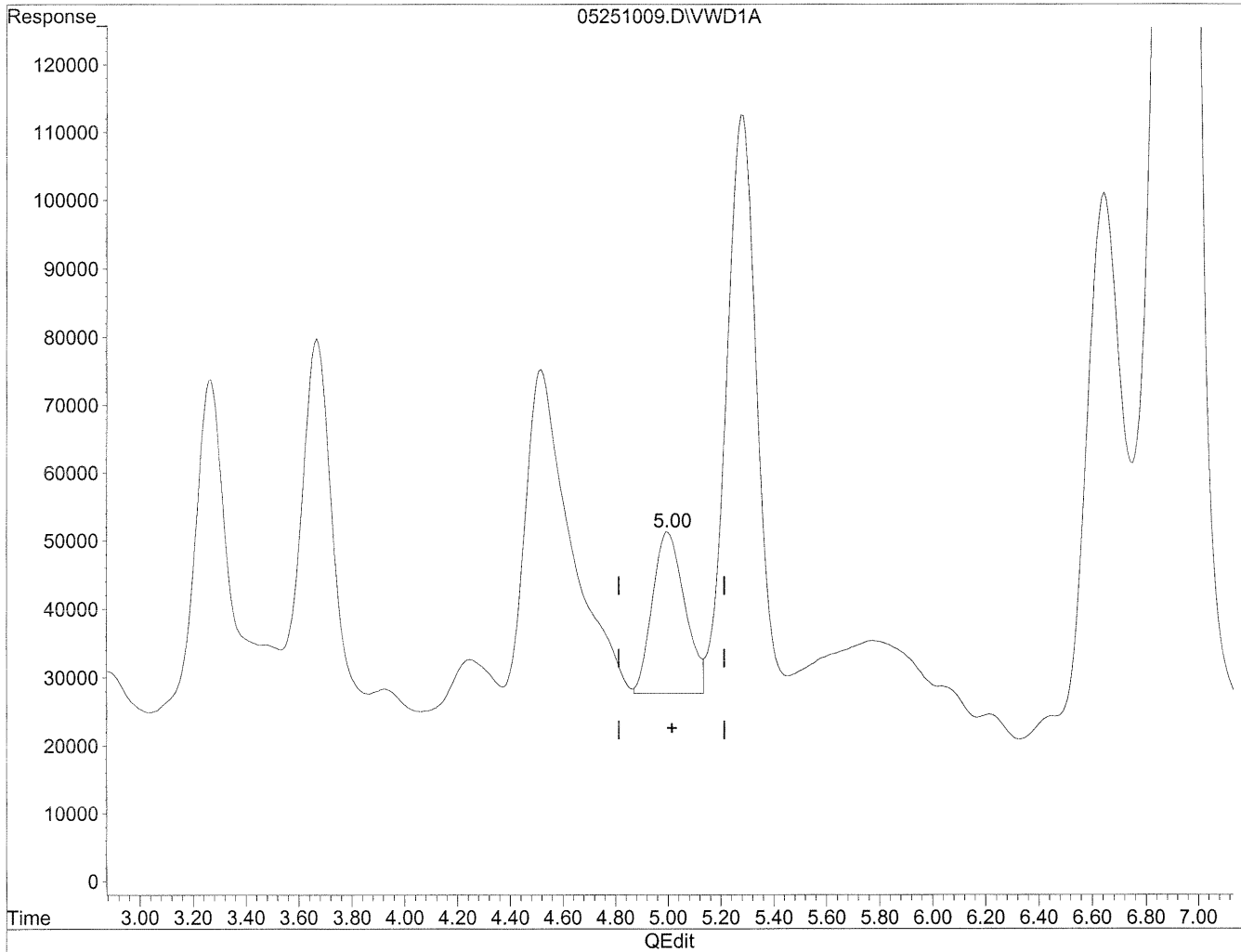


(7) Isovaleraldehyde
 5.00min 881.520ng/ml
 response 3127373

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.00min 559.992ng/ml m

response 1986686

12
m
6/4/10

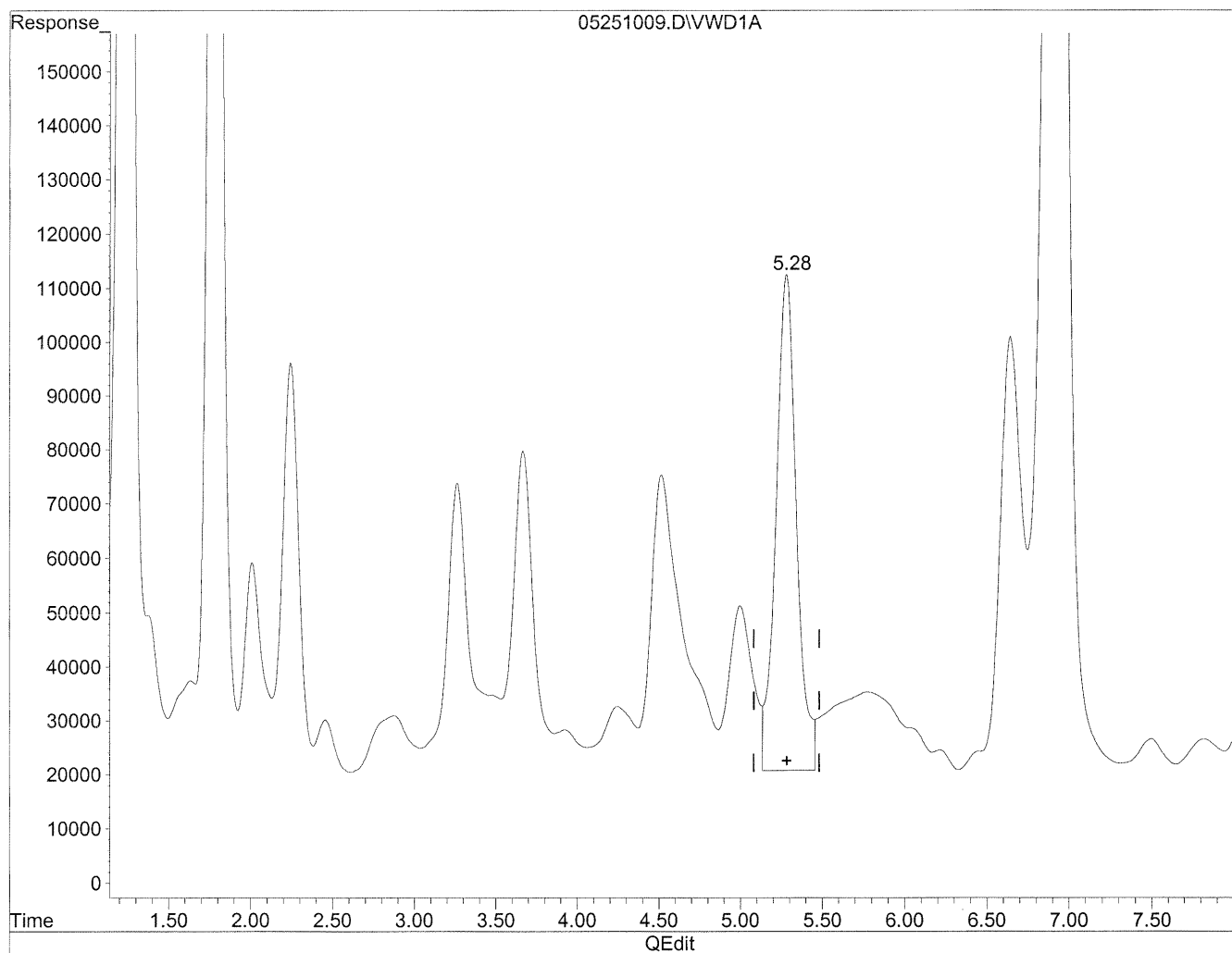
11C
6/4/10

(+) = Expected Retention Time
05251009.D TO110510.M Fri May 28 10:37:36 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

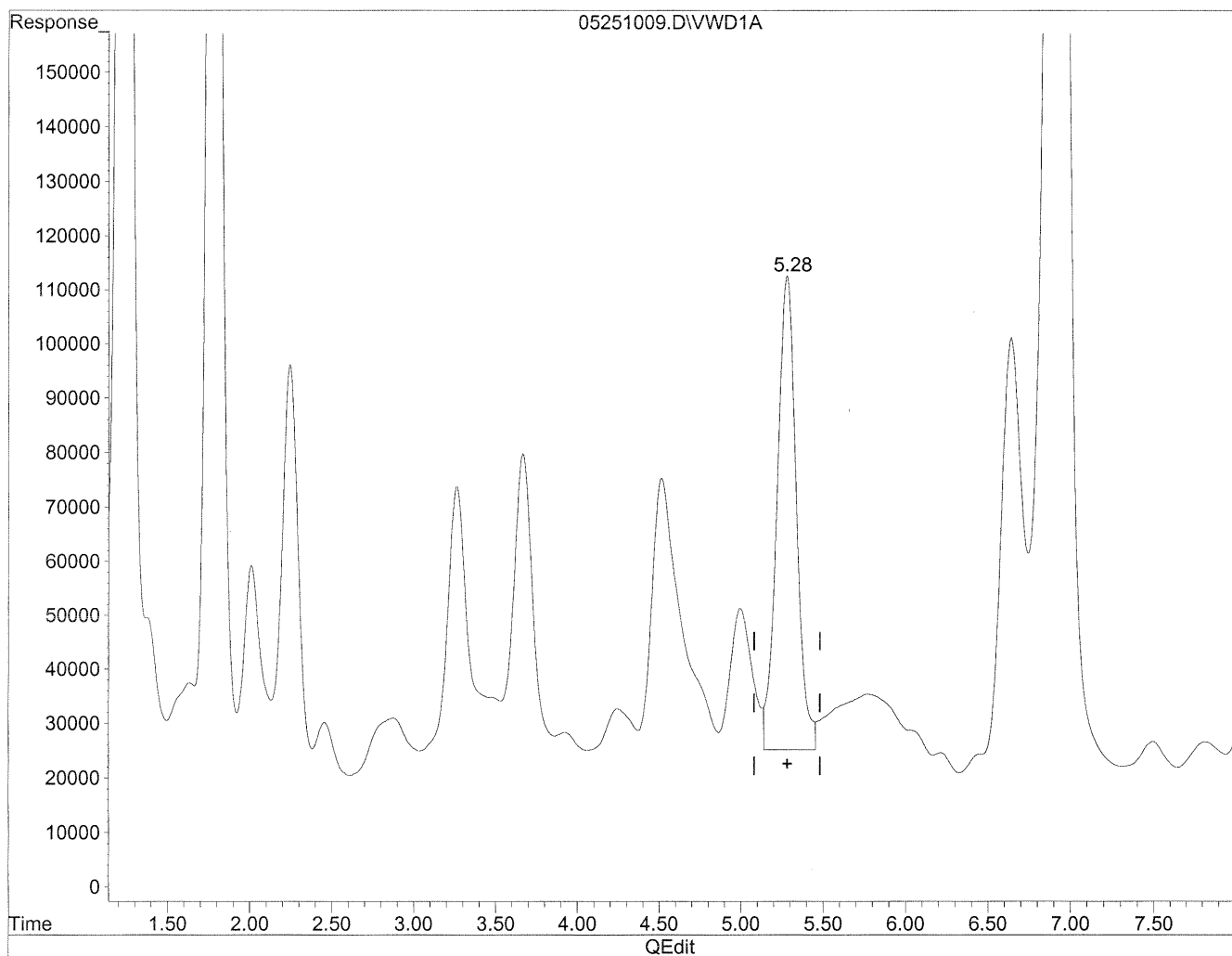
5.28min 2393.776ng/ml

response 8030196

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.28min 2130.214ng/ml m

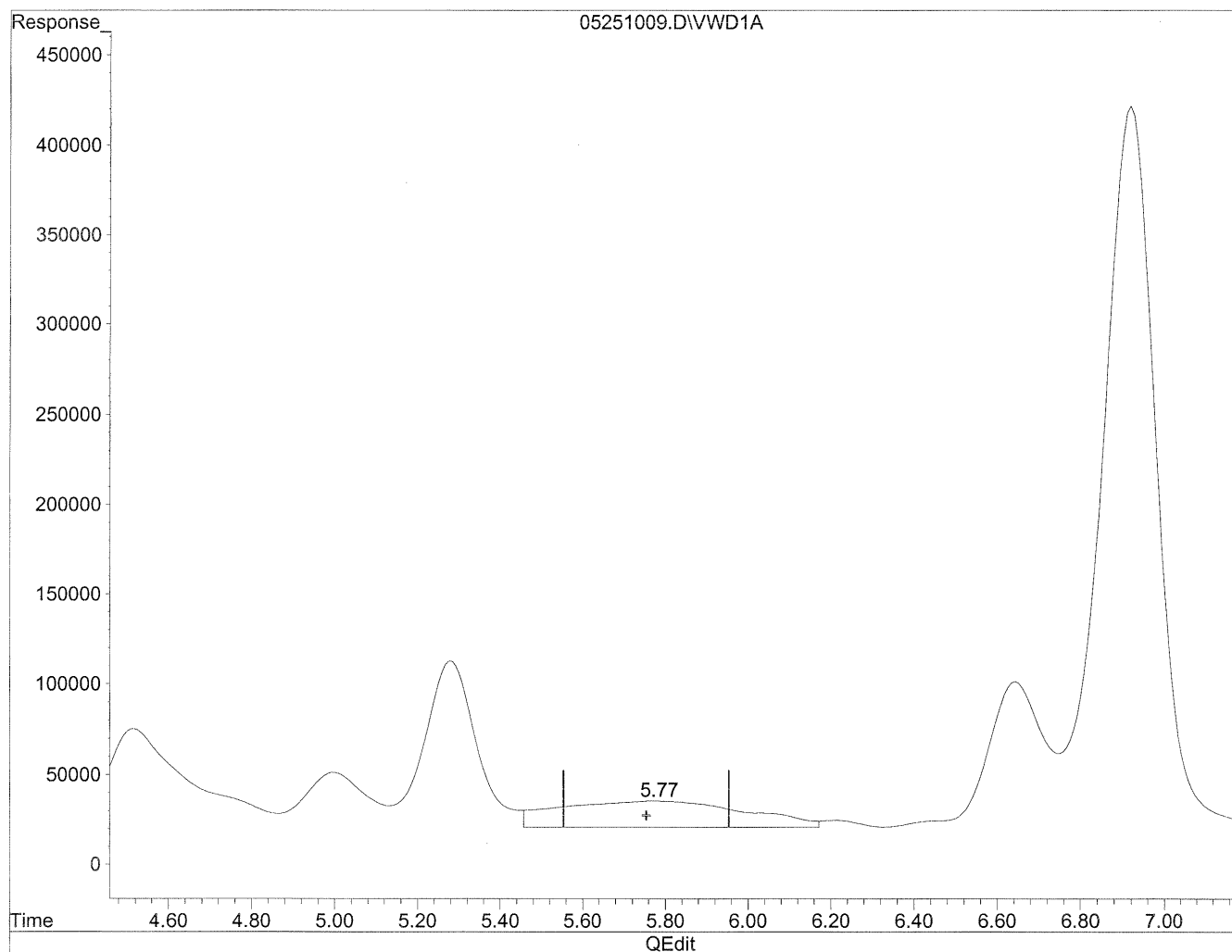
response 7146048

PL
6/4/10
MC
6/14/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

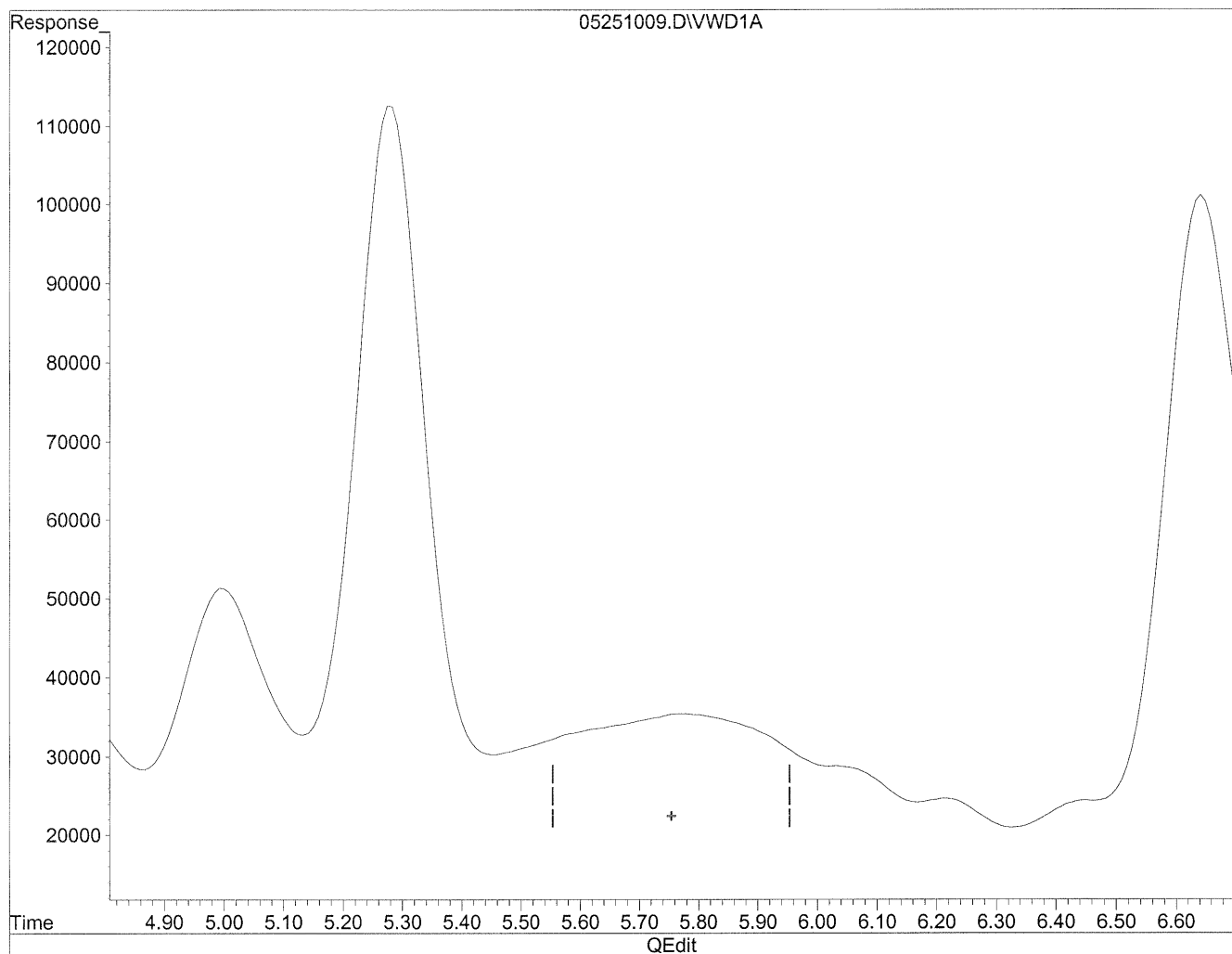
5.78min 2270.467ng/ml

response 4621619

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251009.D Vial: 105
Acq On : 25-May-2010, 12:53 Operator: MD
Sample : P1001793-003 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde
0.00min 0.000ng/ml d
response 0

not real
min 6/4/10

file
6/4/10

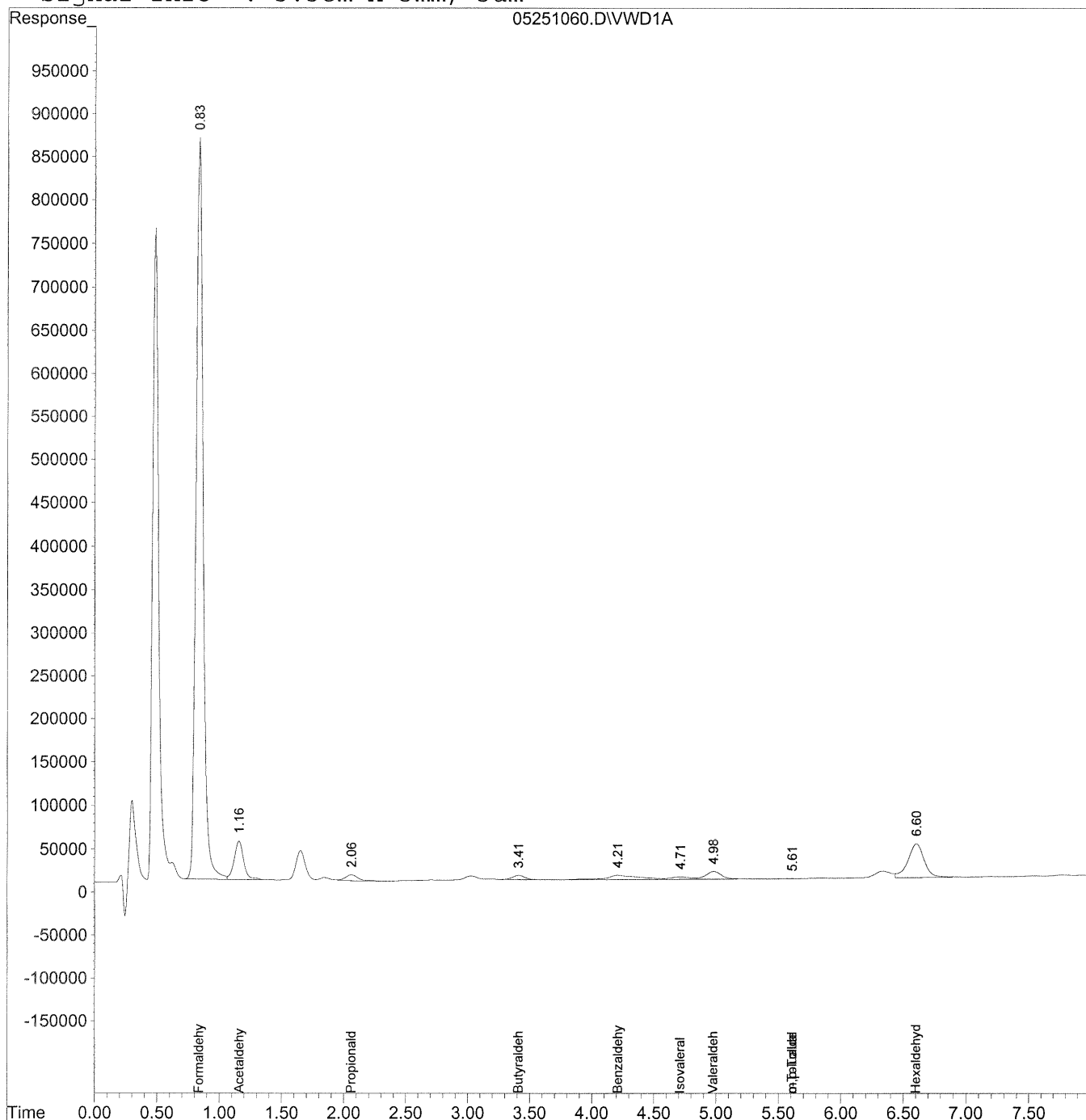
(+) = Expected Retention Time
05251009.D TO110510.M Fri May 28 10:38:11 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251060.D Vial: 141
 Acq On : 25-May-2010, 21:43 Operator: MD
 Sample : P1001793-003 2ml 10x dil Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 12:57 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 11:37:19 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251060.D Vial: 141
Acq On : 25-May-2010, 21:43 Operator: MD
Sample : P1001793-003 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:57 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.84	34088835	3652.555 ng/ml
2)	Acetaldehyde	1.16	2395903	355.727 ng/ml
3)	Propionaldehyde	2.06	515586	106.044 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.41	319248	79.231 ng/ml
6)	Benzaldehyde	4.21	950172	351.042 ng/ml
7)	Isovaleraldehyde	4.72	319897	90.170 ng/ml
8)	Valeraldehyde	4.98	786209	234.367 ng/ml
9)	o-Tolualdehyde	5.61f	18444	9.061 ng/ml
10)	m,p-Tolualdehyde	5.61	18444	7.873 ng/ml
11)	Hexaldehyde	6.60	3576355	1243.788 ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110526
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-004

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: 17525 Minutes

CAS #	Compound	Result	Result	MRL	Result	MRL	Data Qualifier
		µg/Sample	µg/m ³	µg/m ³	ppbV	ppbV	
50-00-0	Formaldehyde	2.7	1.6	0.12	1.3	0.094	
75-07-0	Acetaldehyde	1.2	0.80	0.14	0.44	0.075	
123-38-6	Propionaldehyde	0.22	0.32	0.29	0.13	0.12	
123-72-8	Butyraldehyde	0.36	1.9	1.0	0.63	0.35	
100-52-7	Benzaldehyde	< 0.20	ND	0.12	ND	0.029	
590-86-3	Isovaleraldehyde	0.38	0.35	0.19	0.10	0.053	
110-62-3	Valeraldehyde	< 0.20	ND	0.42	ND	0.12	
66-25-1	n-Hexaldehyde	0.21	0.67	0.63	0.16	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

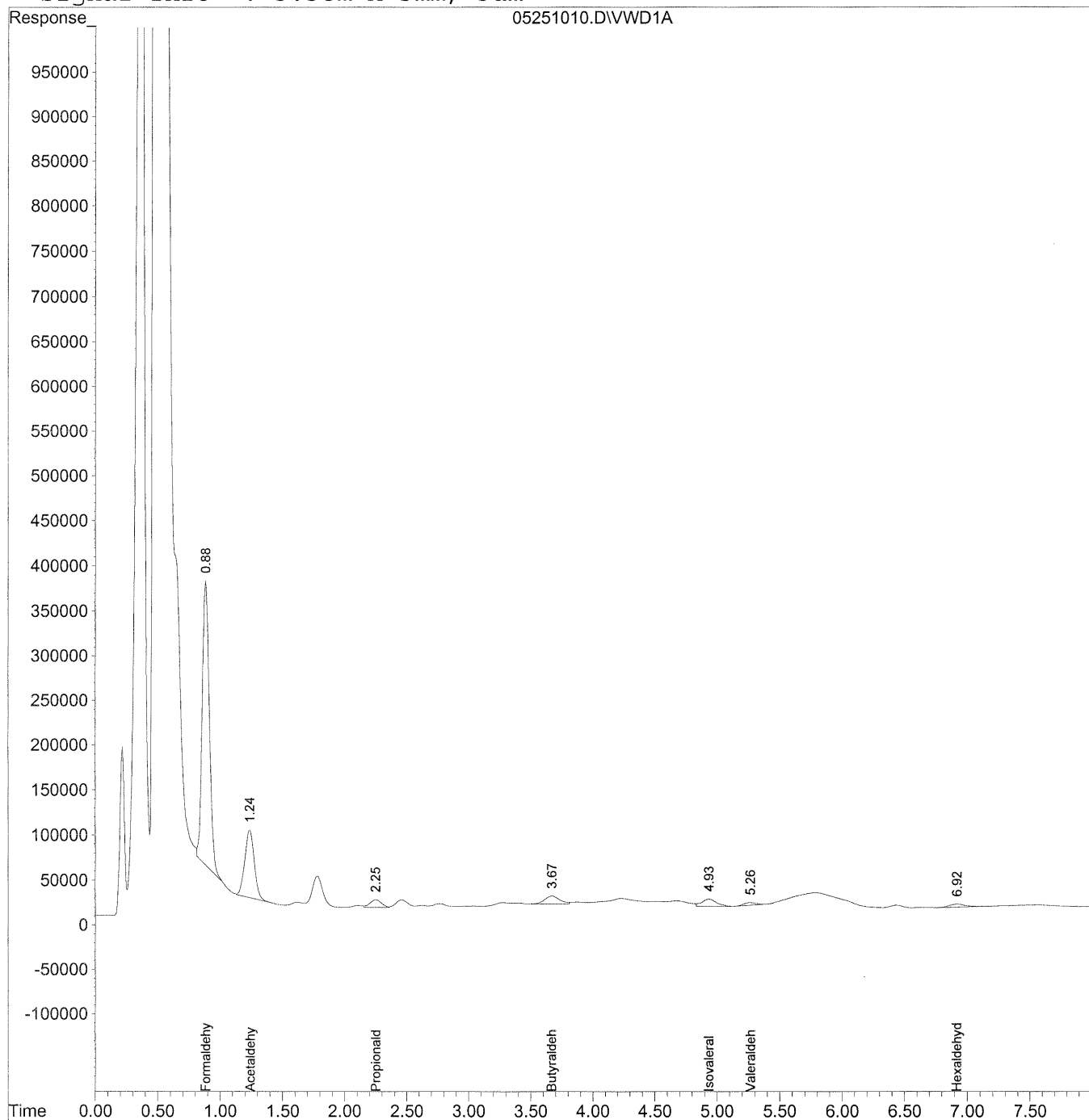
Verified By: Per Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:43 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:43 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

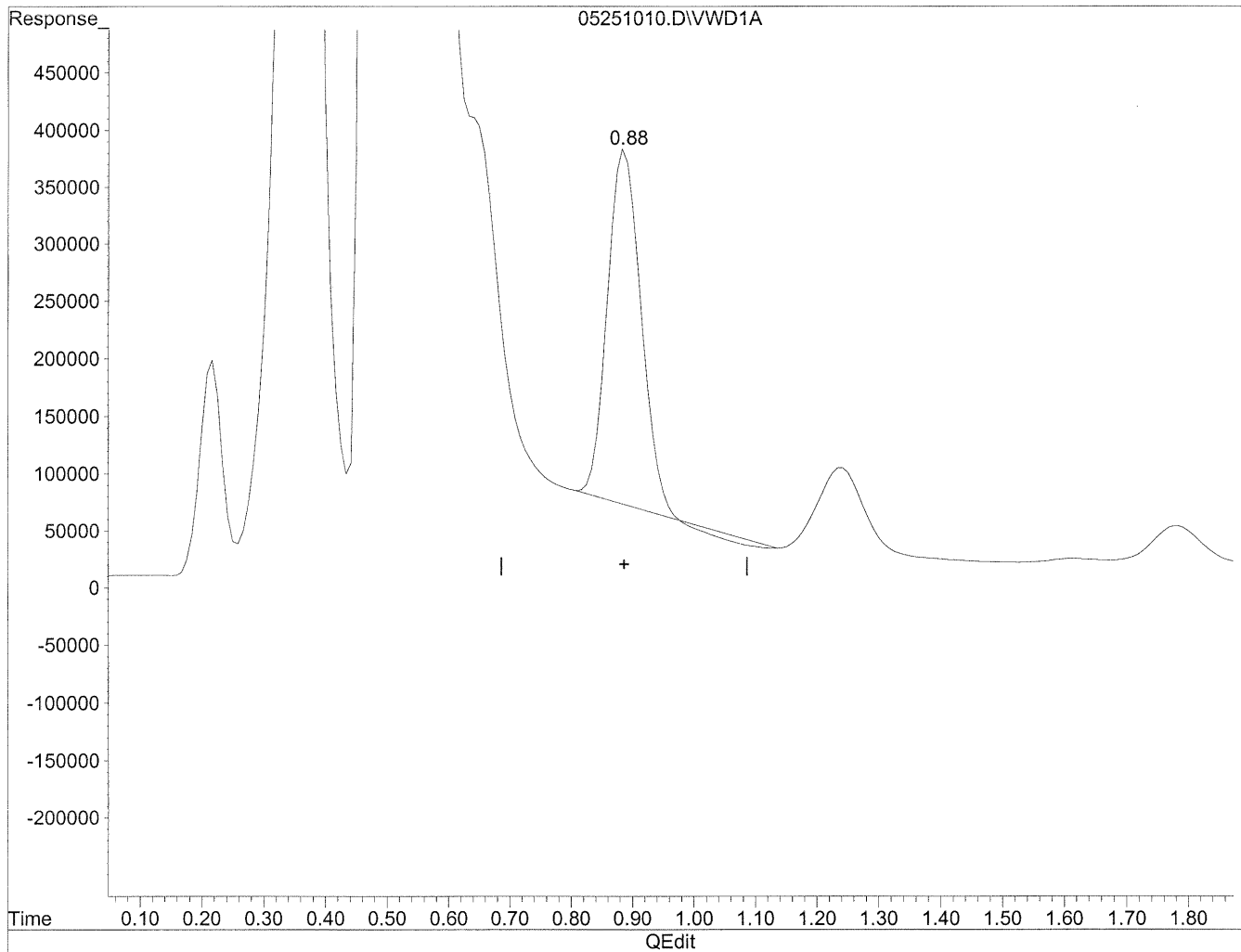
	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.88	12582363	1348.177 ng/mlm
2)	Acetaldehyde	1.24	3963665	588.498 ng/mlm
3)	Propionaldehyde	2.25	525915	108.168 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.67	721949	179.175 ng/mlm
6)	Benzaldehyde	0.00	0	N.D. ng/ml
7)	Isovaleraldehyde	4.94	671321	189.227 ng/ml
8)	Valeraldehyde	5.27	200225	59.686 ng/ml
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11)	Hexaldehyde	6.92	304055	105.744 ng/mlm
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:13 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.89min 1244.648ng/ml

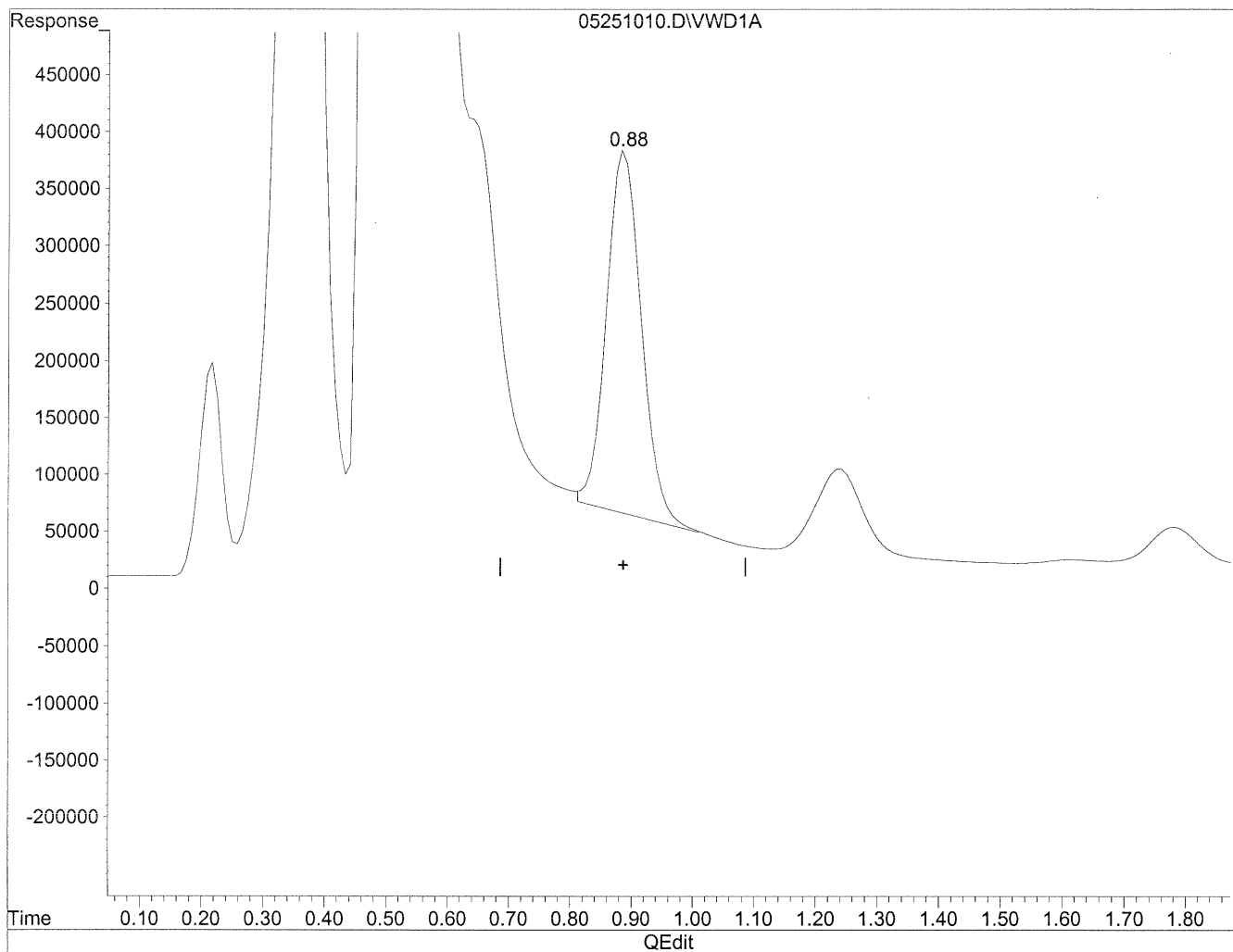
response 11616144

(+) = Expected Retention Time
05251010.D TO110510.M Fri May 28 10:41:03 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:13 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 1348.177ng/ml m

response 12582363

6/4/10

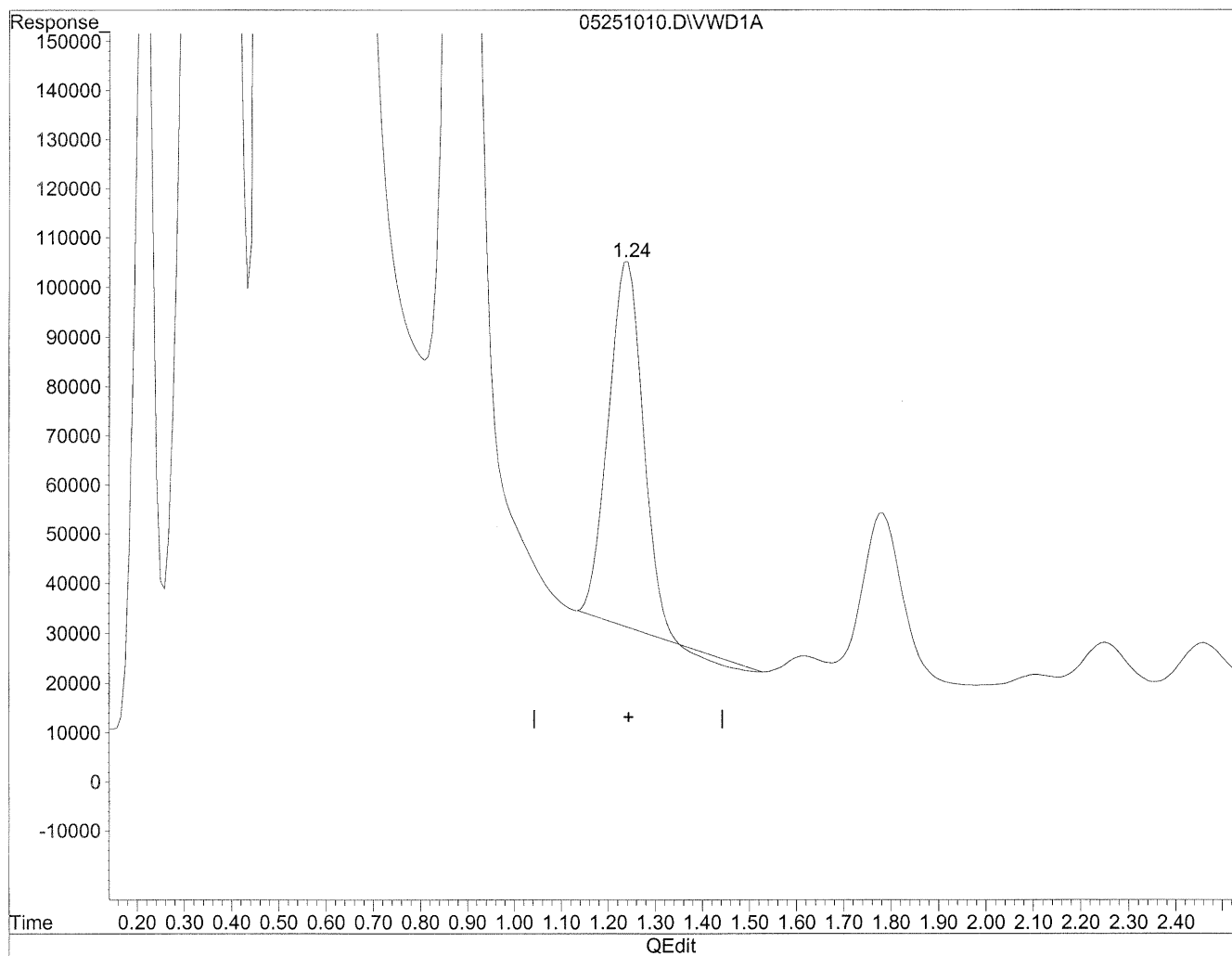
BC
MD
6/4/10

(+) = Expected Retention Time
05251010.D TO110510.M Fri May 28 10:41:08 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:13 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

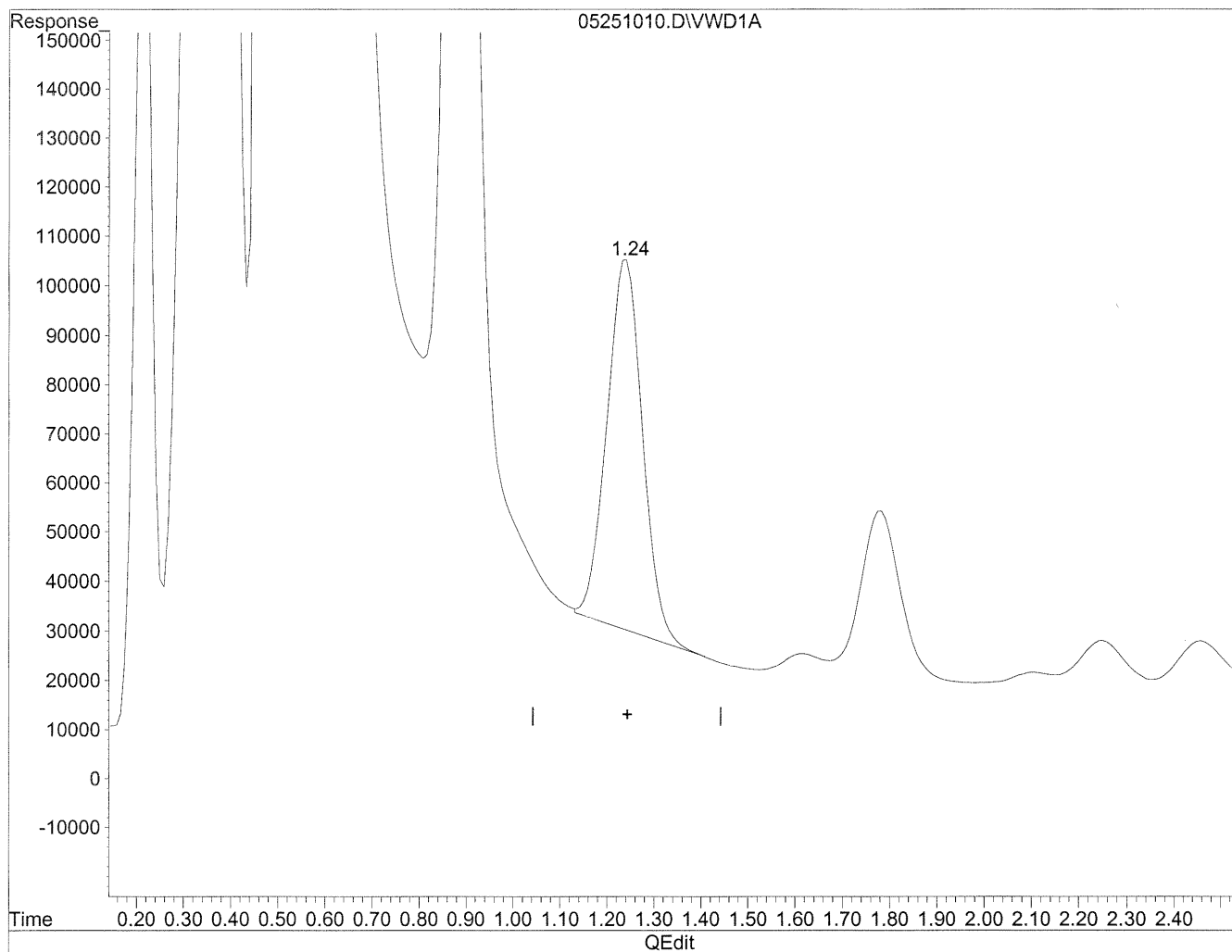


(2) Acetaldehyde
1.24min 556.857ng/ml
response 3750557

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:13 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 588.498ng/ml m

response 3963665

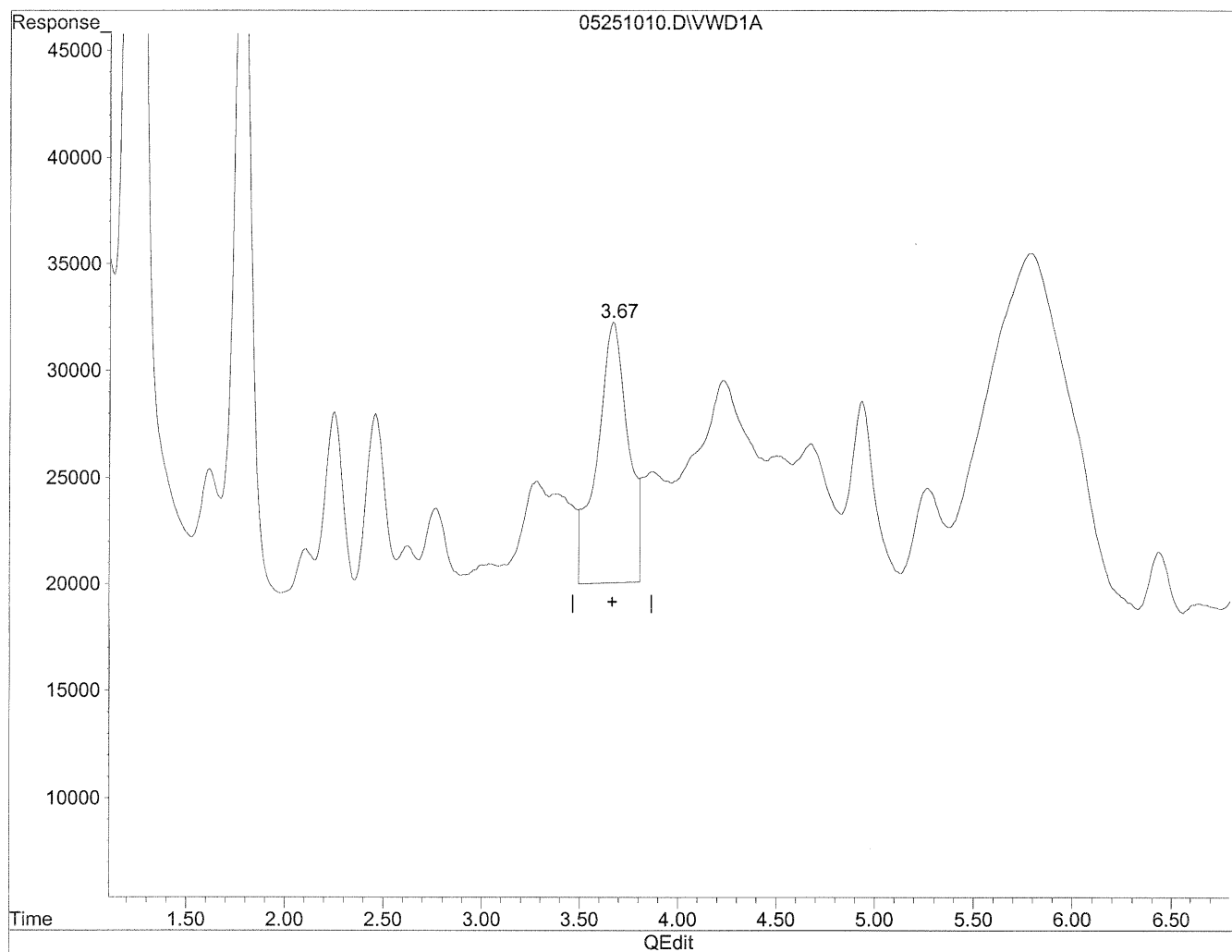
PC
MD
6/4/10

HL
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:13 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.67min 333.243ng/ml

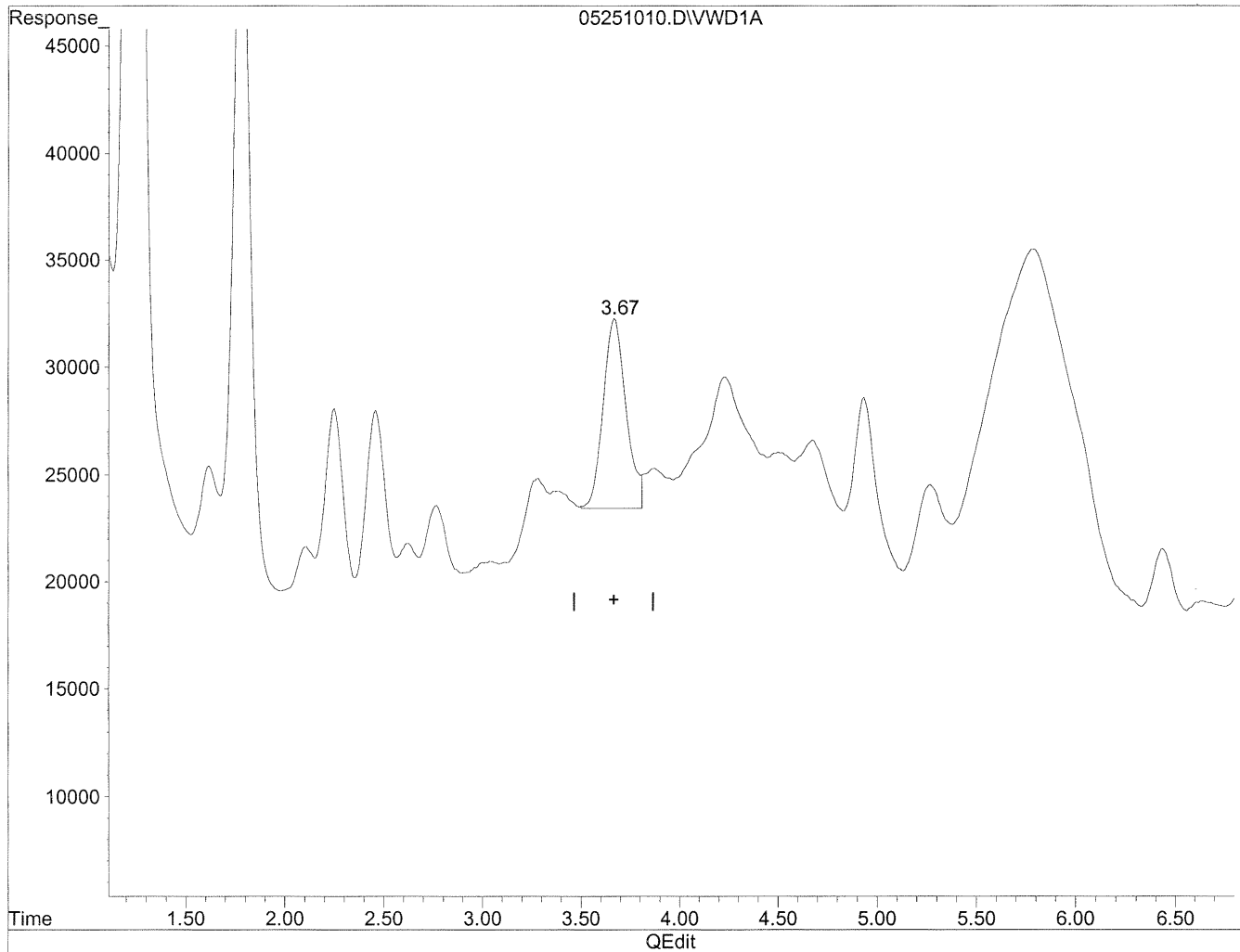
response 1342739

(+) = Expected Retention Time
05251010.D TO110510.M Fri May 28 10:41:42 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:13 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.67min 179.175ng/ml m

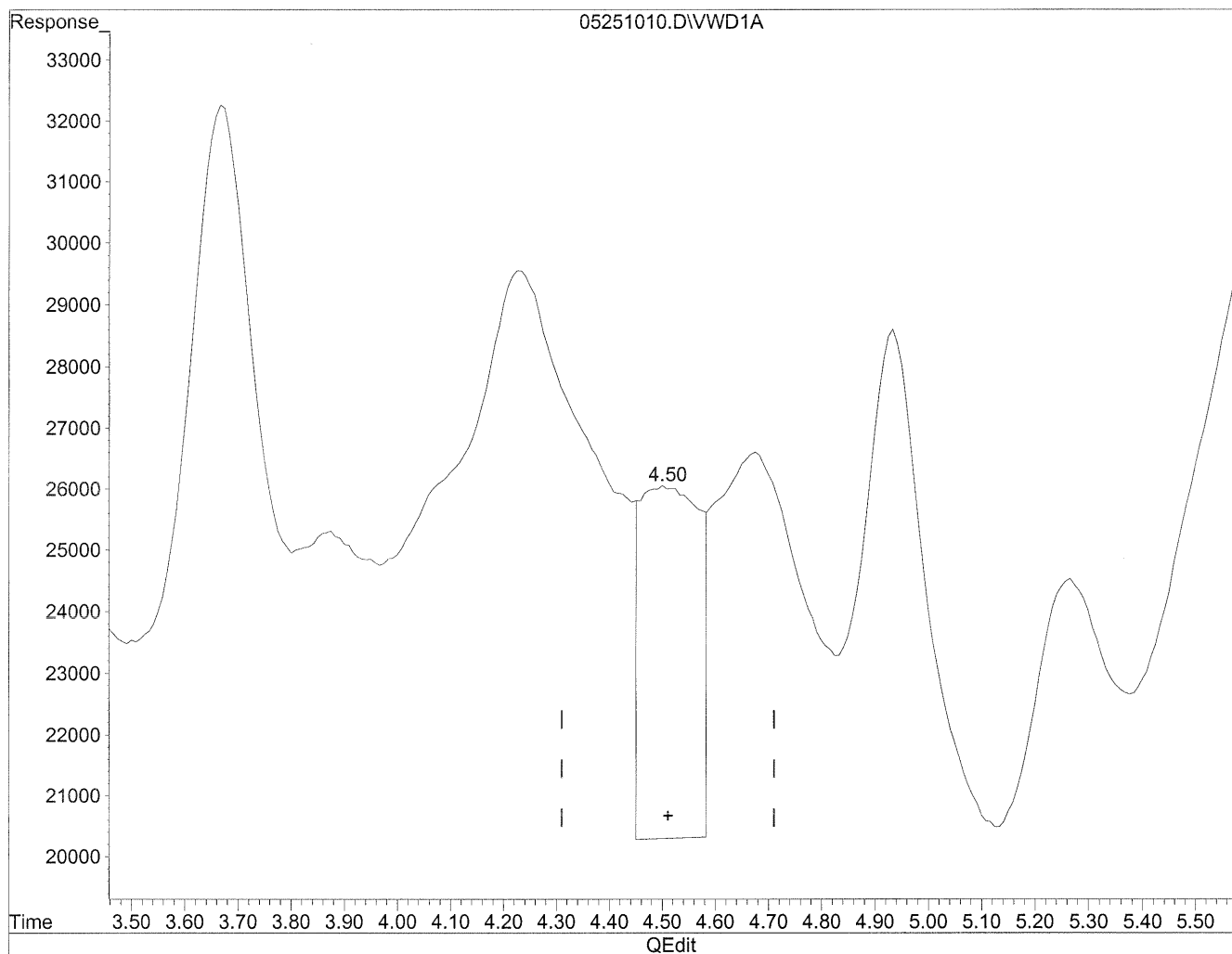
response 721949

12
MD
6/4/10
HLC
6/14/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:13 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.50min 163.603ng/ml

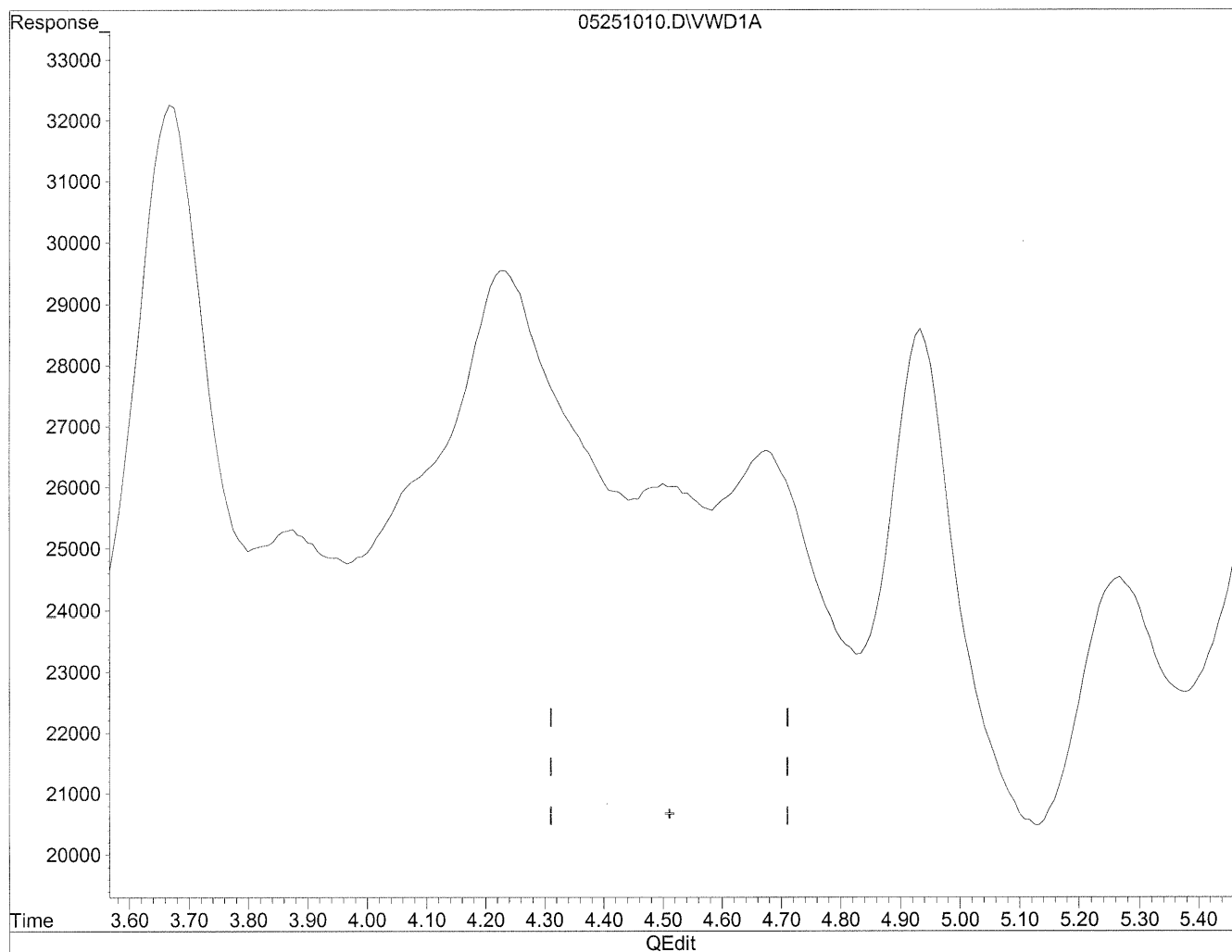
response 442829

(+) = Expected Retention Time
05251010.D TO110510.M Fri May 28 10:42:04 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:13 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

0.00min 0.000ng/ml d

response 0

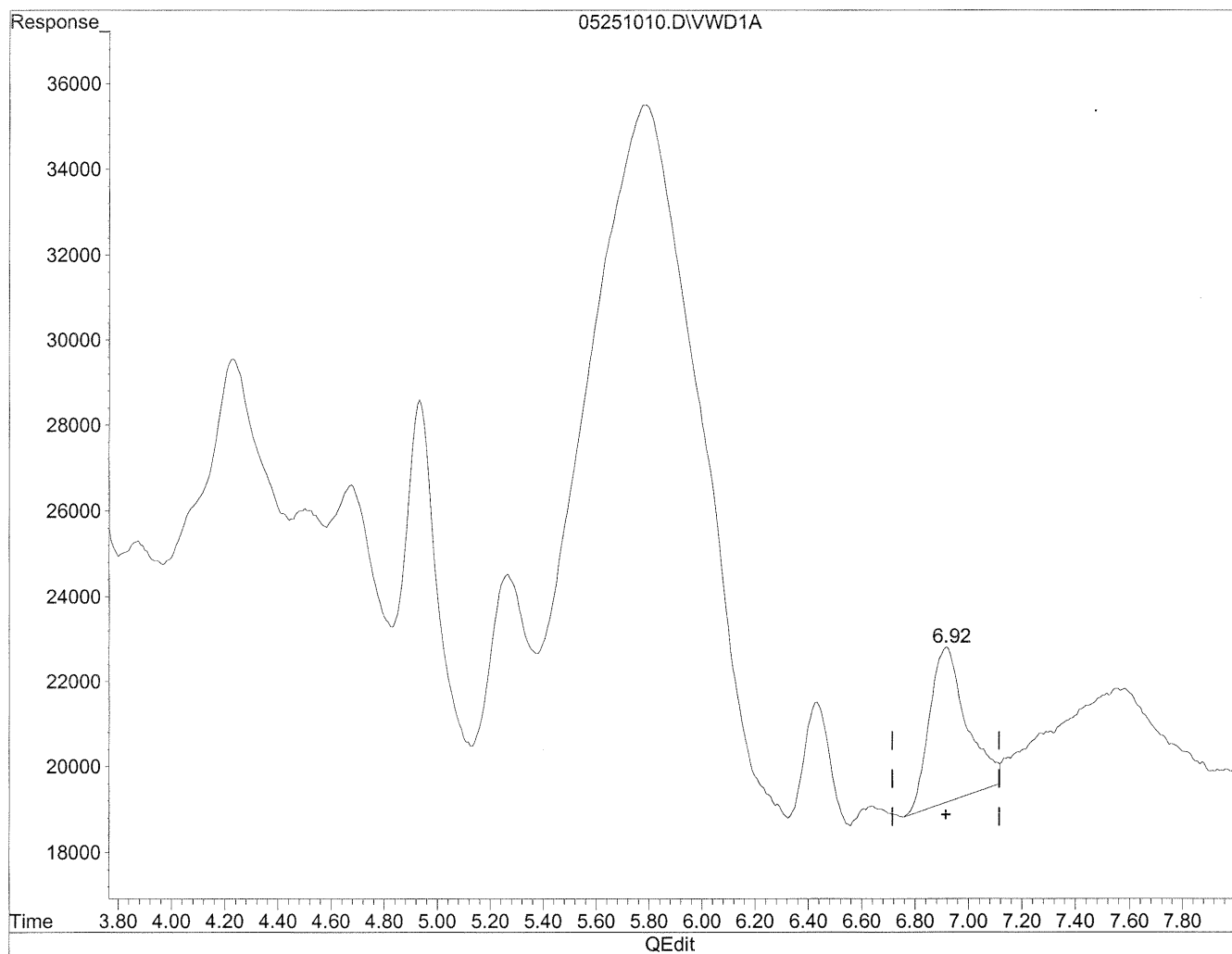
not real
MD
6/4/10
411
6/4/10

(+) = Expected Retention Time
05251010.D TO110510.M Fri May 28 10:42:07 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:13 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.92min 121.460ng/ml

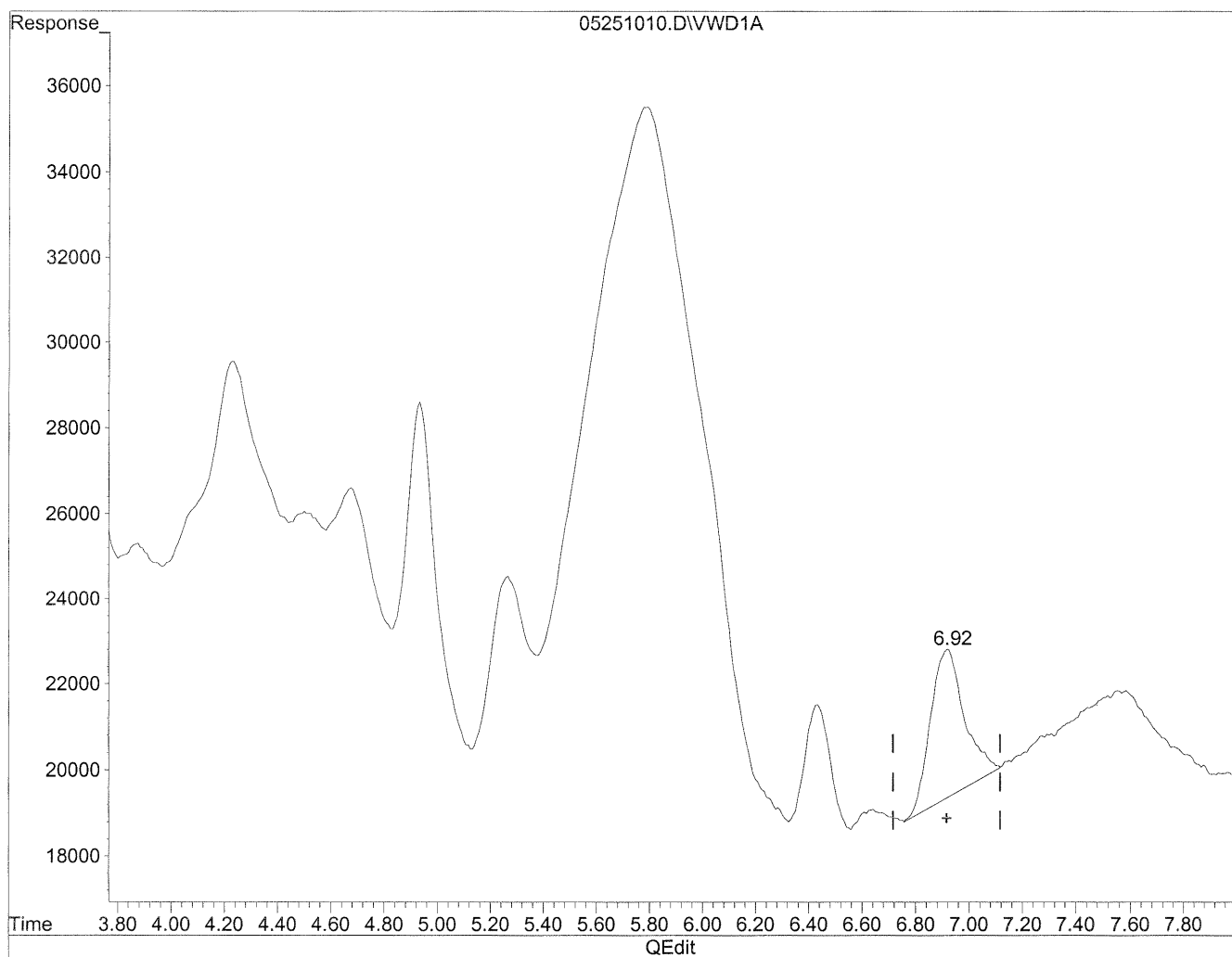
response 349244

(+) = Expected Retention Time
05251010.D TO110510.M Fri May 28 10:43:18 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251010.D Vial: 106
Acq On : 25-May-2010, 13:03 Operator: MD
Sample : P1001793-004 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:13 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.92min 105.744ng/ml m

response 304055

12
SM
6/4/10
HLC
6/4/10

(+) = Expected Retention Time

05251010.D TO110510.M

Fri May 28 10:43:24 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110527
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-005

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: NA Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 0.20	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

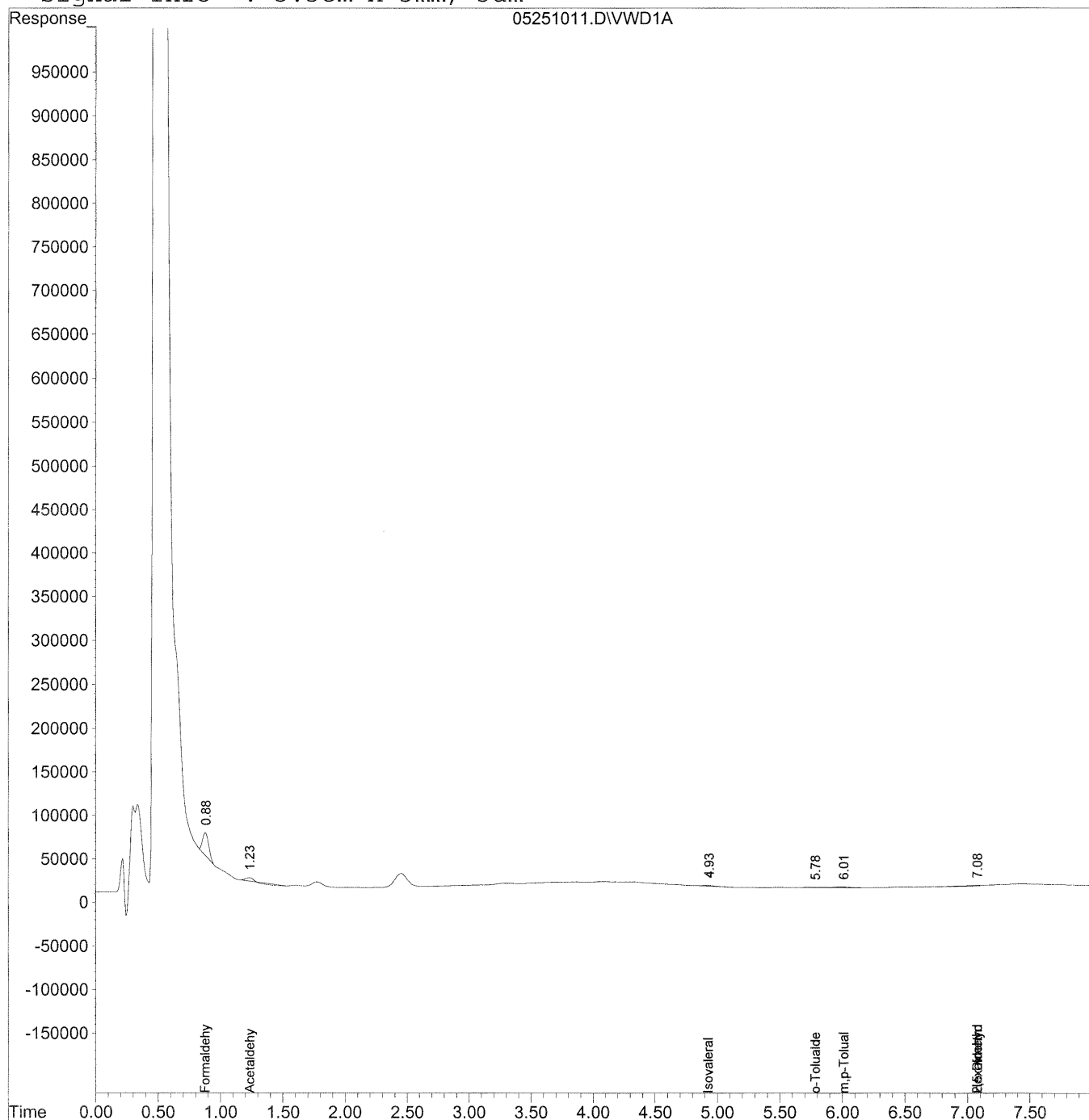
Verified By: Re Date: 6/2/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251011.D Vial: 107
Acq On : 25-May-2010, 13:14 Operator: MD
Sample : P1001793-005 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:06 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251011.D Vial: 107
Acq On : 25-May-2010, 13:14 Operator: MD
Sample : P1001793-005 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:06 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

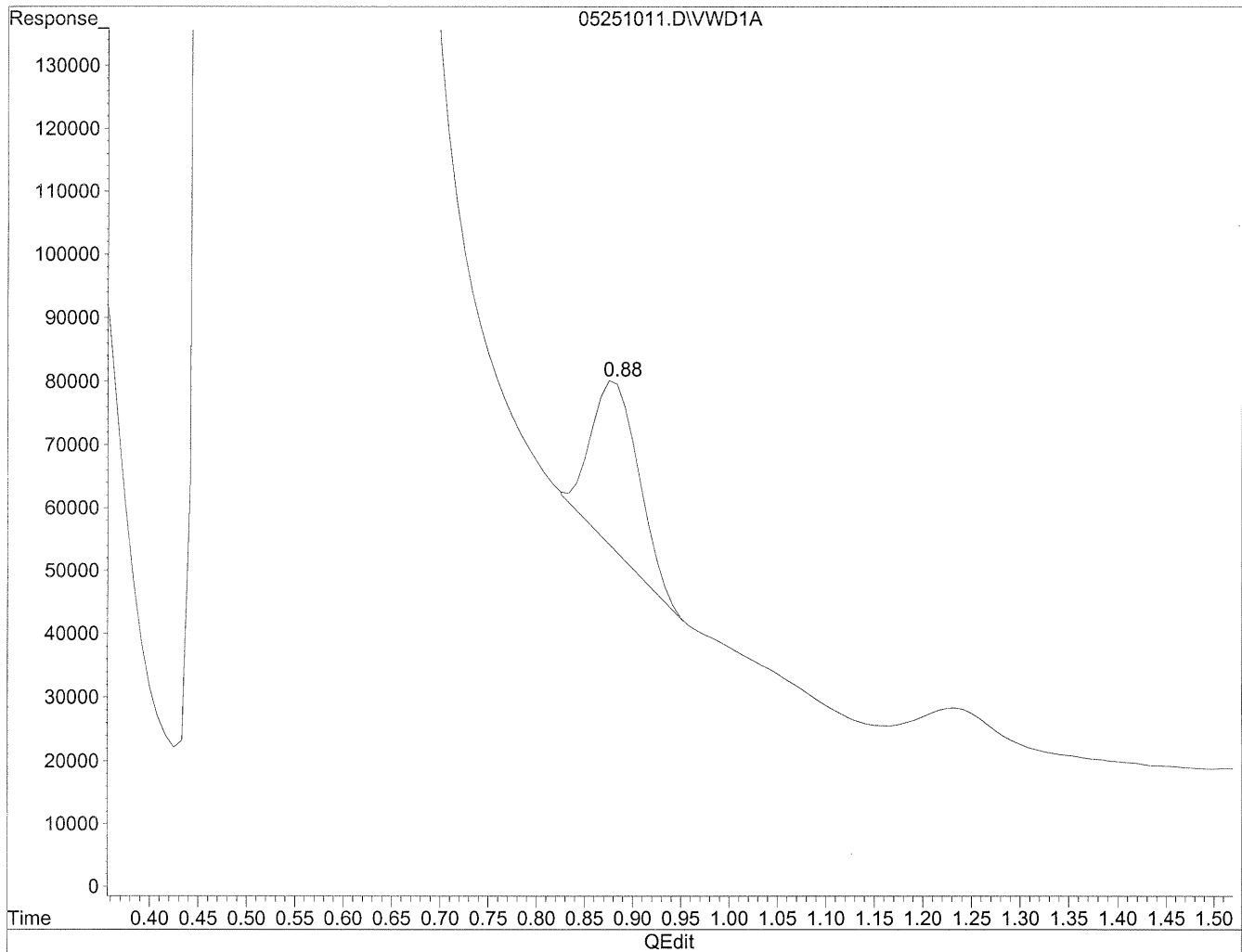
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	919391	98.511 ng/mlm
2) Acetaldehyde	1.23	40694	6.042 ng/ml
3) Propionaldehyde	0.00	0	N.D. ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	0.00	0	N.D. ng/ml
6) Benzaldehyde	0.00	0	N.D. ng/ml
7) Isovaleraldehyde	4.93	65731	18.528 ng/mlm
8) Valeraldehyde	0.00	0	N.D. ng/ml
9) o-Tolualdehyde	5.79	44650	21.935 ng/ml
10) m,p-Tolualdehyde	6.01	108404	46.275 ng/ml
11) Hexaldehyde	7.08f	105325	36.630 ng/ml
12) 2,5-Dimethylbenzaldehyde	7.08	105325	54.742 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251011.D Vial: 107
Acq On : 25-May-2010, 13:14 Operator: MD
Sample : P1001793-005 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:44 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 98.511ng/ml m

response 919391

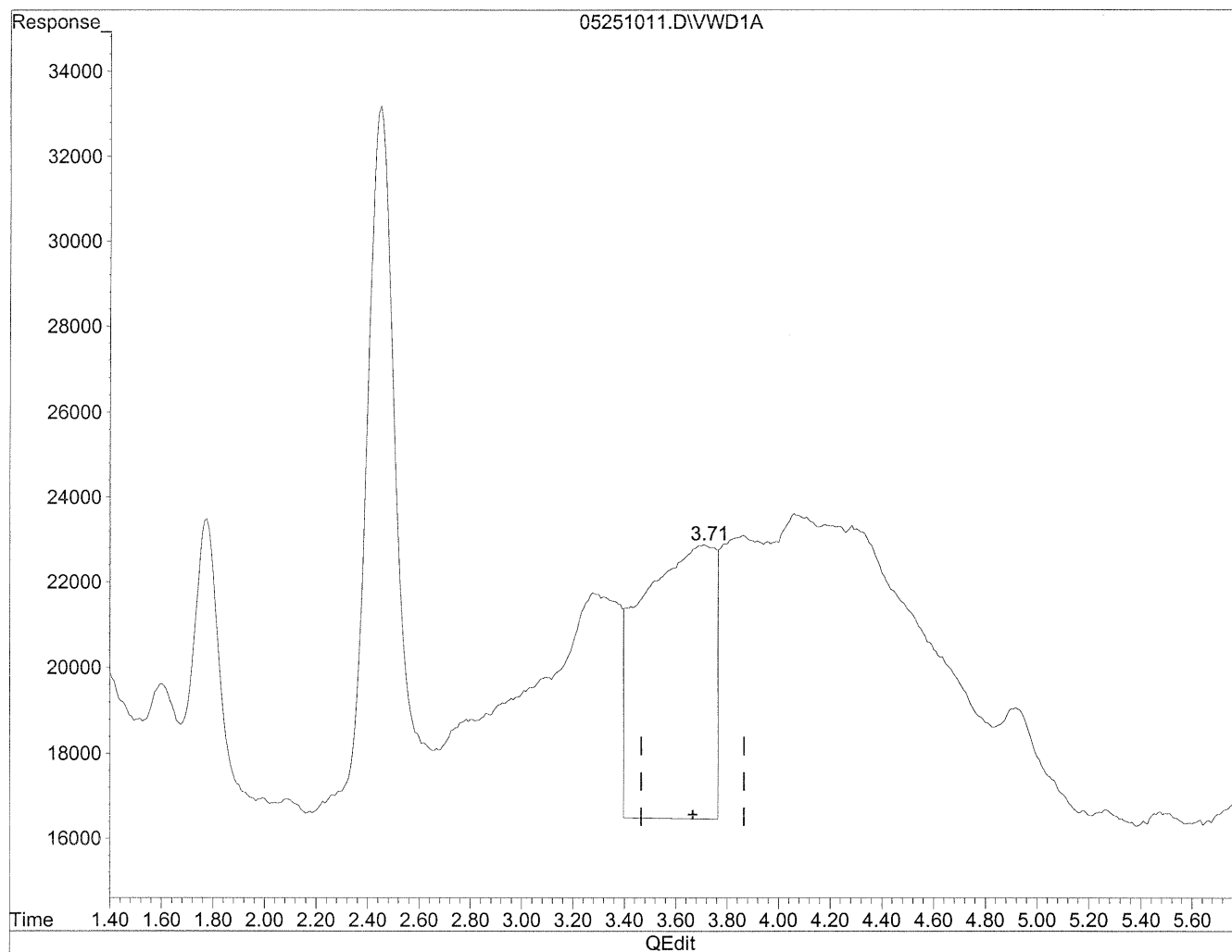
BC
no before
MD
6/4/10
4/4/10

(+) = Expected Retention Time
05251011.D TO110510.M Fri May 28 11:06:47 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251011.D Vial: 107
Acq On : 25-May-2010, 13:14 Operator: MD
Sample : P1001793-005 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:47 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

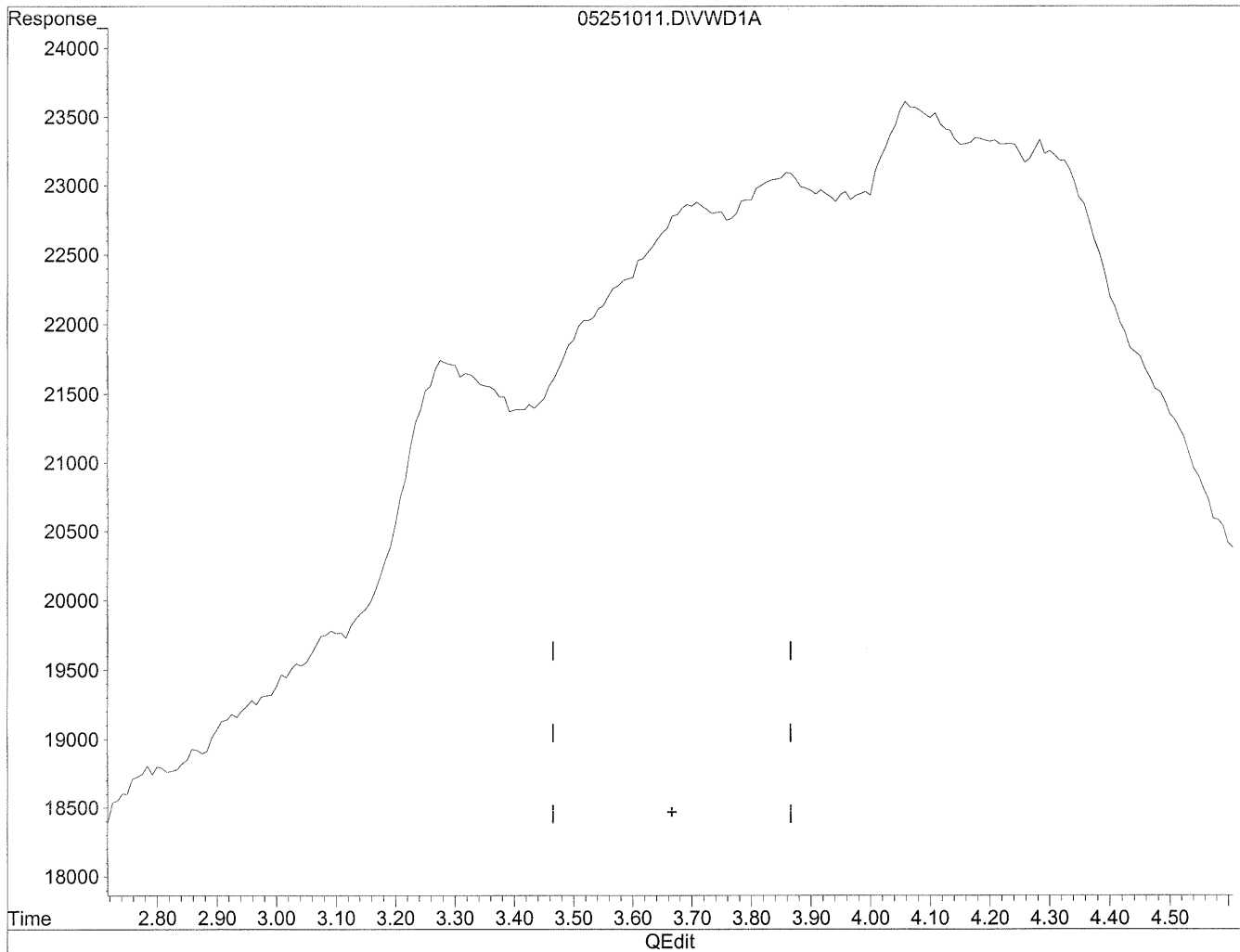


(5) Butyraldehyde
3.71min 314.461ng/ml
response 1267059

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251011.D Vial: 107
Acq On : 25-May-2010, 13:14 Operator: MD
Sample : P1001793-005 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:47 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde
0.00min 0.000ng/ml d
response 0

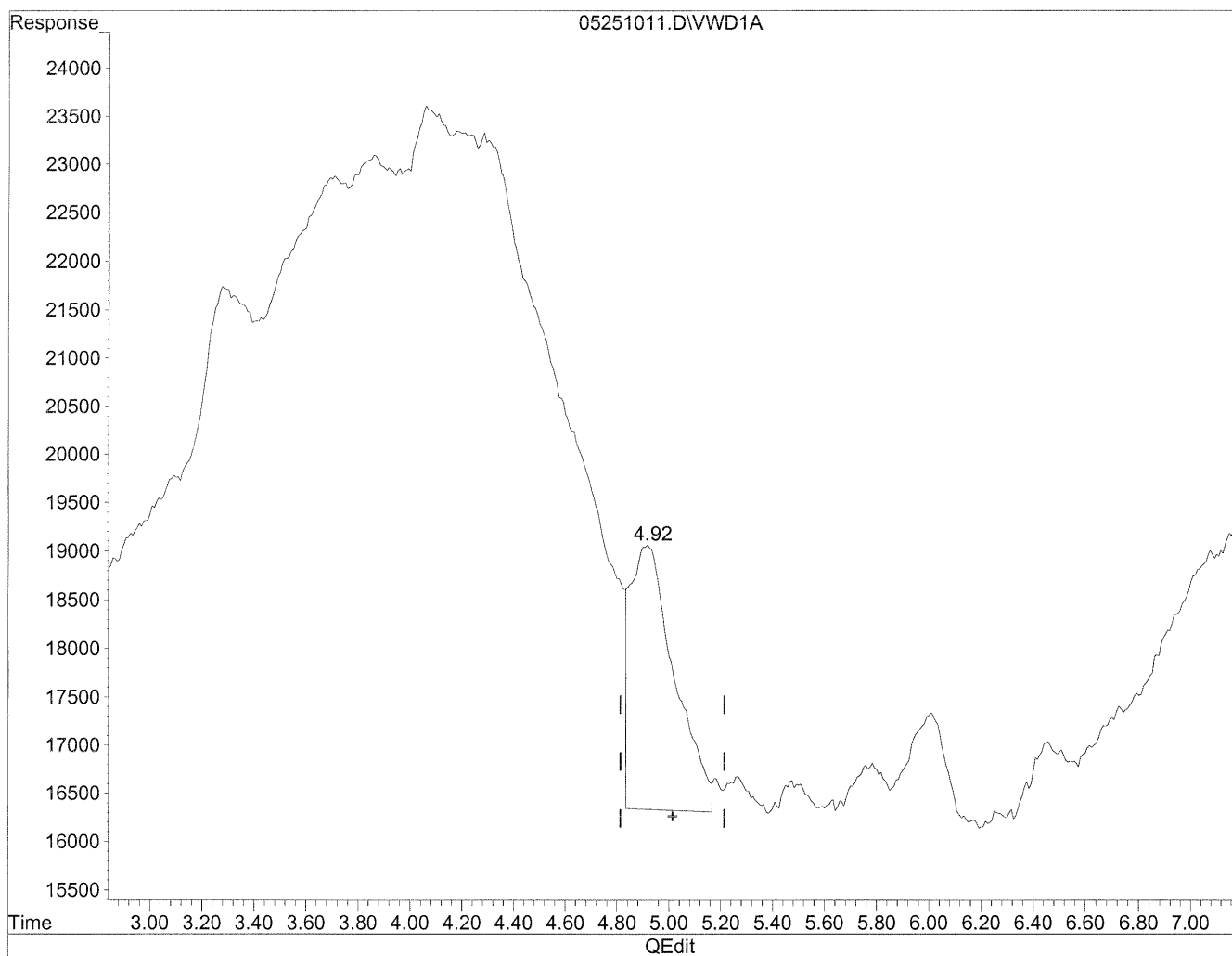
not
real
(MD)
6/4/10

HC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251011.D Vial: 107
Acq On : 25-May-2010, 13:14 Operator: MD
Sample : P1001793-005 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:47 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

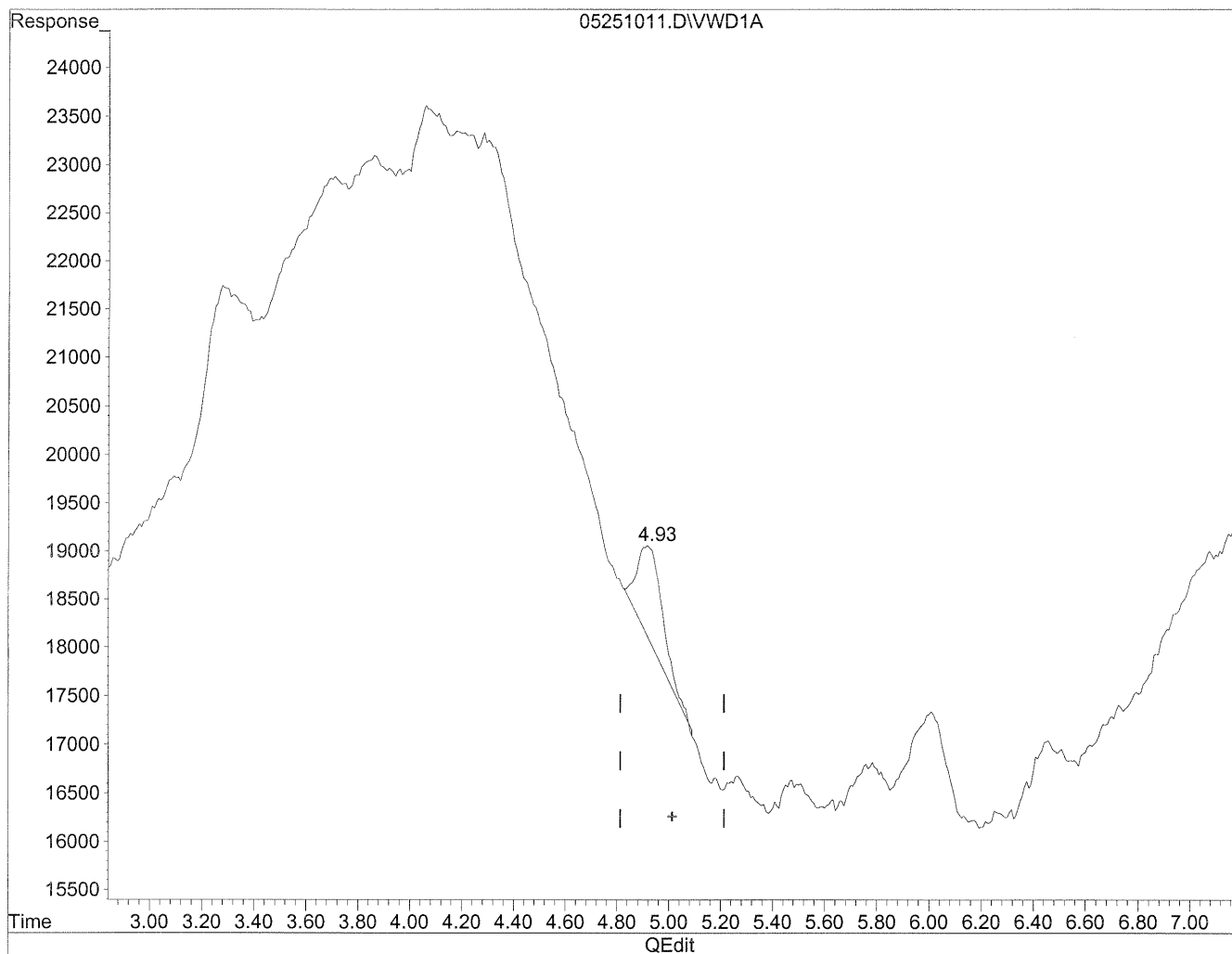


(7) Isovaleraldehyde
4.92min 92.333ng/ml
response 327569

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251011.D Vial: 107
Acq On : 25-May-2010, 13:14 Operator: MD
Sample : P1001793-005 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:47 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.93min 18.528ng/ml m

response 65731

IC
MD
6/4/10
HIC
6/4/10

(+) = Expected Retention Time
05251011.D TO110510.M Fri May 28 10:44:38 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110340
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-006

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: 21405 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	21	10	0.094	8.1	0.077	
75-07-0	Acetaldehyde	4.4	2.5	0.11	1.4	0.062	
123-38-6	Propionaldehyde	1.5	1.8	0.24	0.74	0.10	
123-72-8	Butyraldehyde	2.9	13	0.85	4.2	0.29	
100-52-7	Benzaldehyde	3.6	1.8	0.10	0.42	0.023	
590-86-3	Isovaleraldehyde	2.2	1.7	0.15	0.47	0.043	
110-62-3	Valeraldehyde	6.2	11	0.35	3.0	0.098	
66-25-1	n-Hexaldehyde	28	73	0.52	18	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

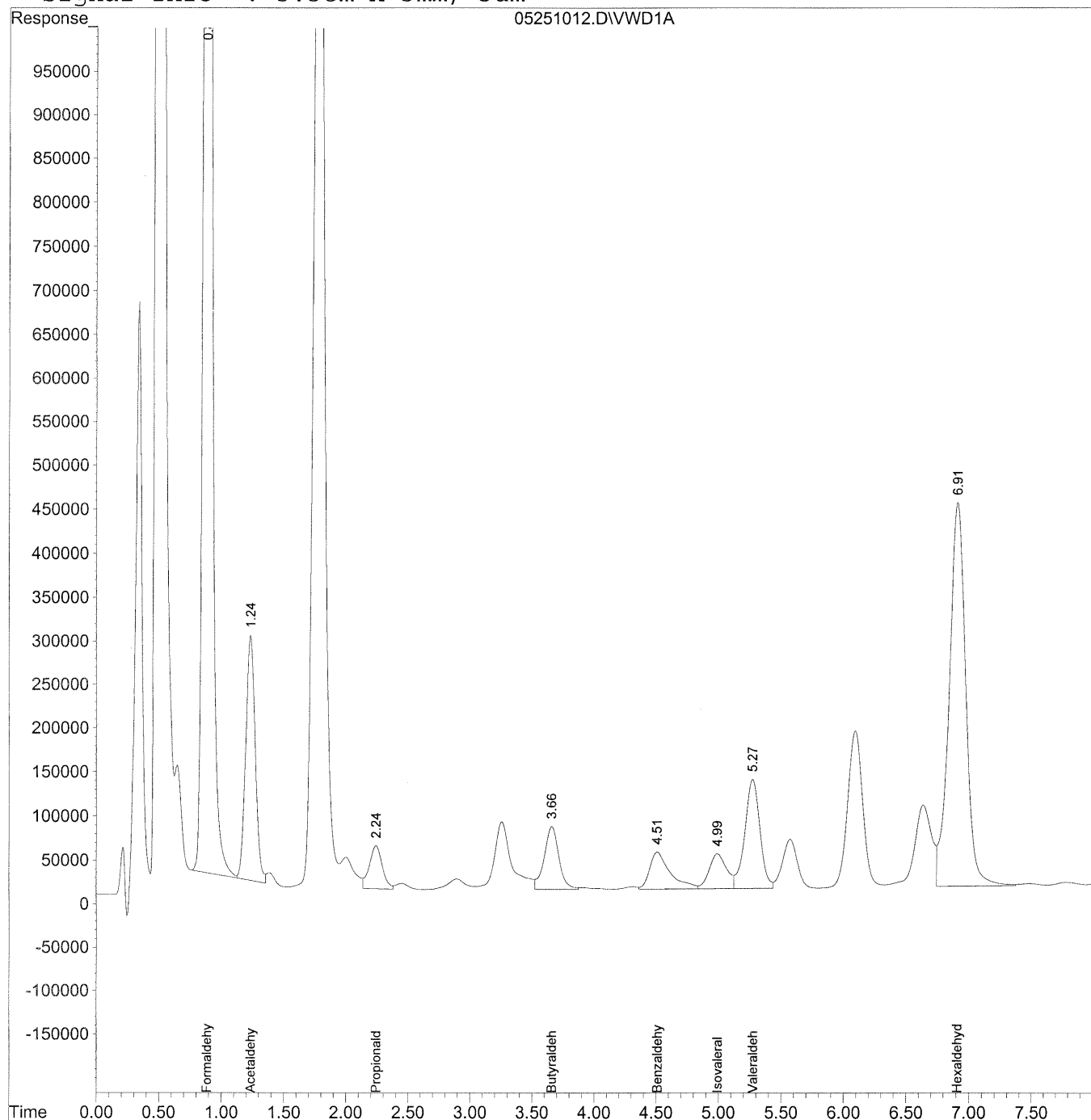
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251012.D Vial: 108
 Acq On : 25-May-2010, 13:24 Operator: MD
 Sample : P1001793-006 2ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 25 13:47 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 14:13:10 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251012.D Vial: 108
Acq On : 25-May-2010, 13:24 Operator: MD
Sample : P1001793-006 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:47 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc Units

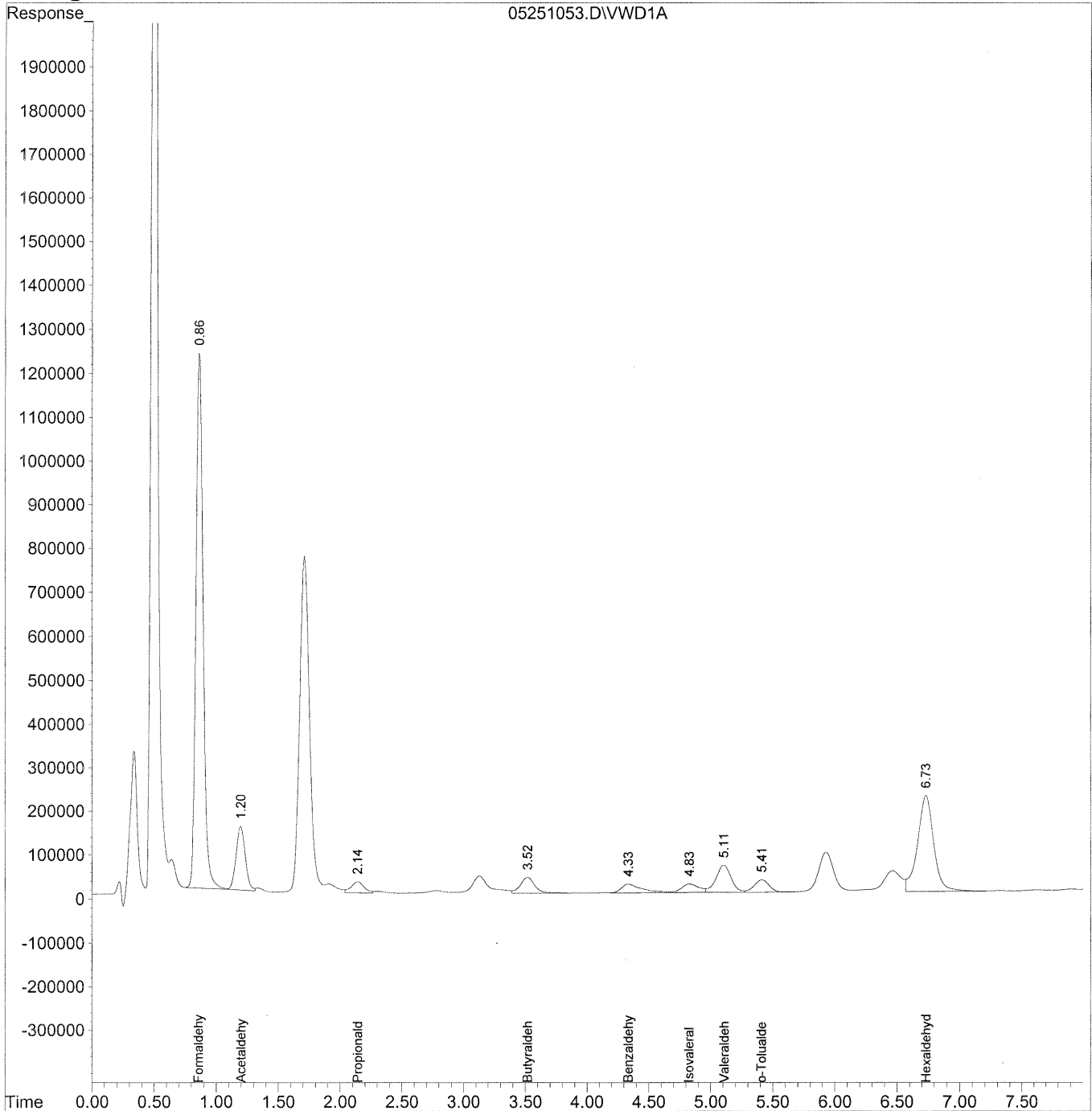
Target Compounds				
1)	Formaldehyde	0.89	98673519	10572.683 ng/ml <i>dil</i>
2)	Acetaldehyde	1.24	14960199	2221.187 ng/ml
3)	Propionaldehyde	2.24	3574160	735.118 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.66	5935976	1473.201 ng/ml
6)	Benzaldehyde	4.51	4829520	1784.268 ng/ml
7)	Isovaleraldehyde	4.99	3839349	1082.206 ng/ml
8)	Valeraldehyde	5.28	10407522	3102.449 ng/ml
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11)	Hexaldehyde	6.91	39511332	13741.289 ng/ml <i>dil</i>
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251053.D Vial: 136
Acq On : 25-May-2010, 20:31 Operator: MD
Sample : P1001793-006 2ml 2x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 15:31 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 08:07:45 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251053.D Vial: 136
Acq On : 25-May-2010, 20:31 Operator: MD
Sample : P1001793-006 2ml 2x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 15:31 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 08:07:45 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

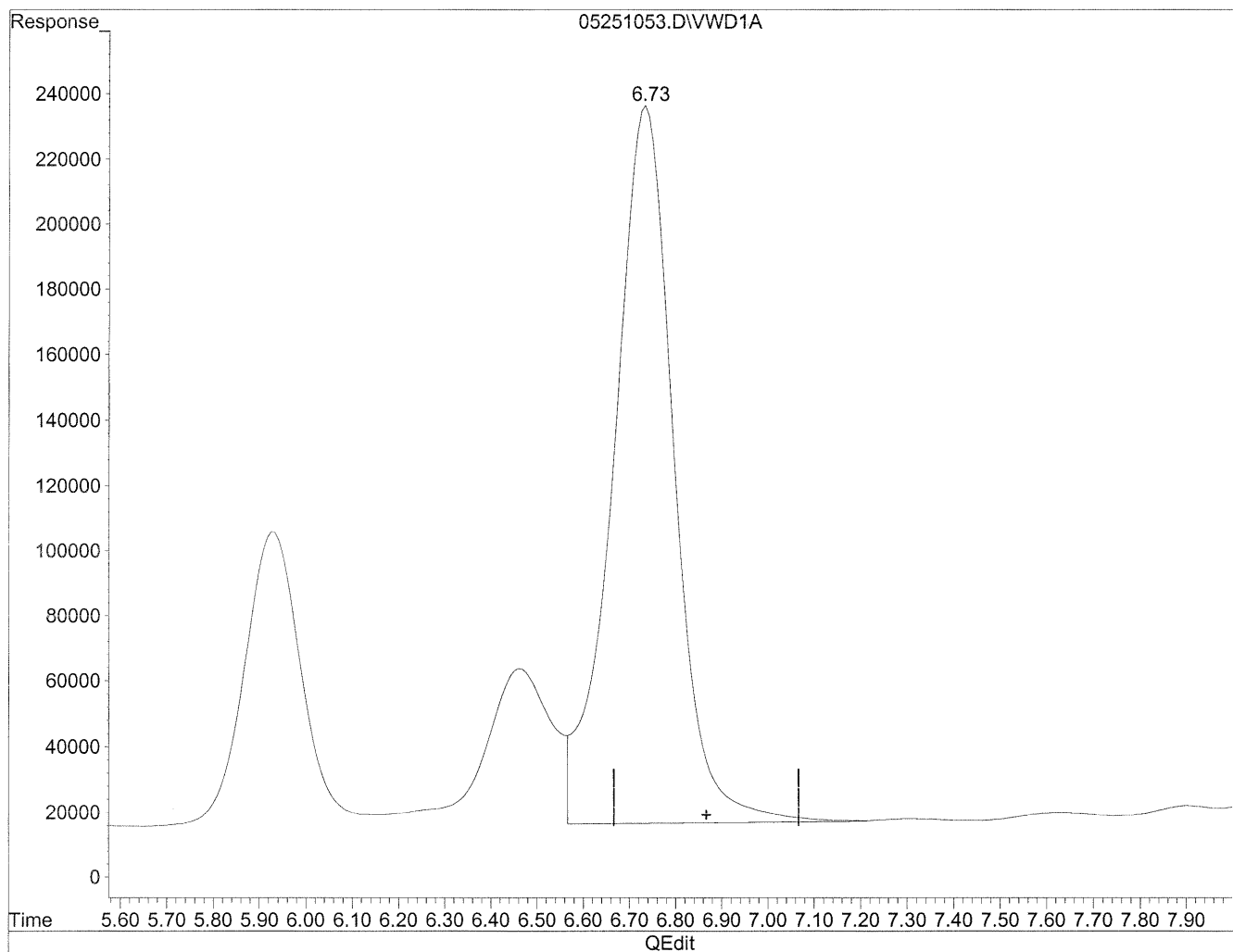
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.87	49289873	5281.317 ng/ml
2) Acetaldehyde	1.20	7468127	1108.816 ng/ml
3) Propionaldehyde	2.14	1810081	372.290 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.52	2927349	726.515 ng/ml
6) Benzaldehyde	4.34	2273295	839.870 ng/ml
7) Isovaleraldehyde	4.83	1853786	522.531 ng/ml
8) Valeraldehyde	5.11	5226279	1557.937 ng/ml
9) o-Tolualdehyde	5.41	2342634	1150.868 ng/ml
10) m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11) Hexaldehyde	6.74	20138136	7003.660 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251053.D Vial: 136
Acq On : 25-May-2010, 20:31 Operator: MD
Sample : P1001793-006 2ml 2x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:08 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 14:54:52 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

6.74min 10466.591ng/ml

response 20138136

(+) = Expected Retention Time

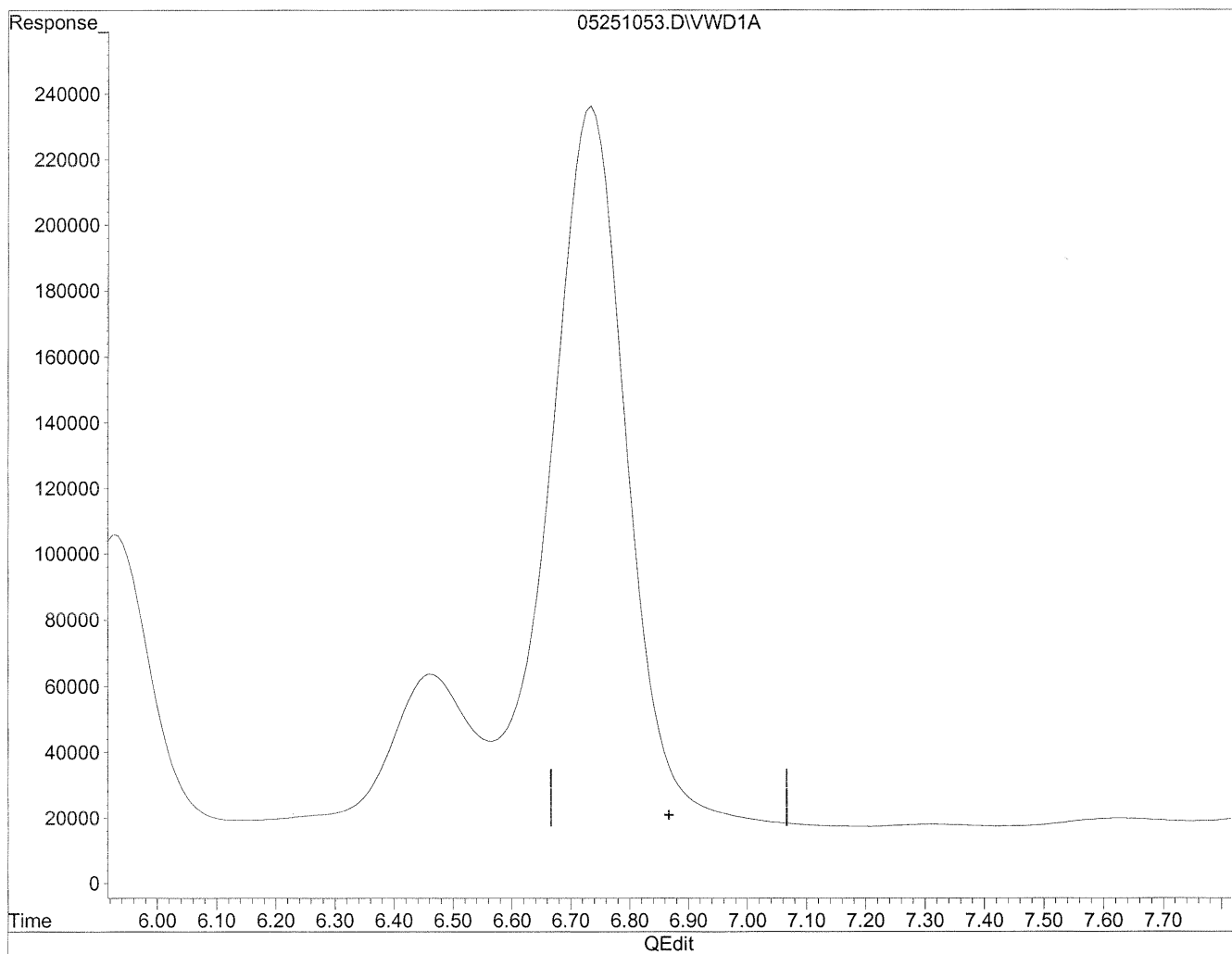
05251053.D TO110510.M

Fri May 28 15:31:55 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251053.D Vial: 136
Acq On : 25-May-2010, 20:31 Operator: MD
Sample : P1001793-006 2ml 2x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:08 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 14:54:52 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

MP
MD
6/4/10
70
6/4/10

(+) = Expected Retention Time
05251053.D TO110510.M Fri May 28 15:31:57 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated

Client Sample ID: 110341

Client Project ID: 17131

CAS Project ID: P1001793

CAS Sample ID: P1001793-007

Test Code: EPA TO-11A

Instrument ID: HP1050/UV_Vis 360/LC2

Analyst: Madeleine Dangazyan

Sampling Media: Radiello Tube

Test Notes: BC

Date Collected: 5/21/10

Date Received: 5/22/10

Date Analyzed: 5/25/10

Desorption Volume: 2.0 ml

Sampling Time: 21405 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	23	11	0.094	9.0	0.077	
75-07-0	Acetaldehyde	5.0	2.8	0.11	1.6	0.062	
123-38-6	Propionaldehyde	1.7	2.0	0.24	0.85	0.10	
123-72-8	Butyraldehyde	3.3	14	0.85	4.8	0.29	
100-52-7	Benzaldehyde	4.6	2.3	0.10	0.53	0.023	
590-86-3	Isovaleraldehyde	2.6	2.0	0.15	0.57	0.043	
110-62-3	Valeraldehyde	7.3	13	0.35	3.6	0.098	
66-25-1	n-Hexaldehyde	30	78	0.52	19	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

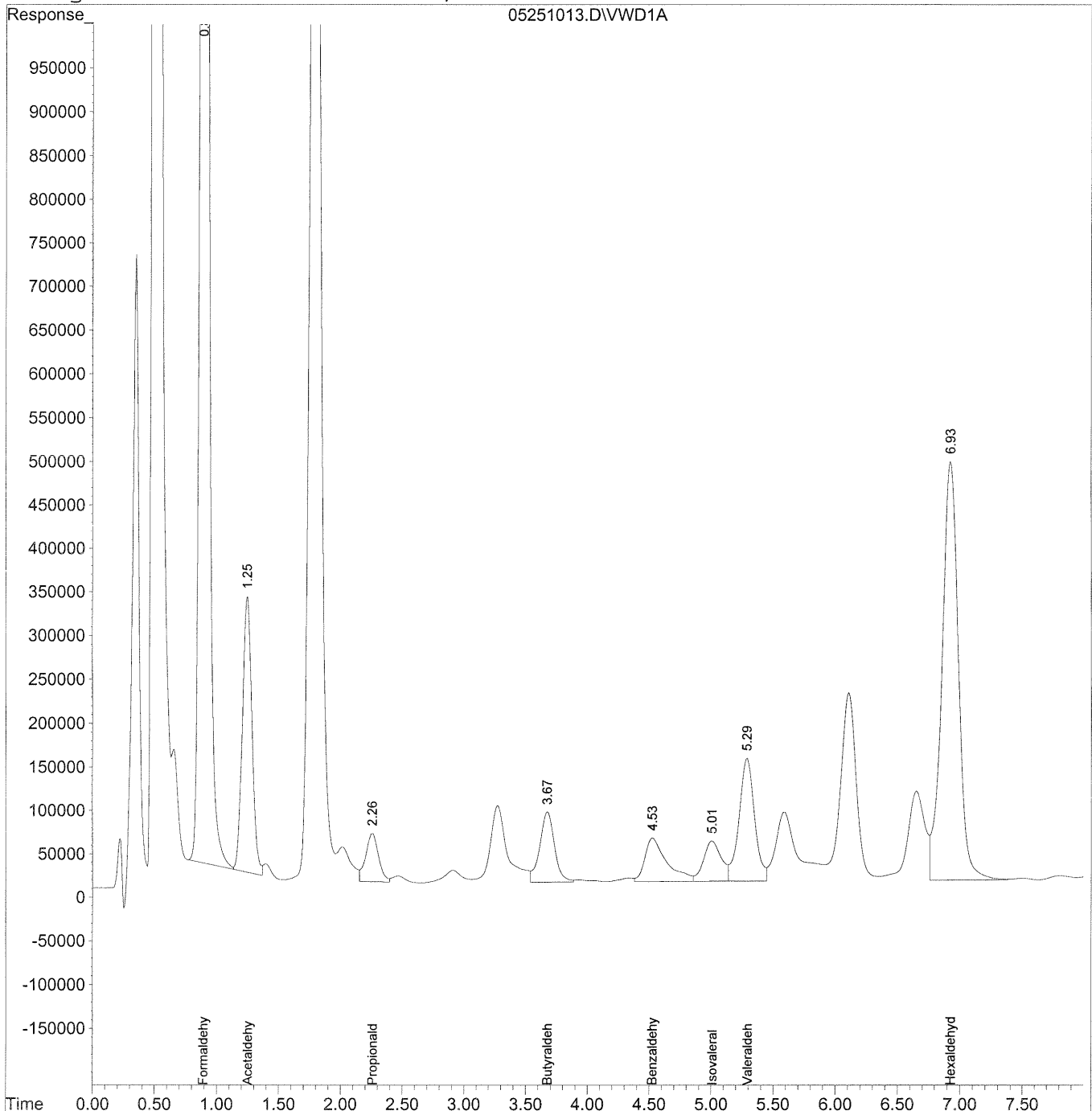
Verified By: Per Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251013.D Vial: 109
Acq On : 25-May-2010, 13:35 Operator: MD
Sample : P1001793-007 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:47 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251013.D Vial: 109
Acq On : 25-May-2010, 13:35 Operator: MD
Sample : P1001793-007 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 13:47 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc Units

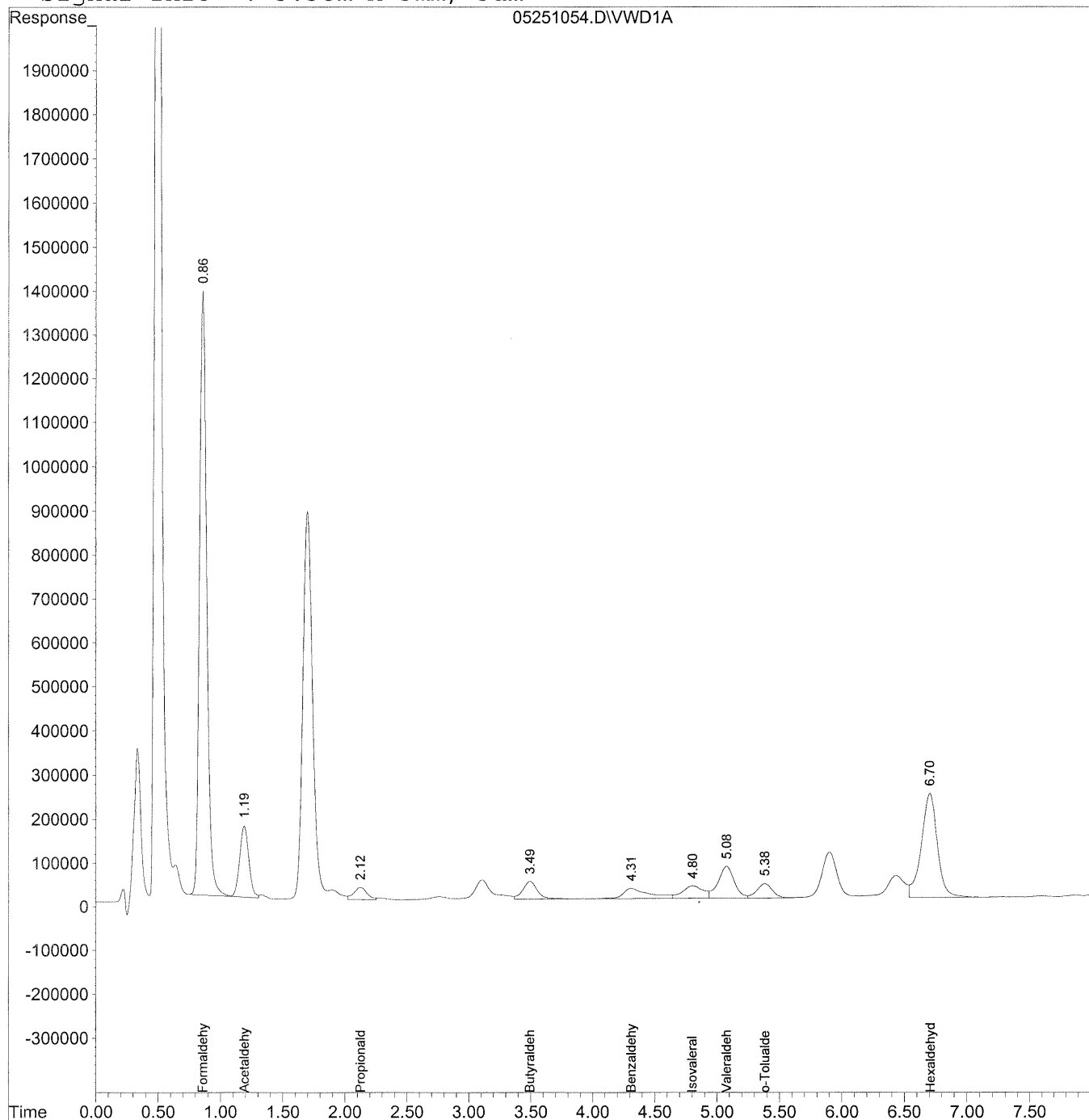
Target Compounds				
1)	Formaldehyde	0.90	110402813	11829.454 ng/ml <i>dil</i>
2)	Acetaldehyde	1.25	16929924	2513.638 ng/ml
3)	Propionaldehyde	2.26	4073023	837.722 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.68	6674165	1656.406 ng/ml
6)	Benzaldehyde	4.53	6170892	2279.839 ng/ml
7)	Isovaleraldehyde	5.01	4657001	1312.680 ng/ml
8)	Valeraldehyde	5.29	12301069	3666.910 ng/ml
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11)	Hexaldehyde	6.93	43278457	15051.423 ng/ml <i>dil</i>
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251054.D Vial: 137
 Acq On : 25-May-2010, 20:41 Operator: MD
 Sample : P1001793-007 2ml 2x dil Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 15:32 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 11:37:19 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251054.D Vial: 137
Acq On : 25-May-2010, 20:41 Operator: MD
Sample : P1001793-007 2ml 2x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 15:32 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

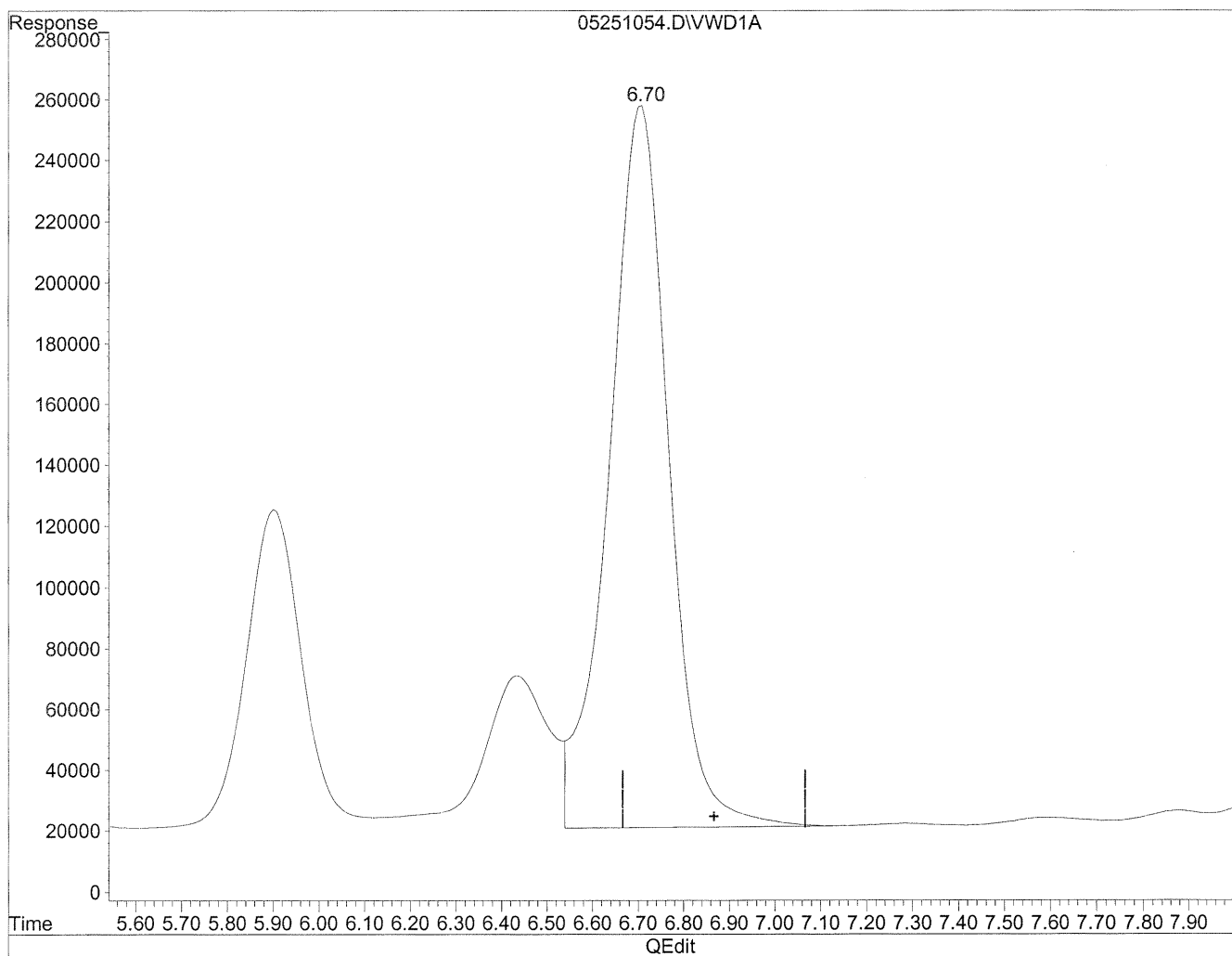
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.86	54735630	5864.820 ng/ml
2) Acetaldehyde	1.19	8343180	1238.738 ng/ml
3) Propionaldehyde	2.13	2085389	428.914 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.50	3392441	841.942 ng/ml
6) Benzaldehyde	4.31	3421448	1264.055 ng/ml
7) Isovaleraldehyde	4.81	3289361	927.180 ng/ml
8) Valeraldehyde	5.08	6559944	1955.498 ng/ml
9) o-Tolualdehyde	5.39	2893710	1421.596 ng/ml
10) m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11) Hexaldehyde	6.71	21580505	7505.289 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251054.D Vial: 137
Acq On : 25-May-2010, 20:41 Operator: MD
Sample : P1001793-007 2ml 2x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 14:54:52 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

6.71min 11216.248ng/ml

response 21580505

(+) = Expected Retention Time

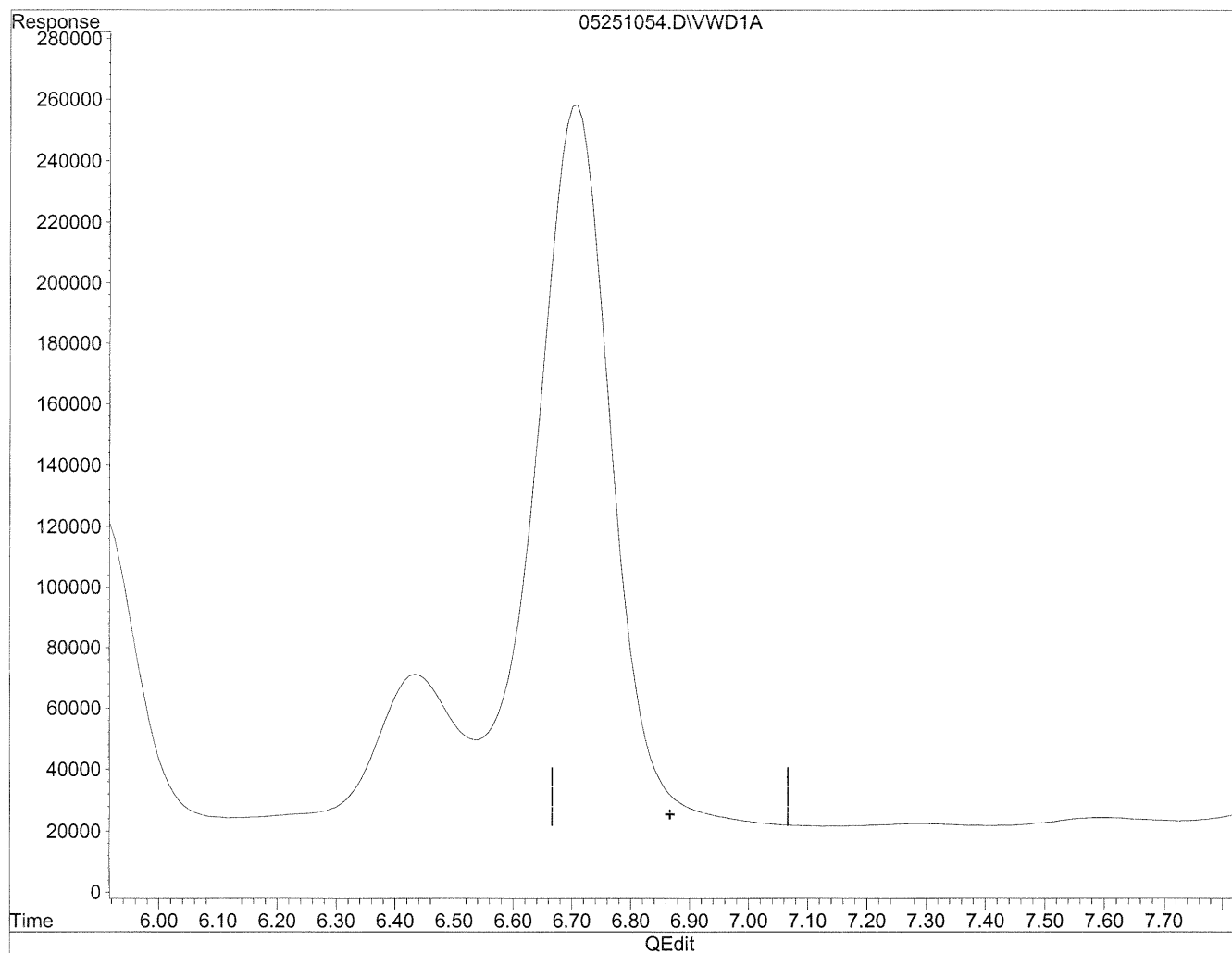
05251054.D TO110510.M

Fri May 28 15:32:21 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251054.D Vial: 137
Acq On : 25-May-2010, 20:41 Operator: MD
Sample : P1001793-007 2ml 2x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 14:54:52 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

HC
6/4/10

MD
6/4/10

(+) = Expected Retention Time
05251054.D TO110510.M Fri May 28 15:32:24 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110342
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-008

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: 21405 Minutes

CAS #	Compound	Result	Result	MRL	Result	MRL	Data Qualifier
		µg/Sample	µg/m ³	µg/m ³	ppbV	ppbV	
50-00-0	Formaldehyde	24	11	0.094	9.3	0.077	
75-07-0	Acetaldehyde	4.5	2.5	0.11	1.4	0.062	
123-38-6	Propionaldehyde	1.5	1.8	0.24	0.76	0.10	
123-72-8	Butyraldehyde	2.9	12	0.85	4.2	0.29	
100-52-7	Benzaldehyde	3.7	1.9	0.10	0.44	0.023	
590-86-3	Isovaleraldehyde	2.2	1.7	0.15	0.49	0.043	
110-62-3	Valeraldehyde	6.4	11	0.35	3.1	0.098	
66-25-1	n-Hexaldehyde	28	74	0.52	18	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

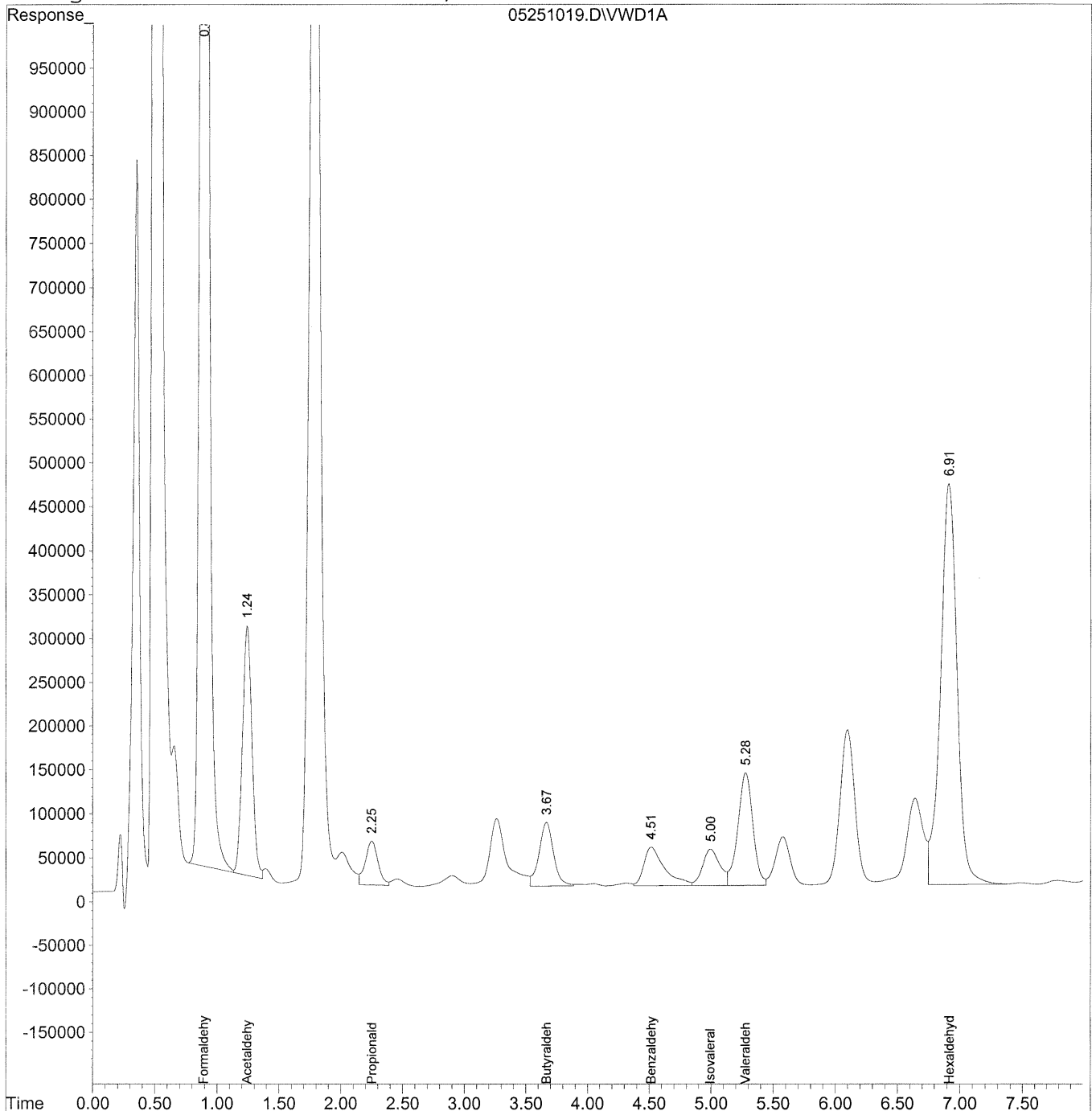
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251019.D Vial: 110
Acq On : 25-May-2010, 14:36 Operator: MD
Sample : P1001793-008 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 14:50 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251019.D Vial: 110
Acq On : 25-May-2010, 14:36 Operator: MD
Sample : P1001793-008 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 14:50 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

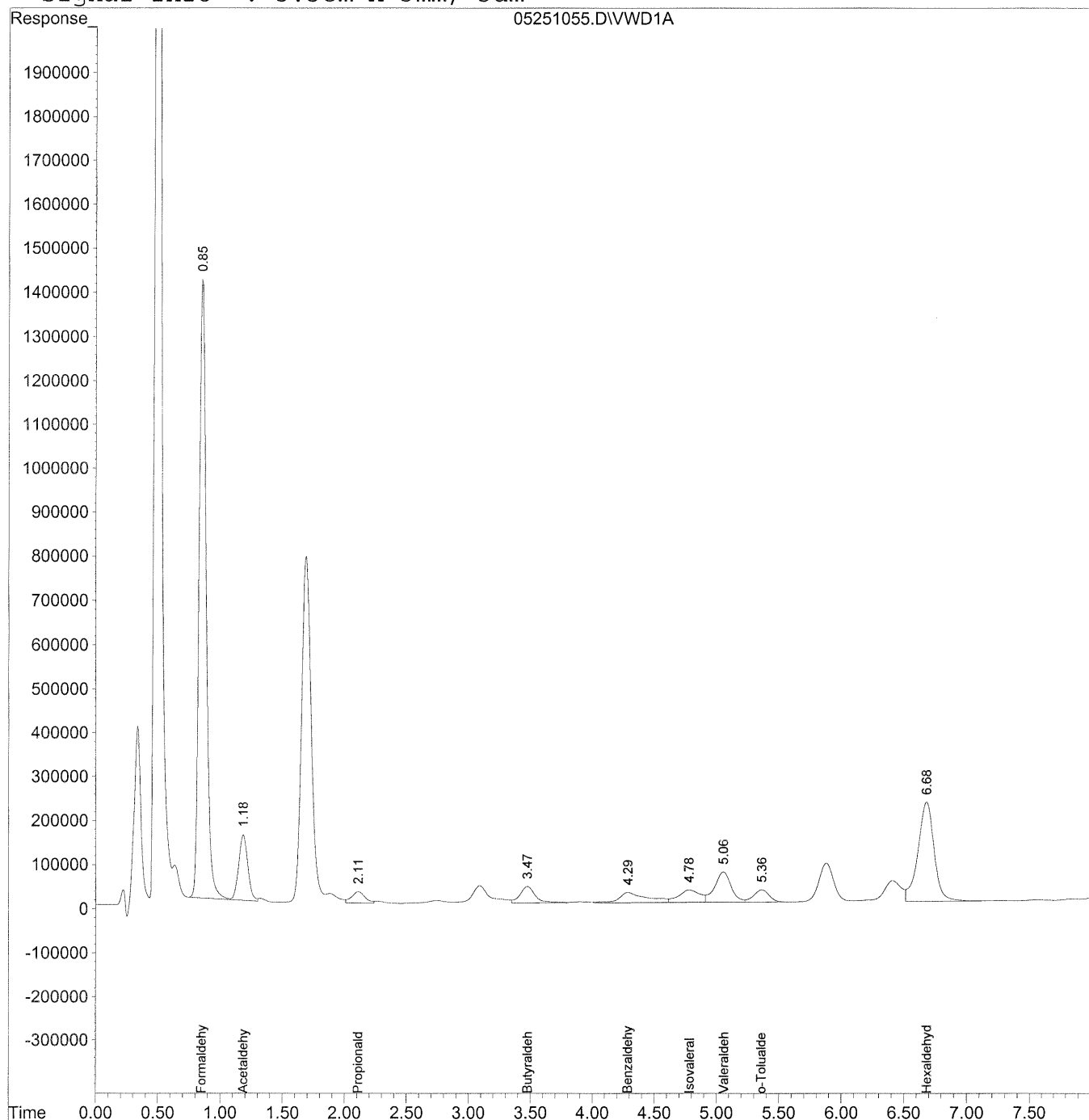
Target Compounds			
1) Formaldehyde	0.90	113345763	12144.786 ng/ml <i>dil</i>
2) Acetaldehyde	1.25	15221805	2260.028 ng/ml
3) Propionaldehyde	2.25	3641764	749.023 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.67	5925995	1470.724 ng/ml
6) Benzaldehyde	4.52	5042364	1862.903 ng/ml
7) Isovaleraldehyde	5.00	3961207	1116.554 ng/ml
8) Valeraldehyde	5.28	10743576	3202.626 ng/ml
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11) Hexaldehyde	6.92	41011738	14263.101 ng/ml <i>dil</i>
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251055.D Vial: 138
 Acq On : 25-May-2010, 20:52 Operator: MD
 Sample : P1001793-008 2ml 2x dil Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 26 8:09 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 26 08:07:45 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251055.D Vial: 138
Acq On : 25-May-2010, 20:52 Operator: MD
Sample : P1001793-008 2ml 2x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:09 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 08:07:45 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.86	56255844	6027.708 ng/ml
2) Acetaldehyde	1.19	7555080	1121.726 ng/ml
3) Propionaldehyde	2.11	1868402	384.285 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.48	3178729	788.903 ng/ml
6) Benzaldehyde	4.29	3548501	1310.995 ng/ml
7) Isovaleraldehyde	4.78	3305639	931.768 ng/ml
8) Valeraldehyde	5.06	6270014	1869.071 ng/ml
9) o-Tolualdehyde	5.36f	2371029	1164.817 ng/ml
10) m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11) Hexaldehyde	6.68	20444215	7110.108 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated**Client Sample ID:** 110343**Client Project ID:** 17131

CAS Project ID: P1001793

CAS Sample ID: P1001793-009

Test Code: EPA TO-11A**Instrument ID:** HP1050/UV_Vis 360/LC2**Analyst:** Madeleine Dangazyan**Sampling Media:** Radiello Tube**Test Notes:** BC**Date Collected:** 5/21/10**Date Received:** 5/22/10**Date Analyzed:** 5/25/10**Desorption Volume:** 2.0 ml**Sampling Time:** 21405 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	3.0	1.4	0.094	1.2	0.077	
75-07-0	Acetaldehyde	1.0	0.57	0.11	0.32	0.062	
123-38-6	Propionaldehyde	< 0.20	ND	0.24	ND	0.10	
123-72-8	Butyraldehyde	0.31	1.3	0.85	0.45	0.29	
100-52-7	Benzaldehyde	< 0.20	ND	0.10	ND	0.023	
590-86-3	Isovaleraldehyde	0.26	0.20	0.15	0.056	0.043	
110-62-3	Valeraldehyde	0.21	0.37	0.35	0.11	0.098	
66-25-1	n-Hexaldehyde	0.27	0.71	0.52	0.17	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

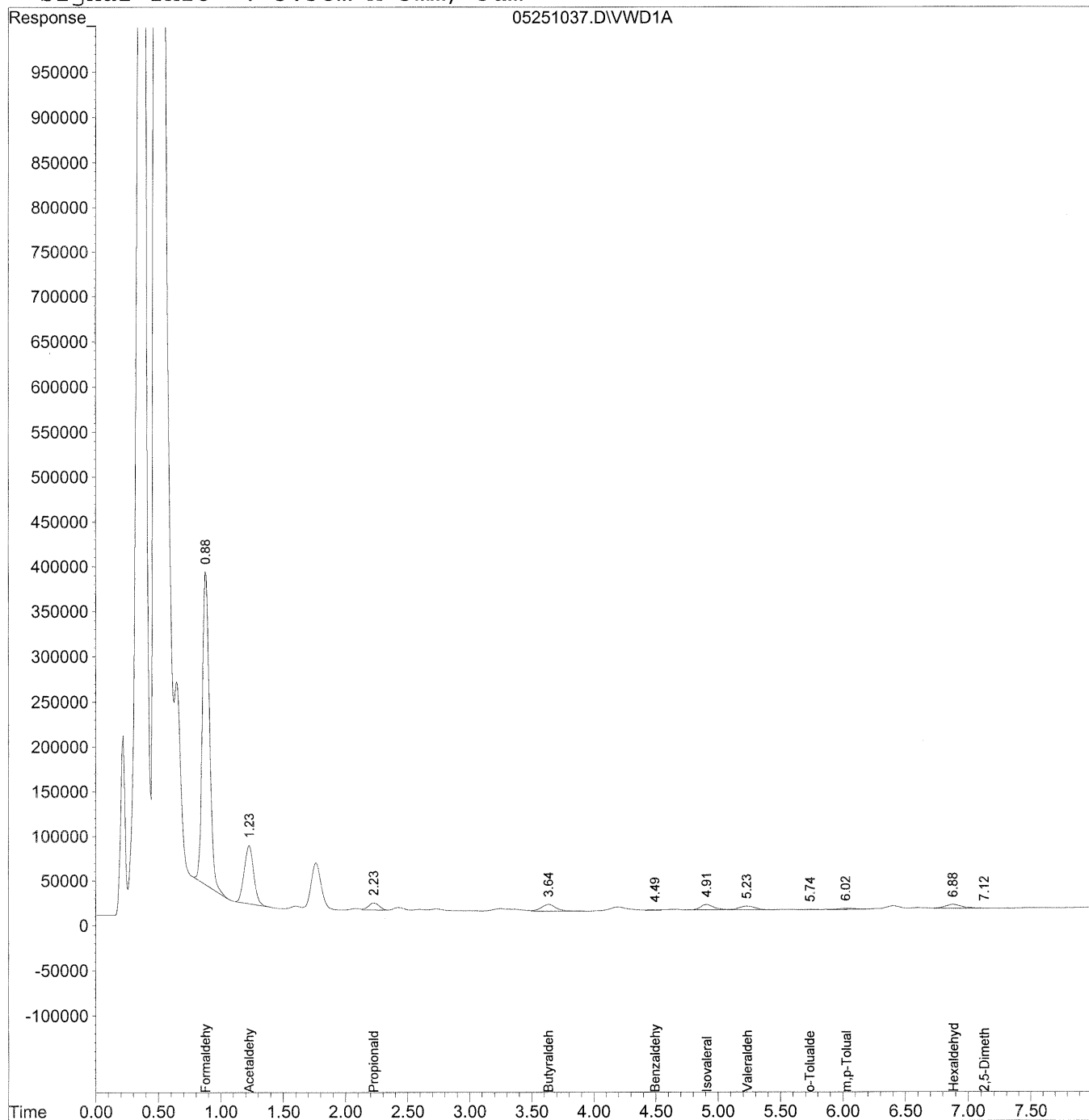
NA = Not applicable.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
Acq On : 25-May-2010, 17:44 Operator: MD
Sample : P1001793-009 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:09 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
Acq On : 25-May-2010, 17:44 Operator: MD
Sample : P1001793-009 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:09 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

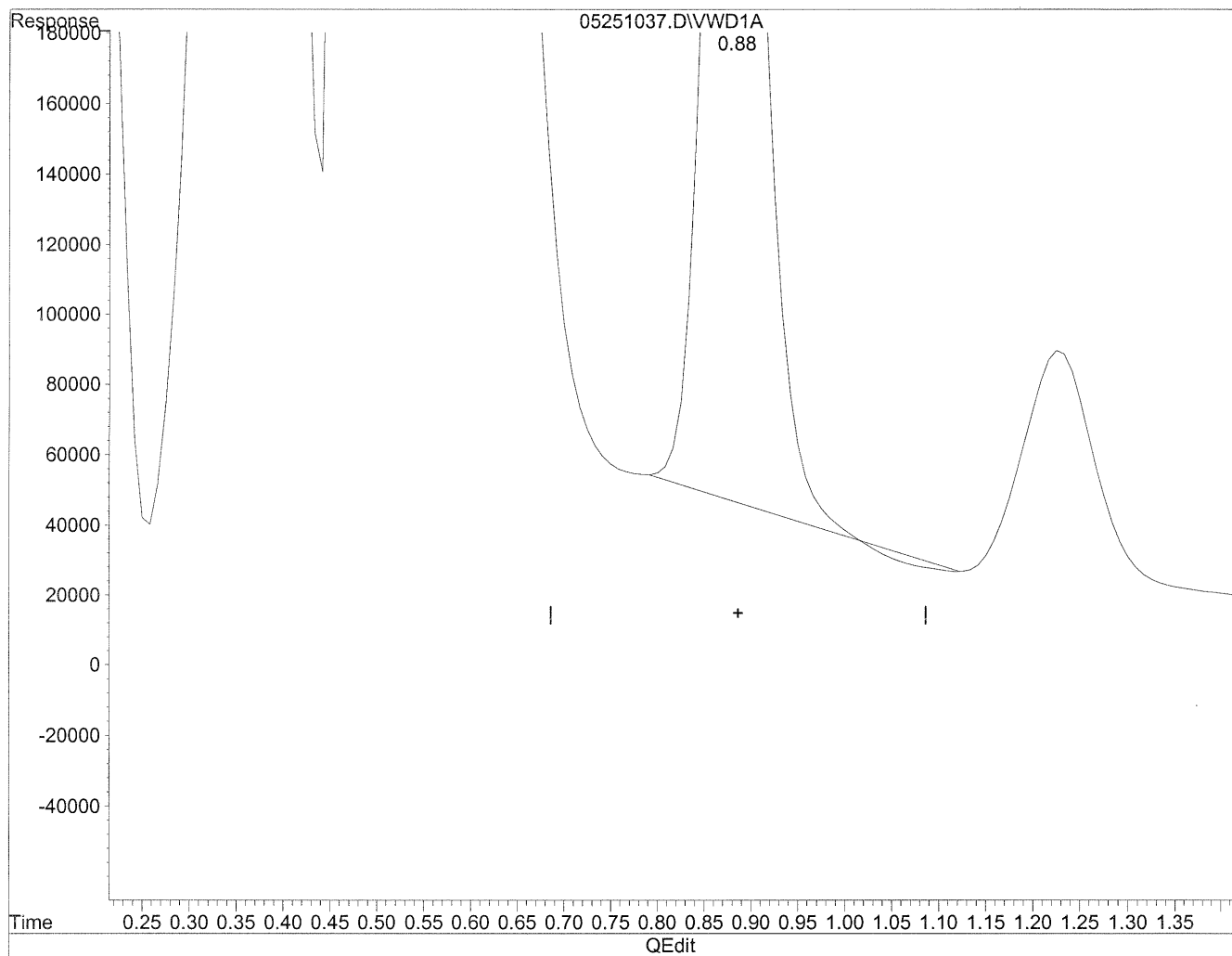
	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.88	14085468	1509.231	ng/mlm
2)	Acetaldehyde	1.23	3480511	516.762	ng/mlm
3)	Propionaldehyde	2.23	474097	97.510	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	3.64	627327	155.691	ng/mlm
6)	Benzaldehyde	4.50	72007	26.603	ng/ml
7)	Isovaleraldehyde	4.91f	458428	129.218	ng/mlm
8)	Valeraldehyde	5.23	359297	107.105	ng/mlm
9)	o-Tolualdehyde	5.74	19737	9.696	ng/ml
10)	m,p-Tolualdehyde	6.03	118291	50.495	ng/ml
11)	Hexaldehyde	6.88	393885	136.986	ng/mlm
12)	2,5-Dimethylbenzaldehyde	7.13	12541	6.518	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
Acq On : 25-May-2010, 17:44 Operator: MD
Sample : P1001793-009 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 1475.606ng/ml

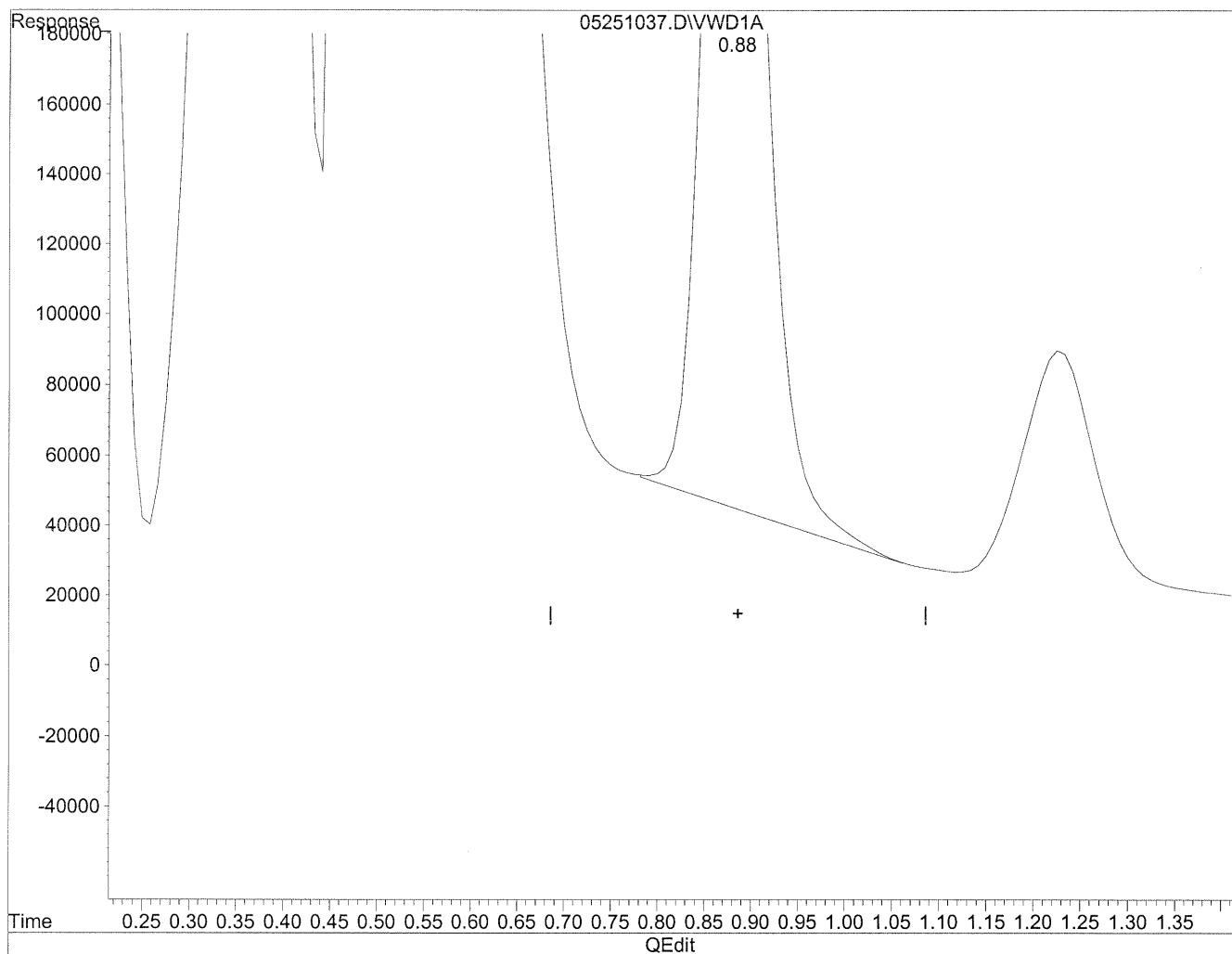
response 13771642

(+) = Expected Retention Time
05251037.D TO110510.M Fri May 28 11:07:53 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
 Acq On : 25-May-2010, 17:44 Operator: MD
 Sample : P1001793-009 2ml Inst : VWD
 Misc : re-run Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 10:30:37 2010
 Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 1509.231ng/ml m

response 14085468

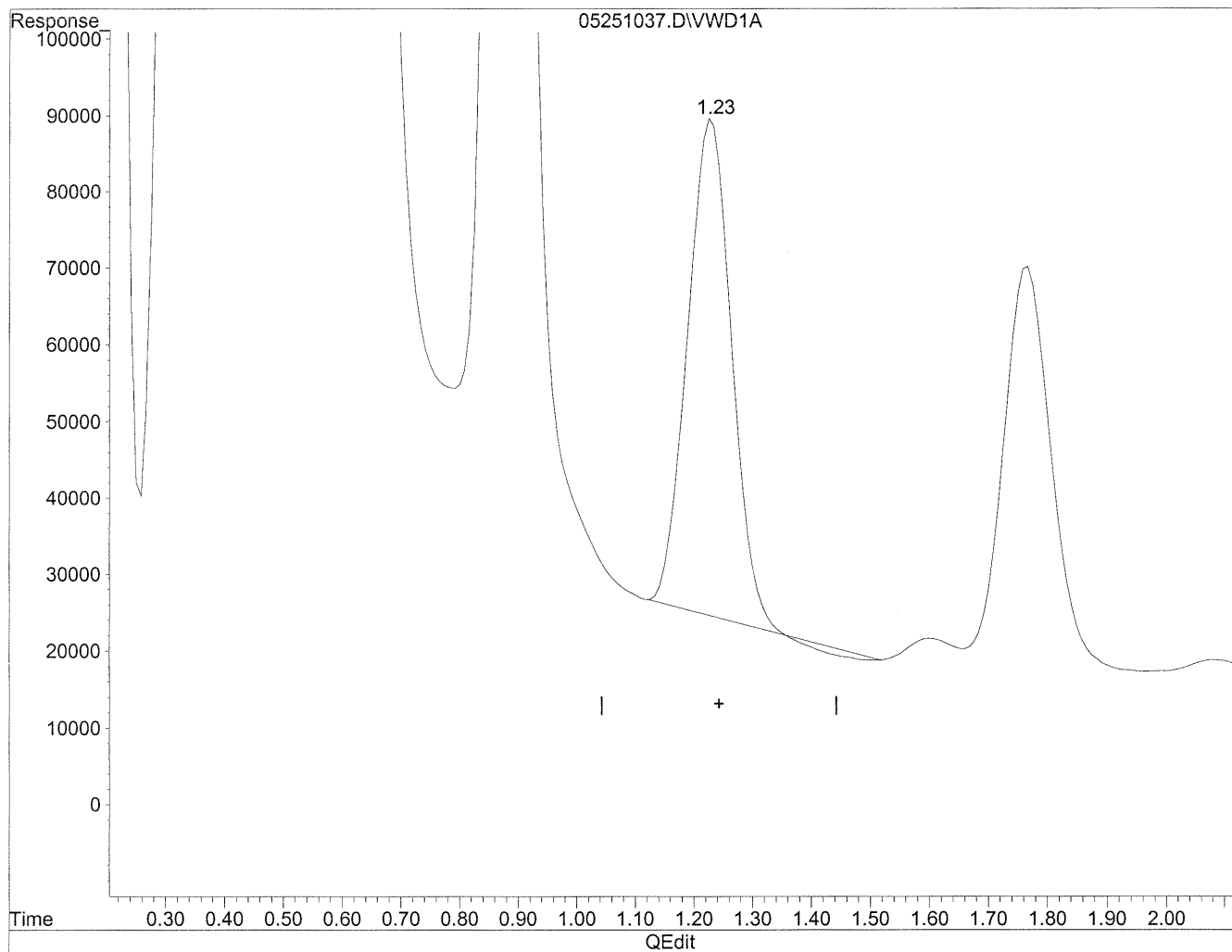
12
6/4/10
HLC
6/4/10

(+) = Expected Retention Time
 05251037.D TO110510.M Fri May 28 11:07:58 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
Acq On : 25-May-2010, 17:44 Operator: MD
Sample : P1001793-009 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.23min 497.639ng/ml

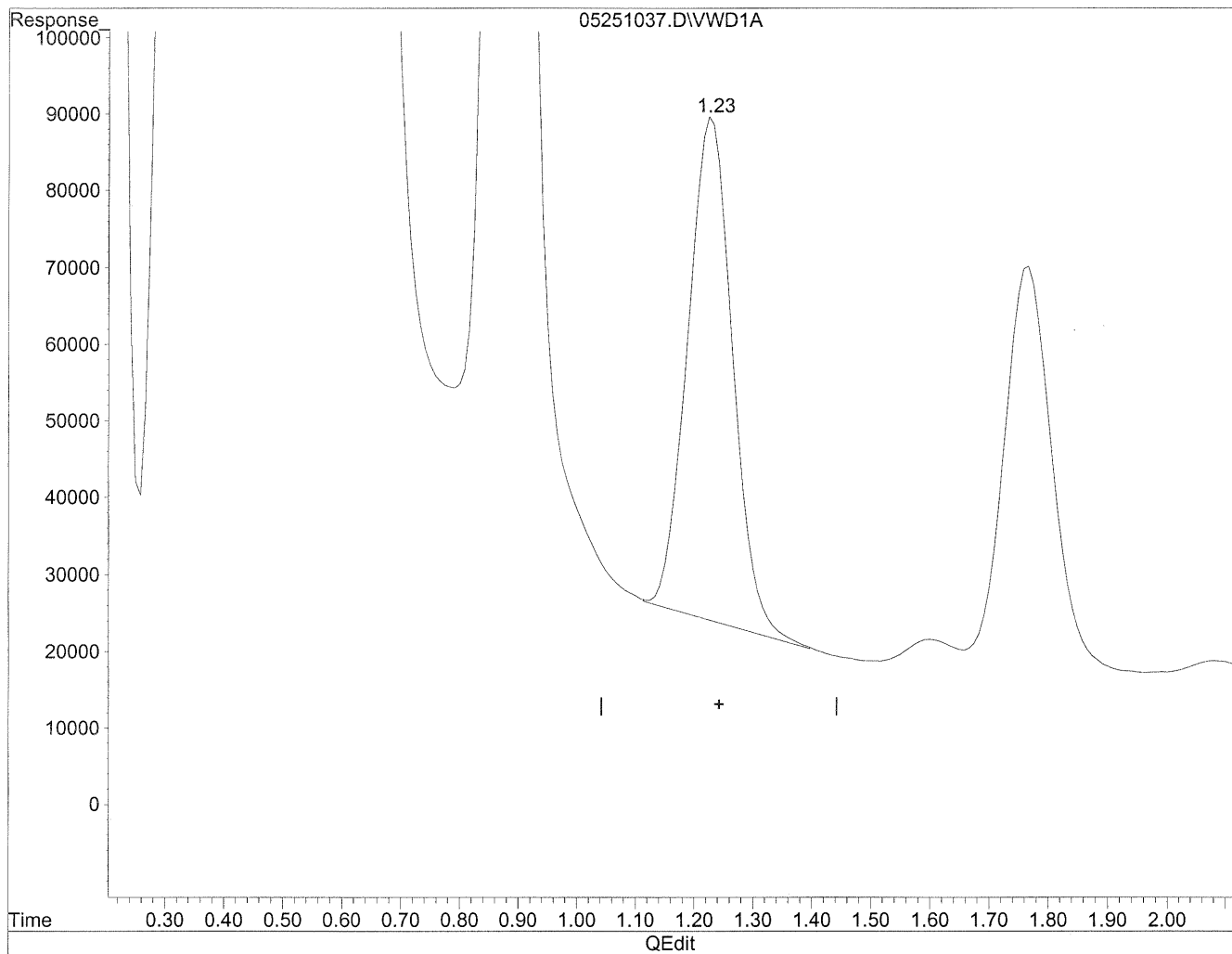
response 3351710

(+) = Expected Retention Time
05251037.D TO110510.M Fri May 28 11:08:06 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
Acq On : 25-May-2010, 17:44 Operator: MD
Sample : P1001793-009 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.23min 516.762ng/ml m

response 3480511

12
MD
6/4/10

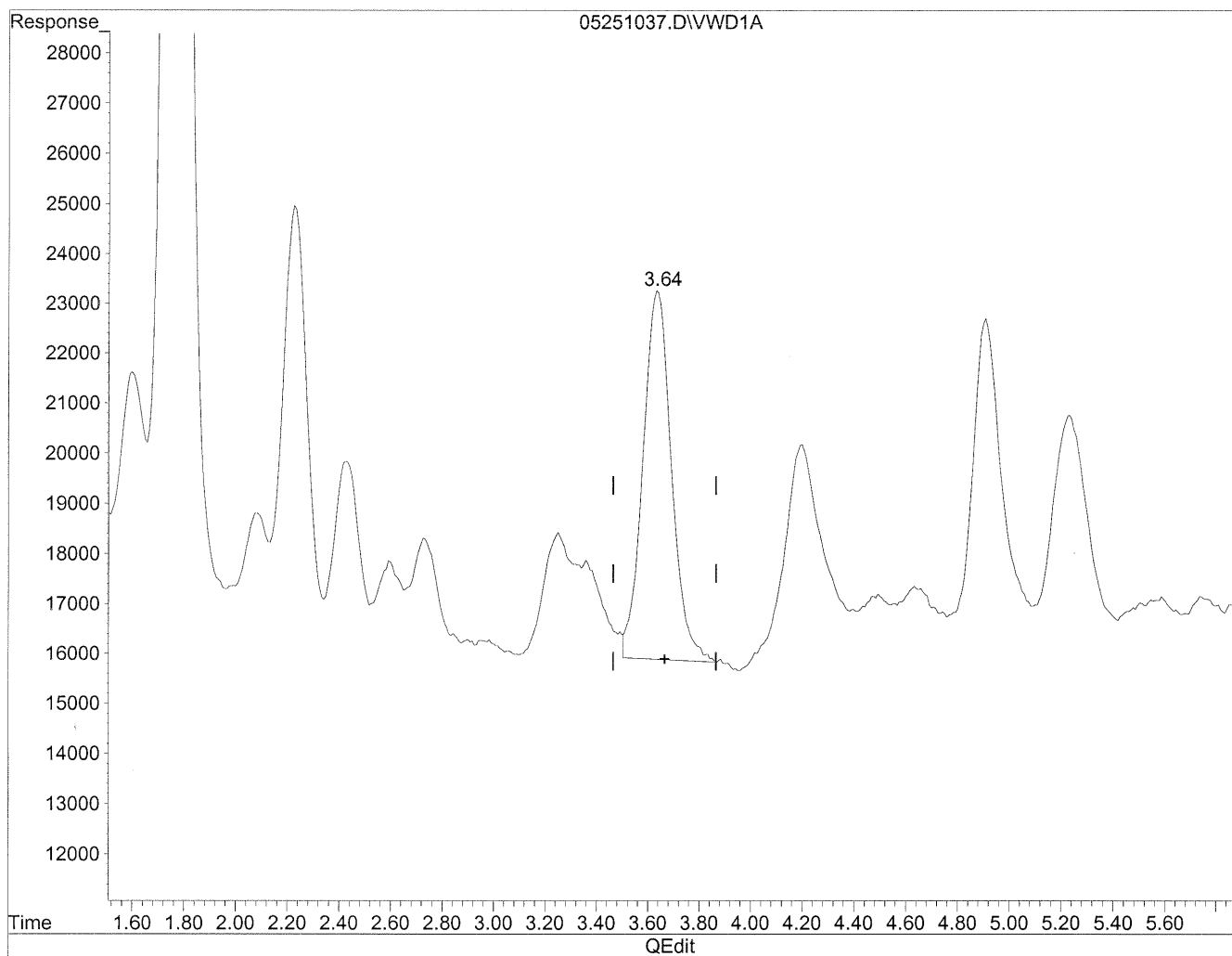
HC
6/4/10

(+) = Expected Retention Time
05251037.D TO110510.M Fri May 28 11:08:11 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
Acq On : 25-May-2010, 17:44 Operator: MD
Sample : P1001793-009 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

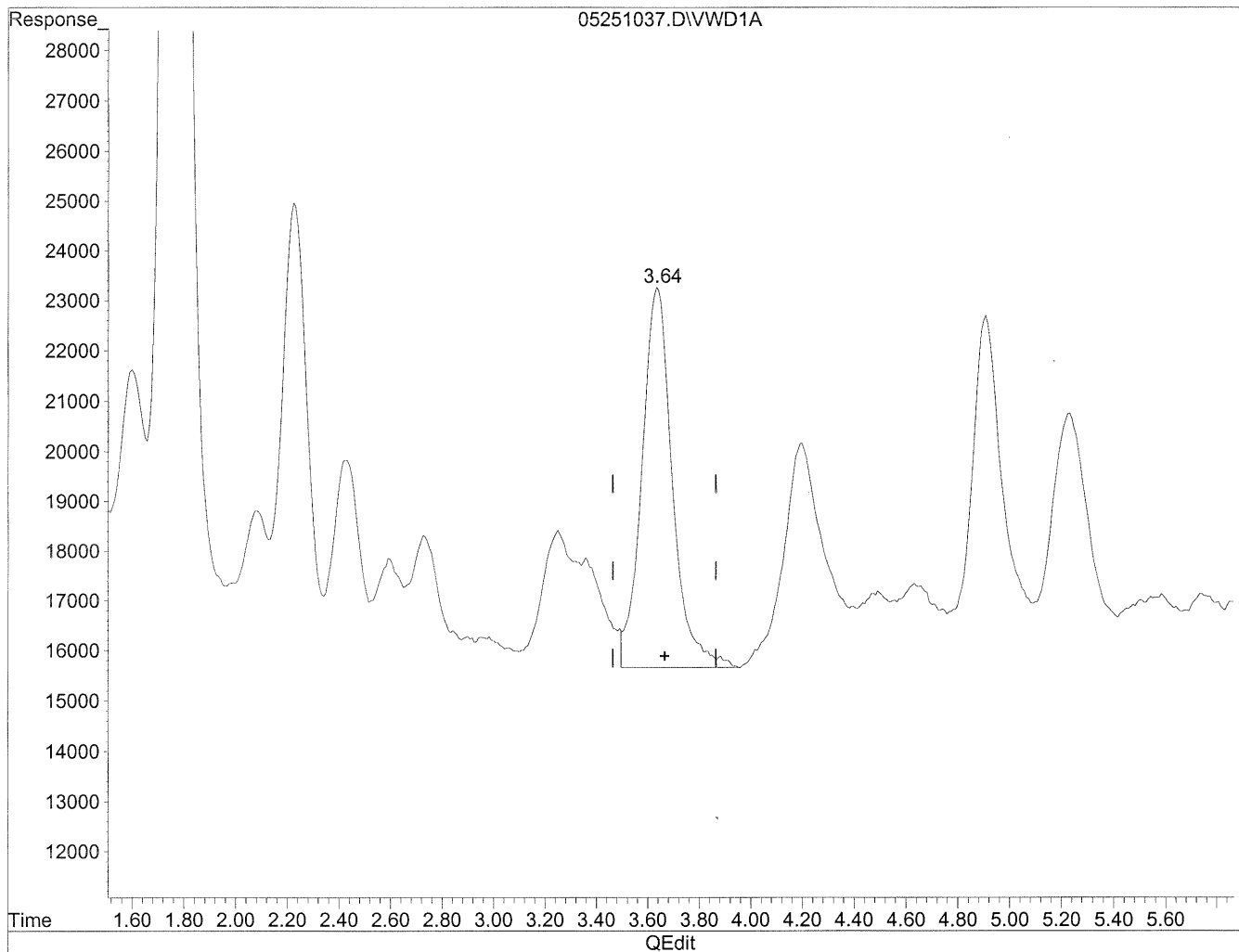


(5) Butyraldehyde
3.64min 142.243ng/ml
response 573141

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
Acq On : 25-May-2010, 17:44 Operator: MD
Sample : P1001793-009 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.64min 155.691ng/ml m

response 627327

DL
NO
6/4/10

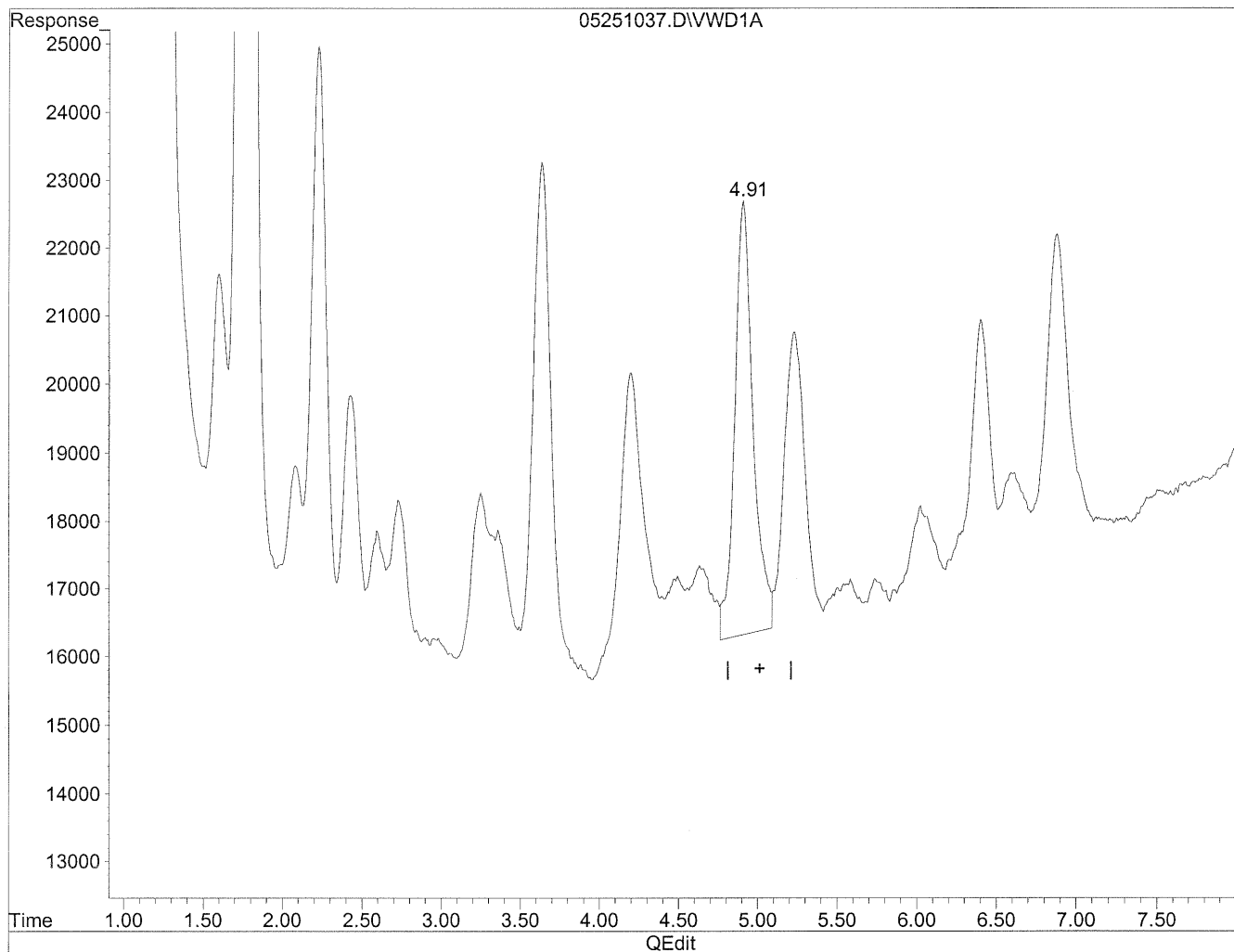
HC
6/4/10

(+) = Expected Retention Time
05251037.D TO110510.M Fri May 28 11:08:40 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
Acq On : 25-May-2010, 17:44 Operator: MD
Sample : P1001793-009 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



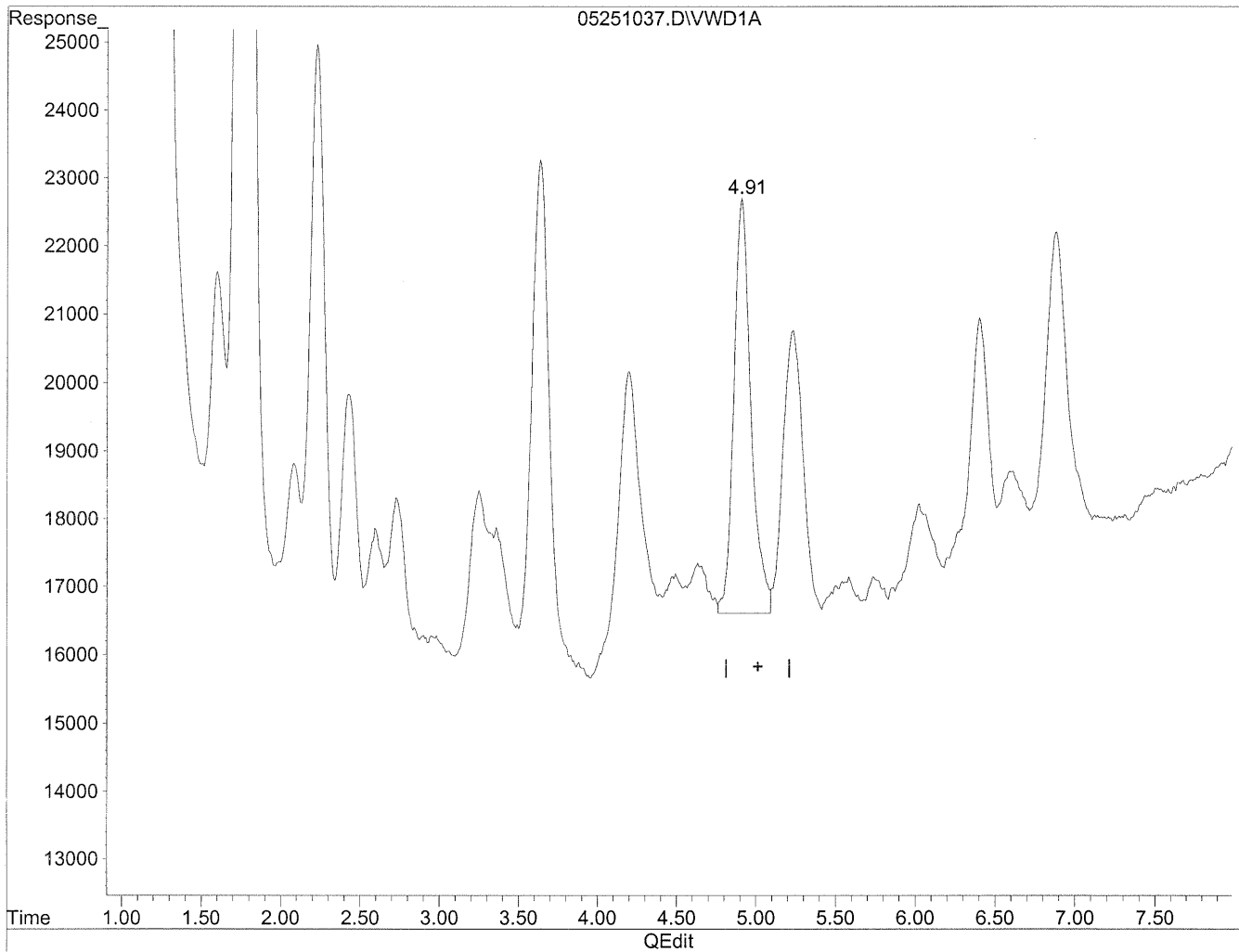
(7) Isovaleraldehyde
4.91min 143.905ng/ml
response 510532

(+) = Expected Retention Time
05251037.D TO110510.M Fri May 28 11:09:02 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
Acq On : 25-May-2010, 17:44 Operator: MD
Sample : P1001793-009 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.91min 129.218ng/ml m

response 458428

HC
6/4/10

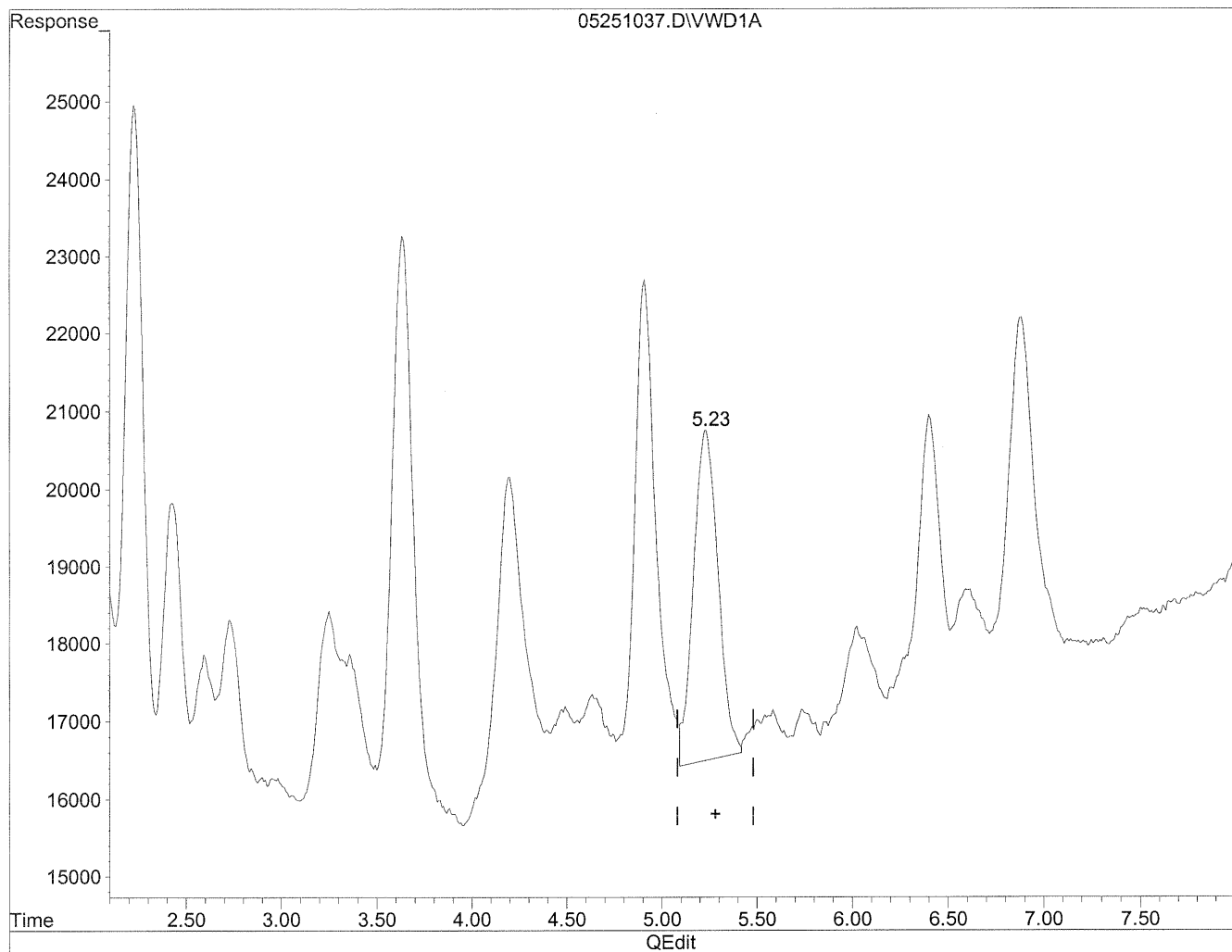
BC
(M)
6/4/10

(+) = Expected Retention Time
05251037.D TO110510.M Fri May 28 11:09:20 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
 Acq On : 25-May-2010, 17:44 Operator: MD
 Sample : P1001793-009 2ml Inst : VWD
 Misc : re-run Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 10:30:37 2010
 Response via : Multiple Level Calibration

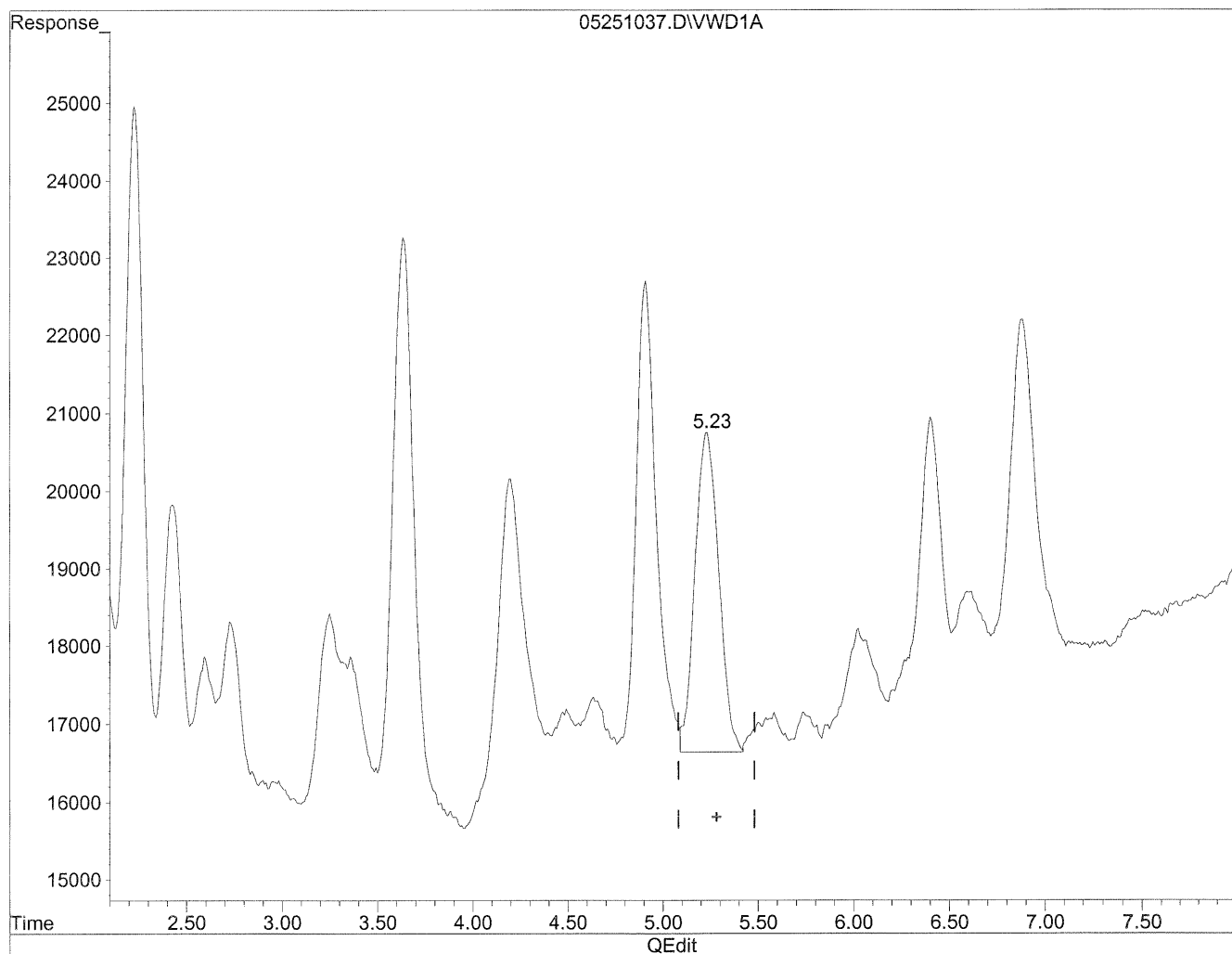


(8) Valeraldehyde
 5.23min 114.759ng/ml
 response 384974

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
Acq On : 25-May-2010, 17:44 Operator: MD
Sample : P1001793-009 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.23min 107.105ng/ml m

response 359297

HC
6/4/10

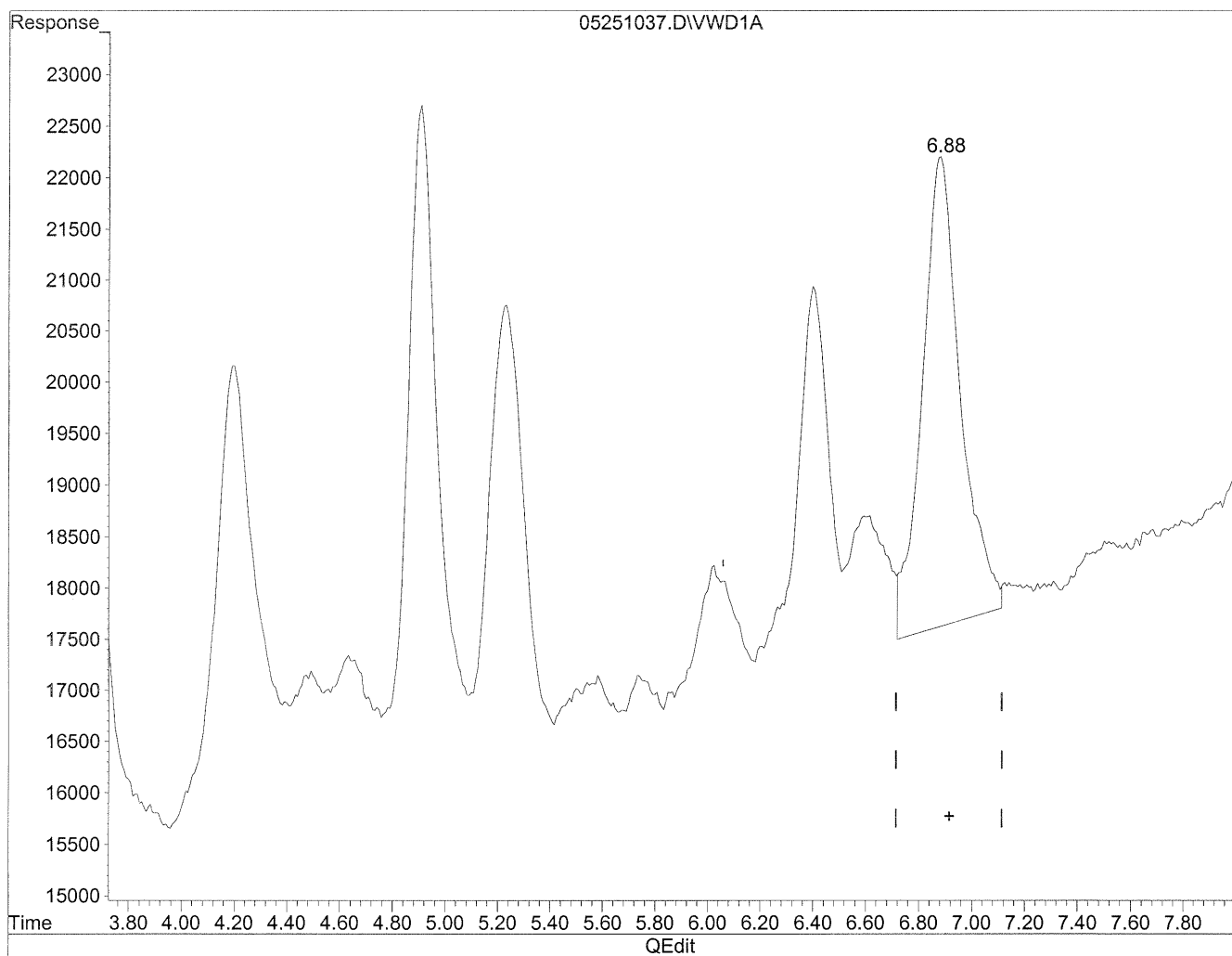
BC
6/4/10

(+) = Expected Retention Time
05251037.D TO110510.M Fri May 28 11:09:34 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
 Acq On : 25-May-2010, 17:44 Operator: MD
 Sample : P1001793-009 2ml Inst : VWD
 Misc : re-run Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 10:30:37 2010
 Response via : Multiple Level Calibration



(11) Hexaldehyde

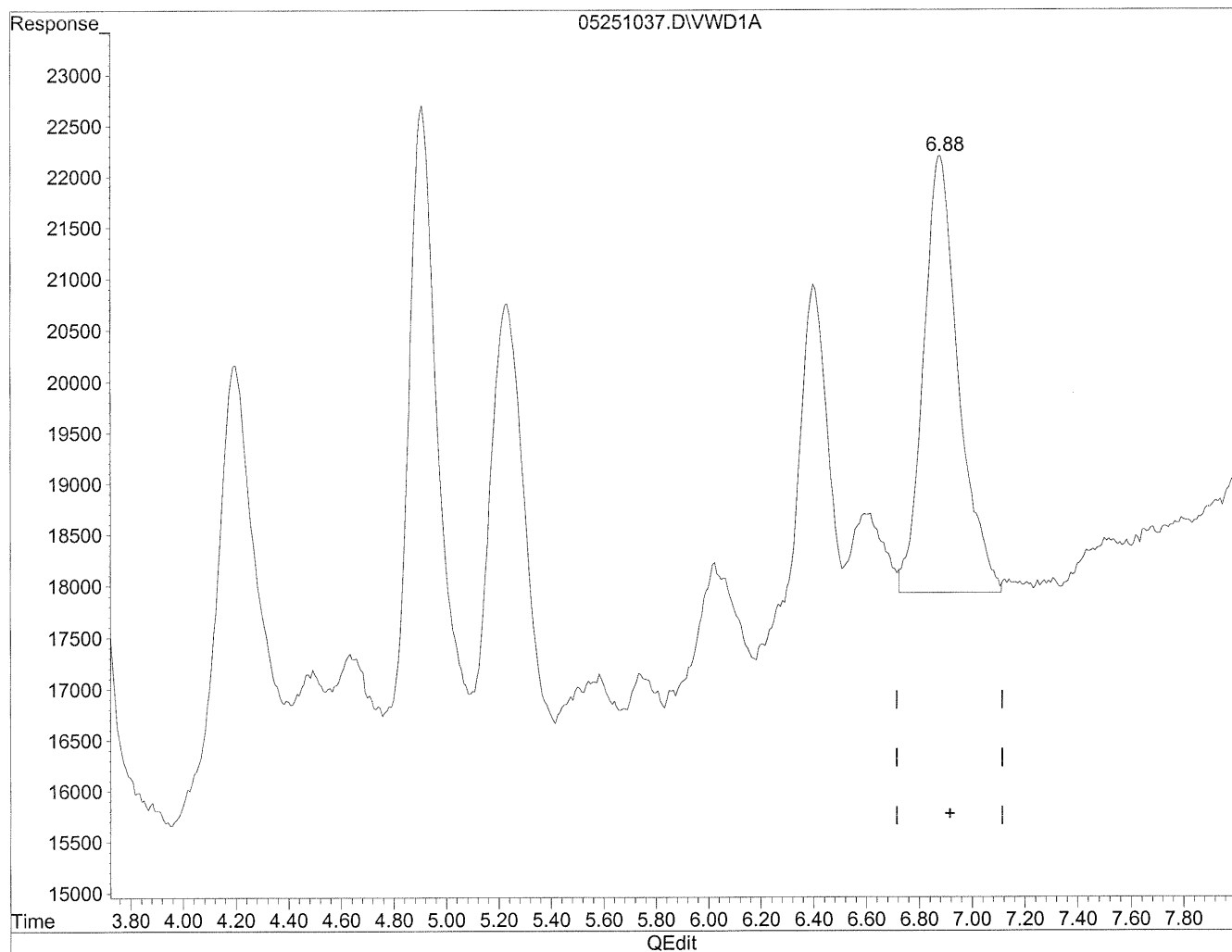
6.88min 159.696ng/ml

response 459185

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251037.D Vial: 124
 Acq On : 25-May-2010, 17:44 Operator: MD
 Sample : P1001793-009 2ml Inst : VWD
 Misc : re-run Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 10:30:37 2010
 Response via : Multiple Level Calibration



(11) Hexaldehyde

6.88min 136.986ng/ml m

response 393885

HC
6/4/10

12
(MD)
6/4/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: **Environmental Health & Engineering, Incorporated**
 Client Sample ID: **110344**
 Client Project ID: **17131**

CAS Project ID: P1001793
 CAS Sample ID: P1001793-010

Test Code: EPA TO-11A
 Instrument ID: HP1050/UV_Vis 360/LC2
 Analyst: Madeleine Dangazyan
 Sampling Media: Radiello Tube
 Test Notes: **BC**

Date Collected: 5/21/10
 Date Received: 5/22/10
 Date Analyzed: 5/25/10
 Desorption Volume: 2.0 ml
 Sampling Time: NA Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	0.26	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

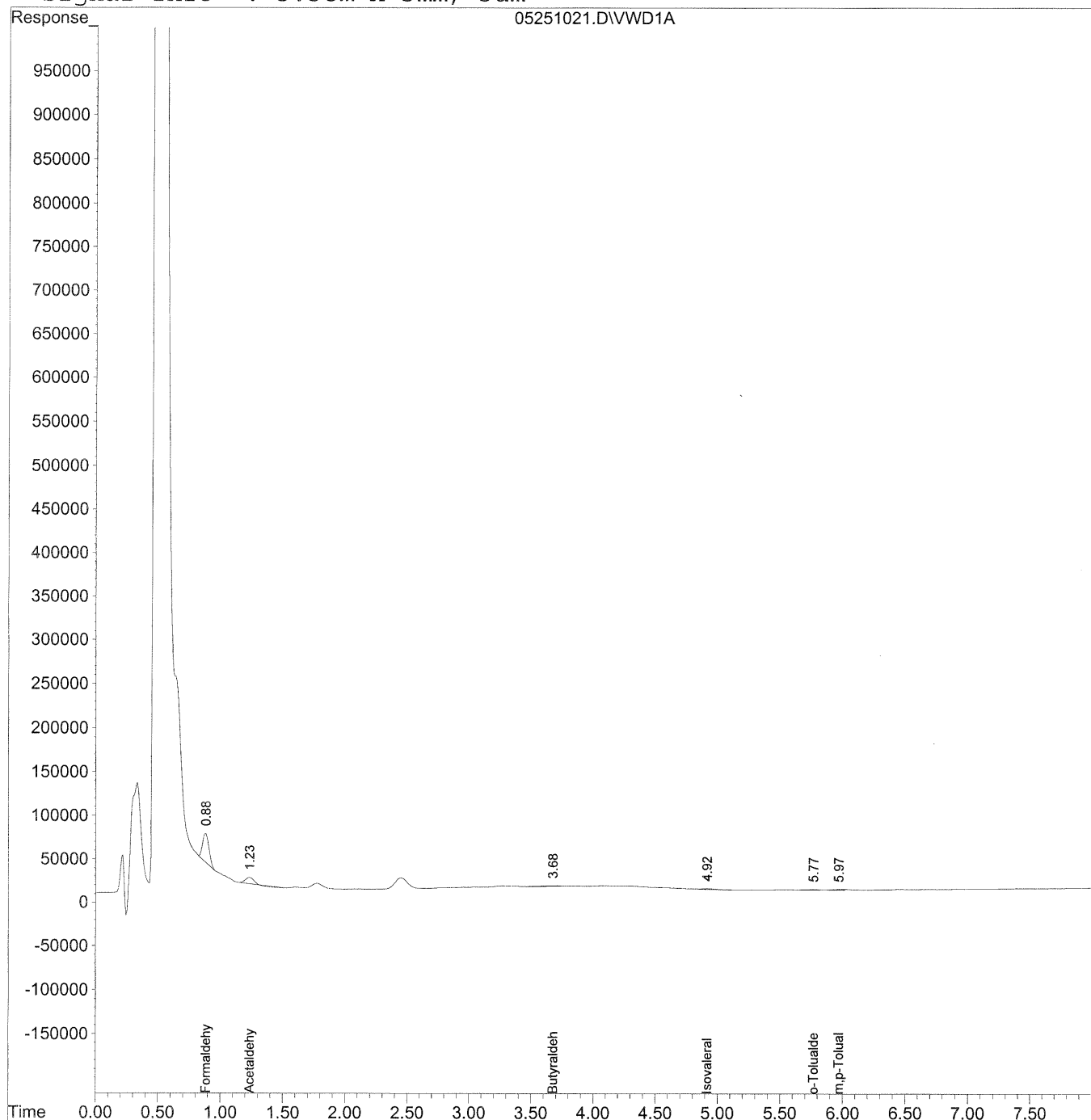
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251021.D Vial: 112
Acq On : 25-May-2010, 14:57 Operator: MD
Sample : P1001793-010 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:49 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251021.D Vial: 112
Acq On : 25-May-2010, 14:57 Operator: MD
Sample : P1001793-010 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:49 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

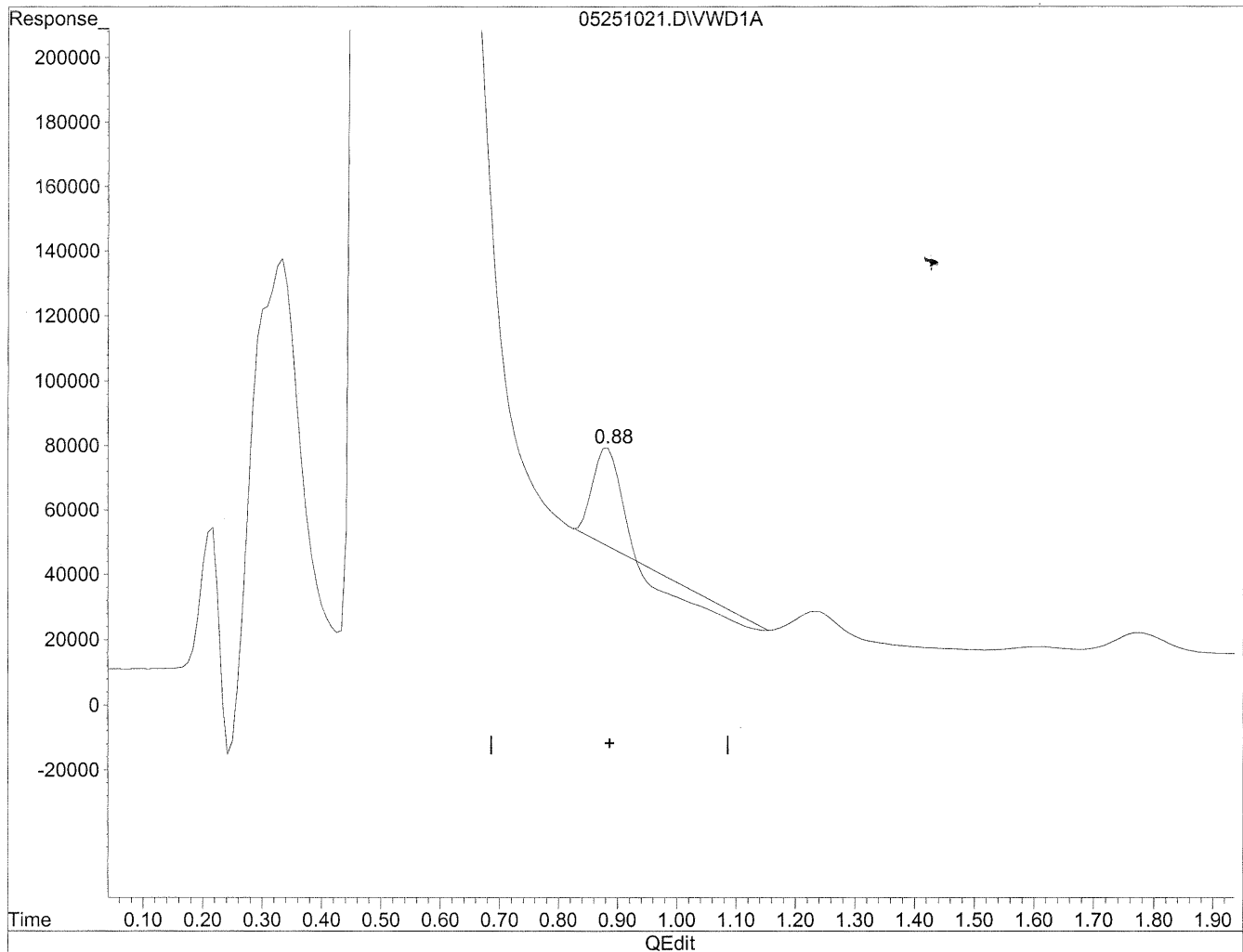
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.88	1200432	128.624 ng/mlm
2)	Acetaldehyde	1.24	263011	39.050 ng/ml
3)	Propionaldehyde	0.00	0	N.D. ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.68	75568	18.755 ng/ml
6)	Benzaldehyde	0.00	0	N.D. ng/ml
7)	Isovaleraldehyde	4.92	55555	15.659 ng/ml
8)	Valeraldehyde	0.00	0	N.D. ng/ml
9)	o-Tolualdehyde	5.77	45871	22.535 ng/ml
10)	m,p-Tolualdehyde	5.97	54949	23.456 ng/ml
11)	Hexaldehyde	0.00	0	N.D. ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251021.D Vial: 112
Acq On : 25-May-2010, 14:57 Operator: MD
Sample : P1001793-010 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:12 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

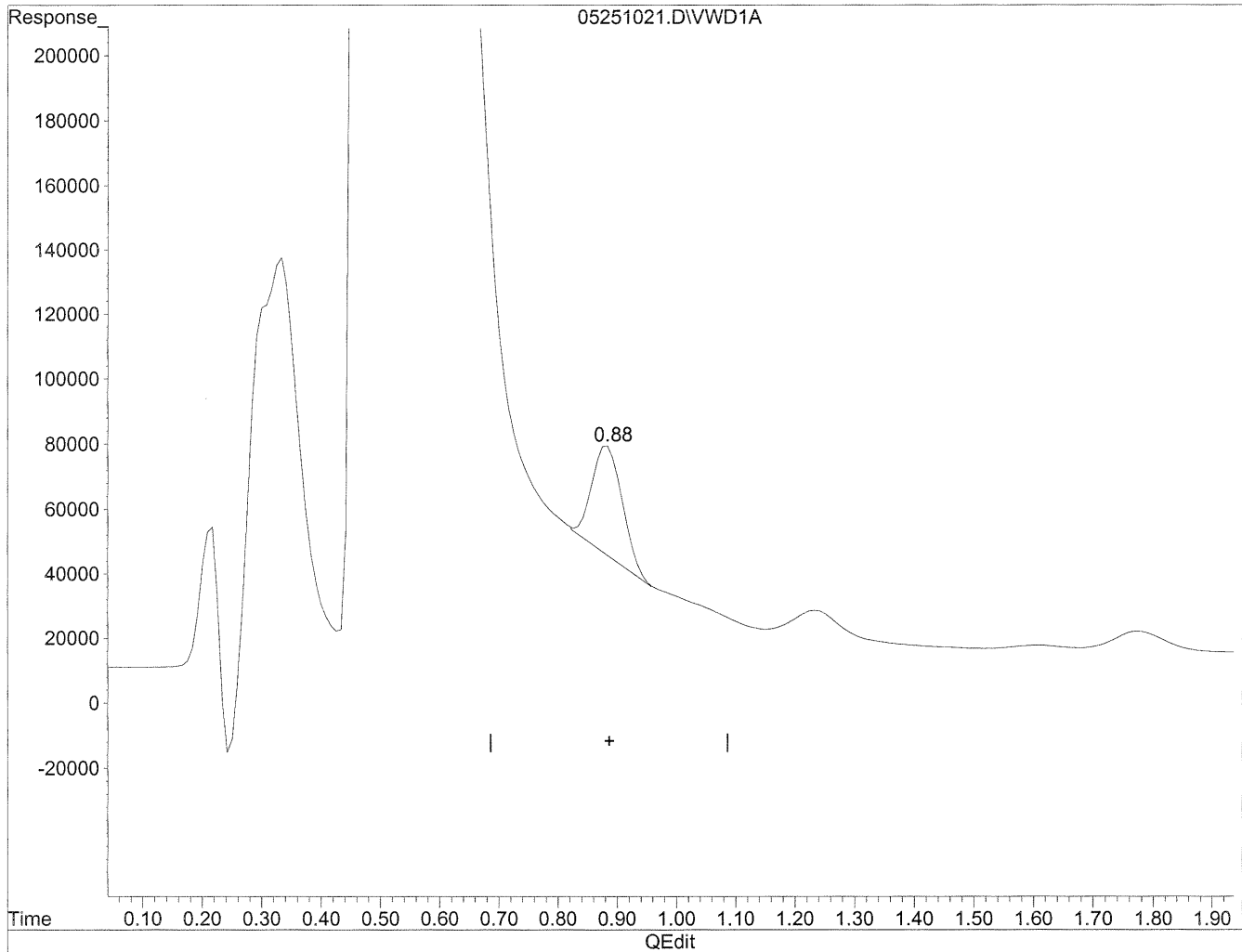


(1) Formaldehyde
0.88min 64.894ng/ml
response 605647

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251021.D Vial: 112
Acq On : 25-May-2010, 14:57 Operator: MD
Sample : P1001793-010 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:12 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 128.624ng/ml m

response 1200432

He
6/4/10

TC
MD
6/4/10

(+) = Expected Retention Time
05251021.D TO110510.M Fri May 28 10:49:06 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated

Client Sample ID: 110391

Client Project ID: 17131

CAS Project ID: P1001793

CAS Sample ID: P1001793-011

Test Code: EPA TO-11A

Instrument ID: HP1050/UV_Vis 360/LC2

Analyst: Madeleine Dangazyan

Sampling Media: Radiello Tube

Test Notes: BC

Date Collected: 5/21/10

Date Received: 5/22/10

Date Analyzed: 5/25/10

Desorption Volume: 2.0 ml

Sampling Time: 18345 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	50	27	0.11	22	0.090	
75-07-0	Acetaldehyde	3.7	2.4	0.13	1.3	0.072	
123-38-6	Propionaldehyde	1.2	1.7	0.28	0.70	0.12	
123-72-8	Butyraldehyde	2.4	12	0.99	4.1	0.34	M
100-52-7	Benzaldehyde	3.2	1.9	0.12	0.44	0.027	
590-86-3	Isovaleraldehyde	0.81	0.73	0.18	0.21	0.051	
110-62-3	Valeraldehyde	2.6	5.3	0.40	1.5	0.11	
66-25-1	n-Hexaldehyde	11	34	0.61	8.2	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

M = Matrix interference; results may be biased .

NA = Not applicable.

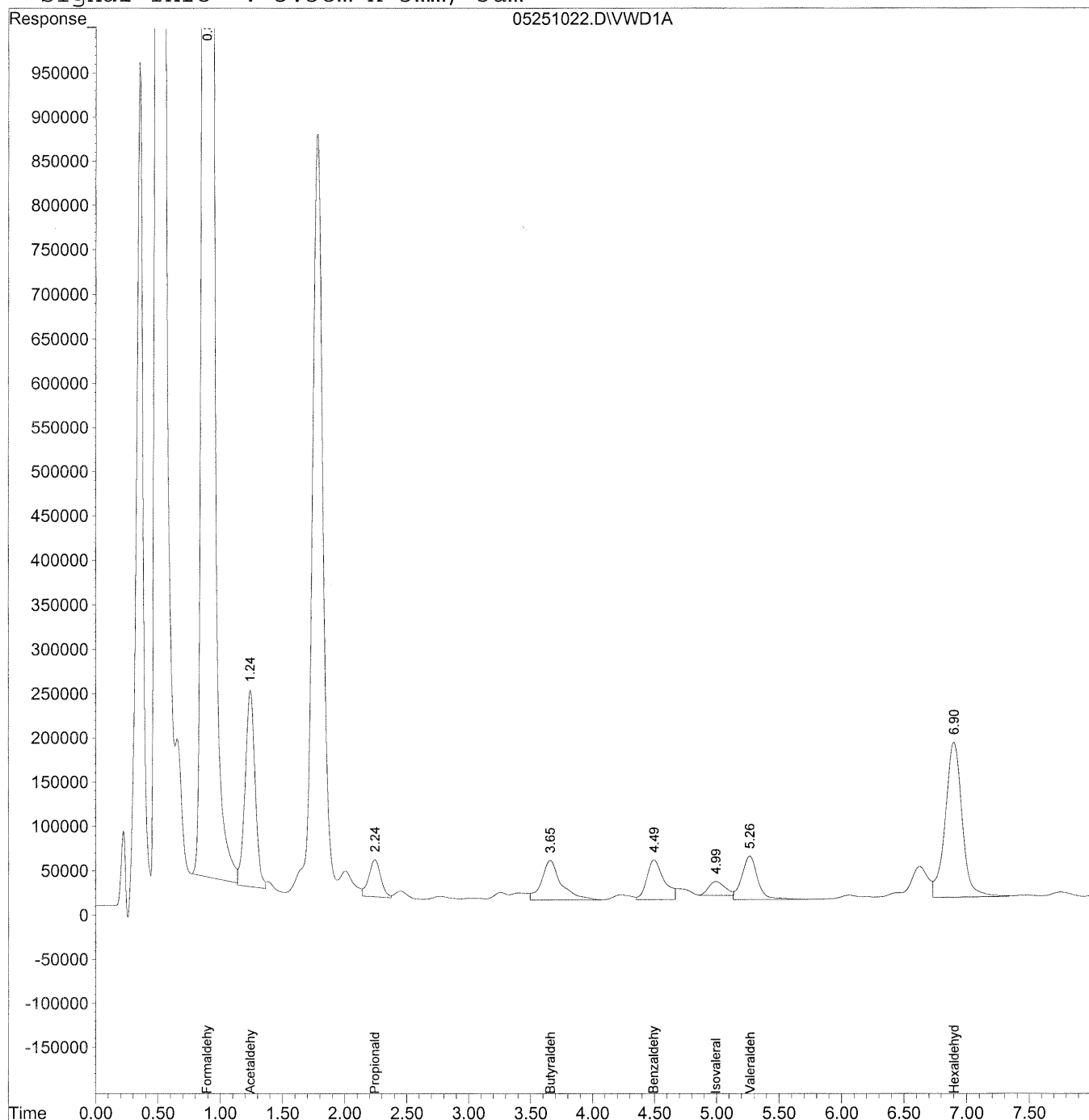
Verified By: Re Date: 6/2/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:52 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:52 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

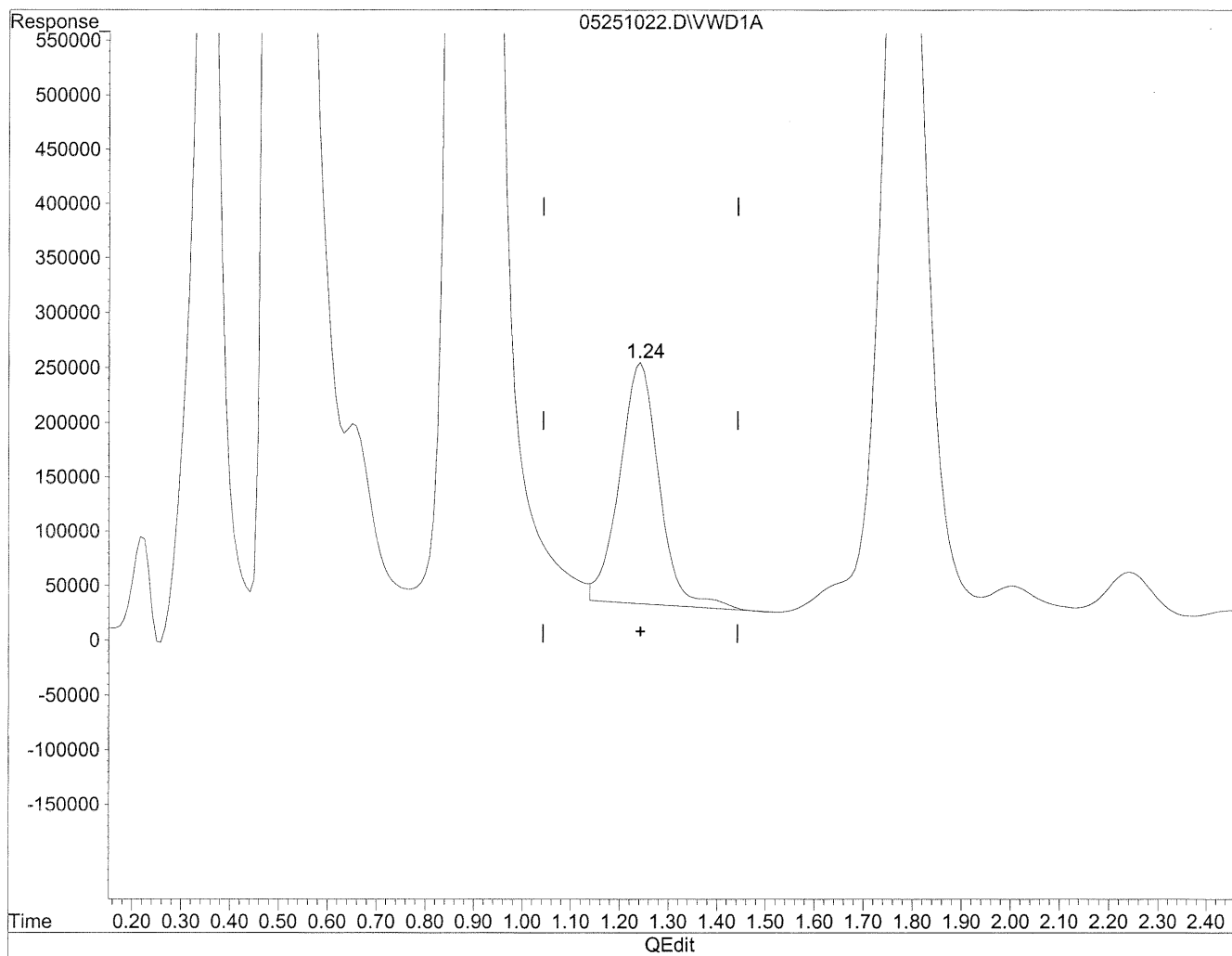
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.89	238143637	25516.644 ng/ml <i>dil</i>
2)	Acetaldehyde	1.24	12409789	1842.520 ng/mlm
3)	Propionaldehyde	2.24	2891212	594.652 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.65	4855961	1205.161 ng/mlm
6)	Benzaldehyde	4.49	4339176	1603.110 ng/mlm
7)	Isovaleraldehyde	4.99	1441113	406.210 ng/mlm
8)	Valeraldehyde	5.27	4364406	1301.016 ng/ml
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11)	Hexaldehyde	6.90	16014737	5569.620 ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:54 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

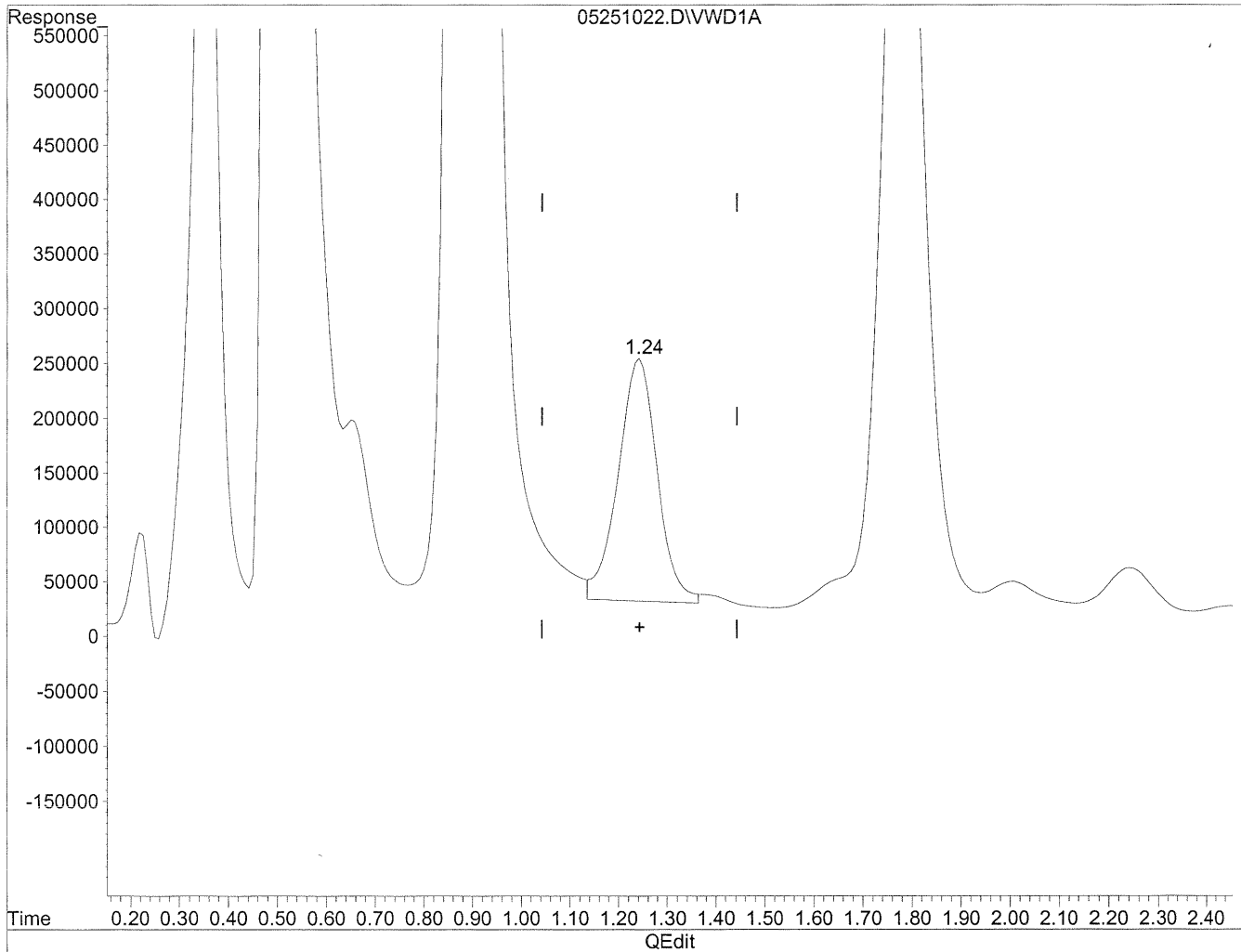
1.24min 1862.965ng/ml

response 12547492

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:54 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 1842.520ng/ml m

response 12409789

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MD
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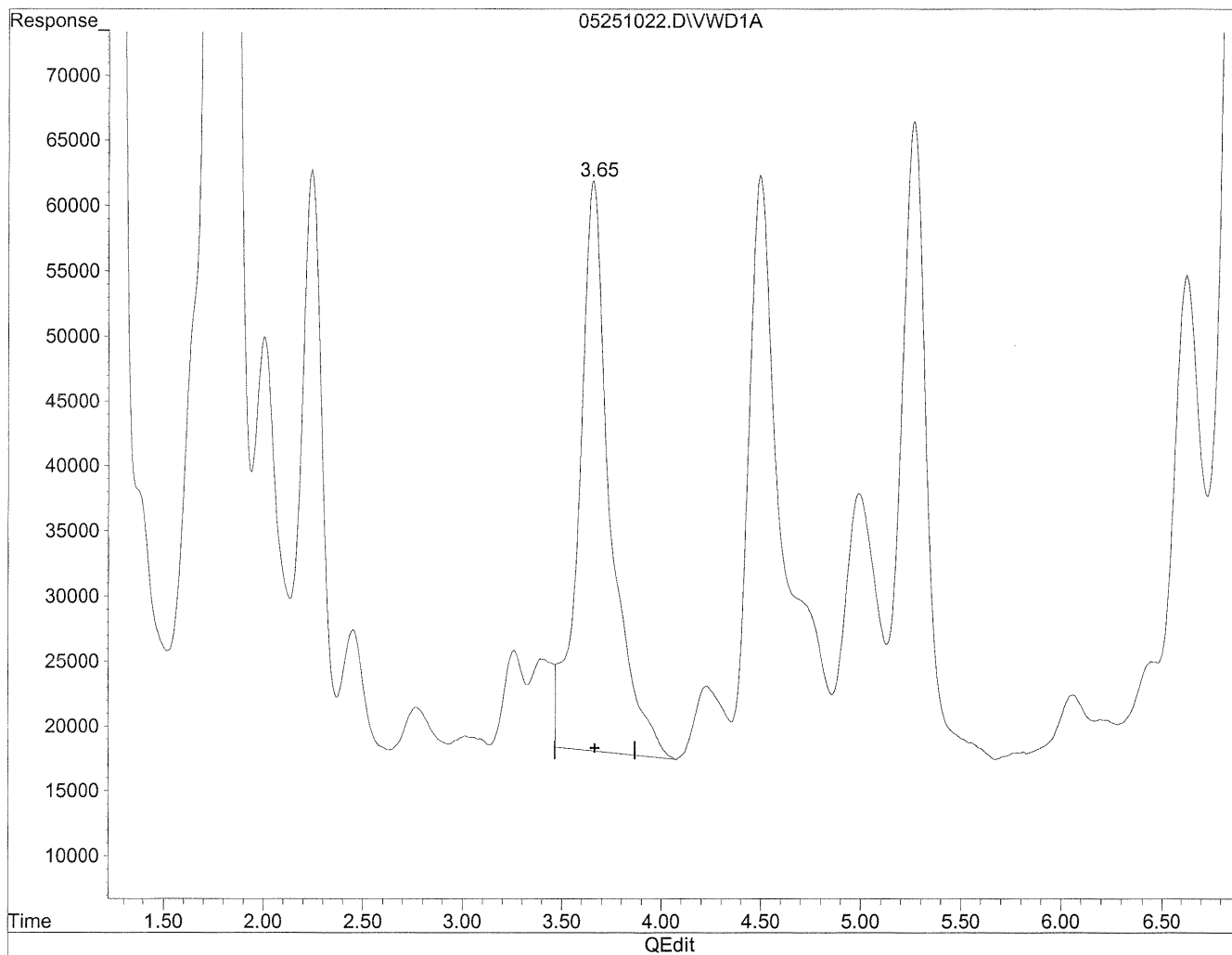
Hc
6/4/10

(+) = Expected Retention Time
05251022.D TO110510.M Fri May 28 10:50:16 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:54 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.66min 1181.533ng/ml

response 4760756

(+) = Expected Retention Time

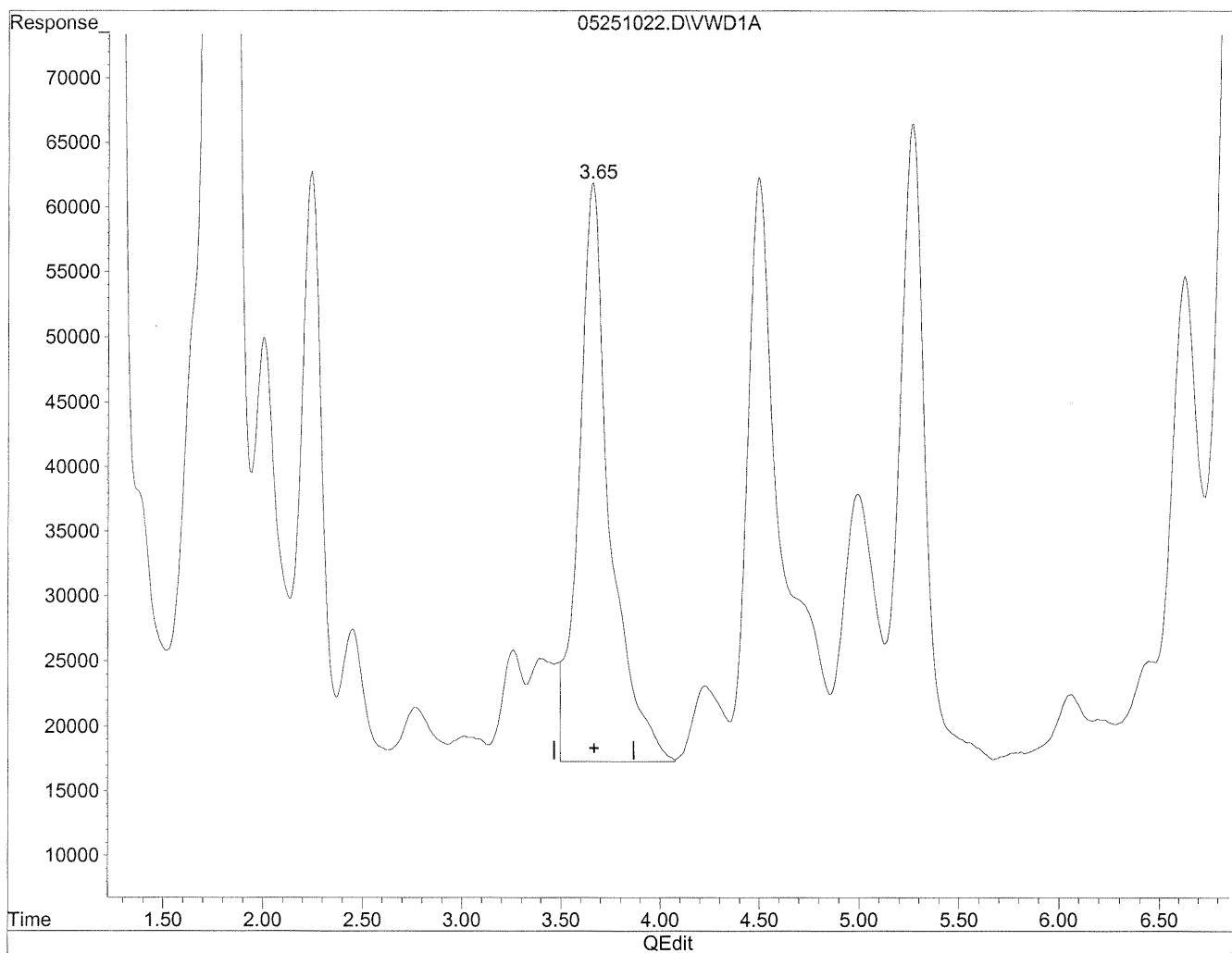
05251022.D TO110510.M

Fri May 28 10:50:40 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:54 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.65min 1205.161ng/ml m

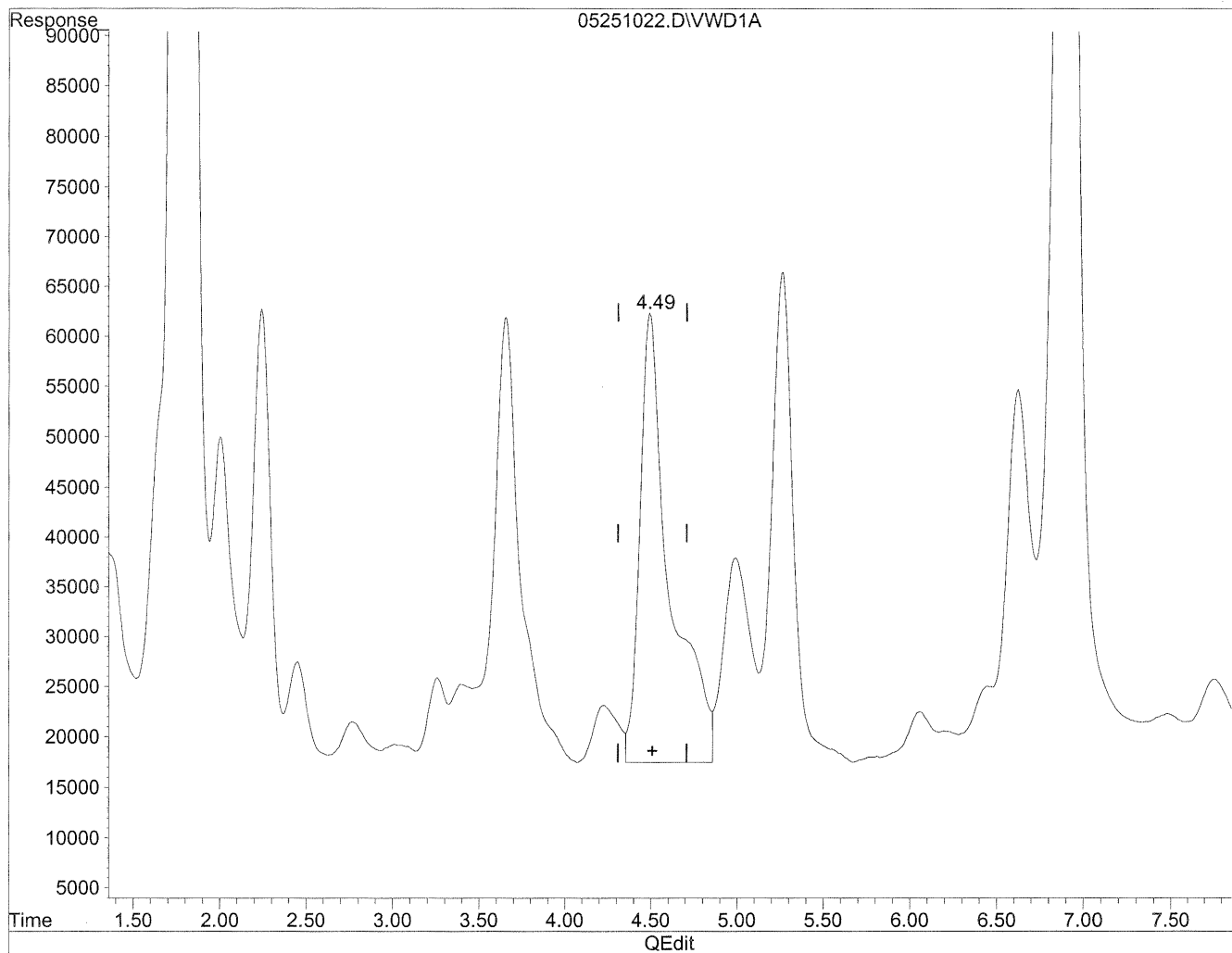
response 4855961

IC
m flag
6/4/10
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:54 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

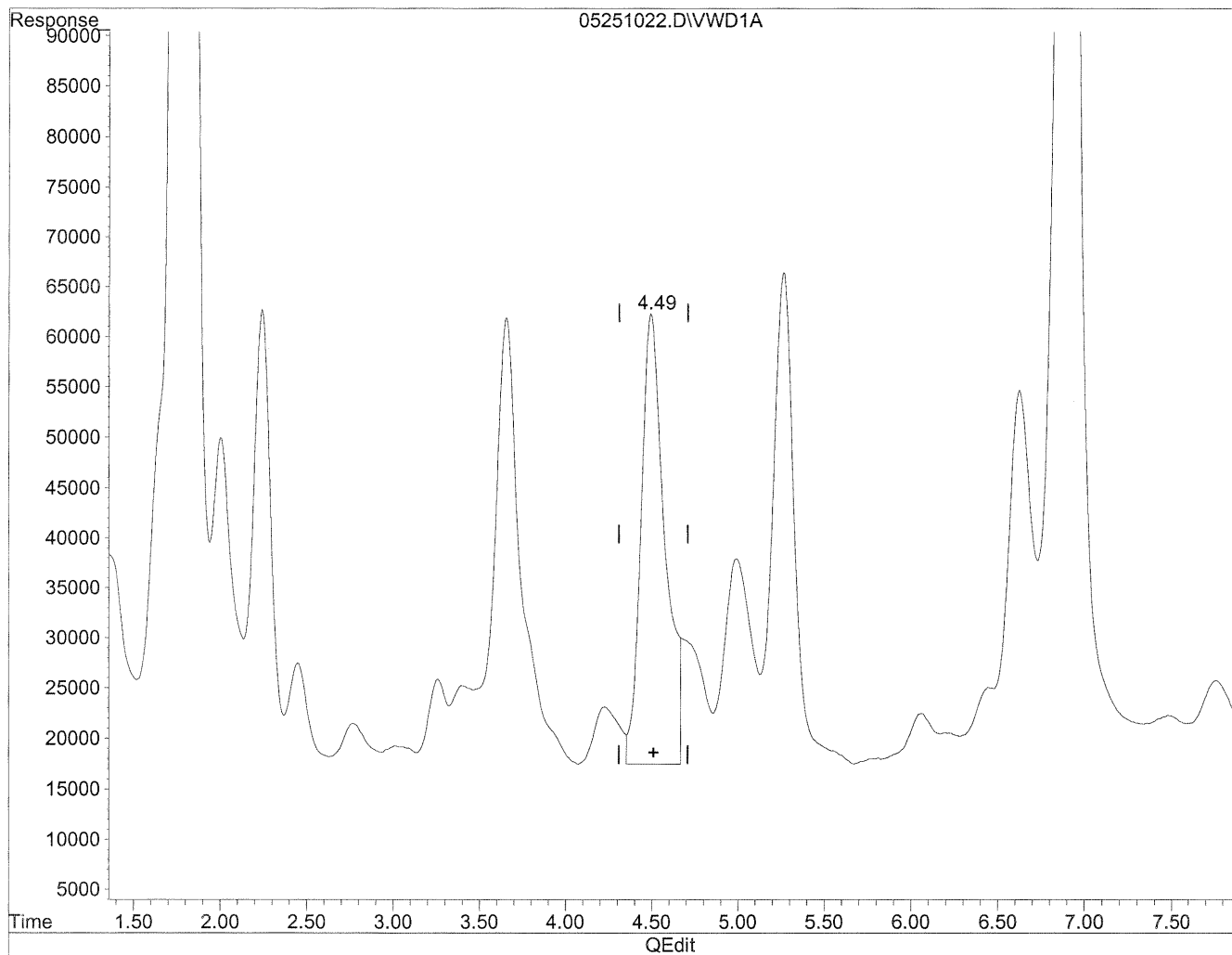
4.50min 1991.674ng/ml

response 5390911

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:54 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.49min 1603.110ng/ml m

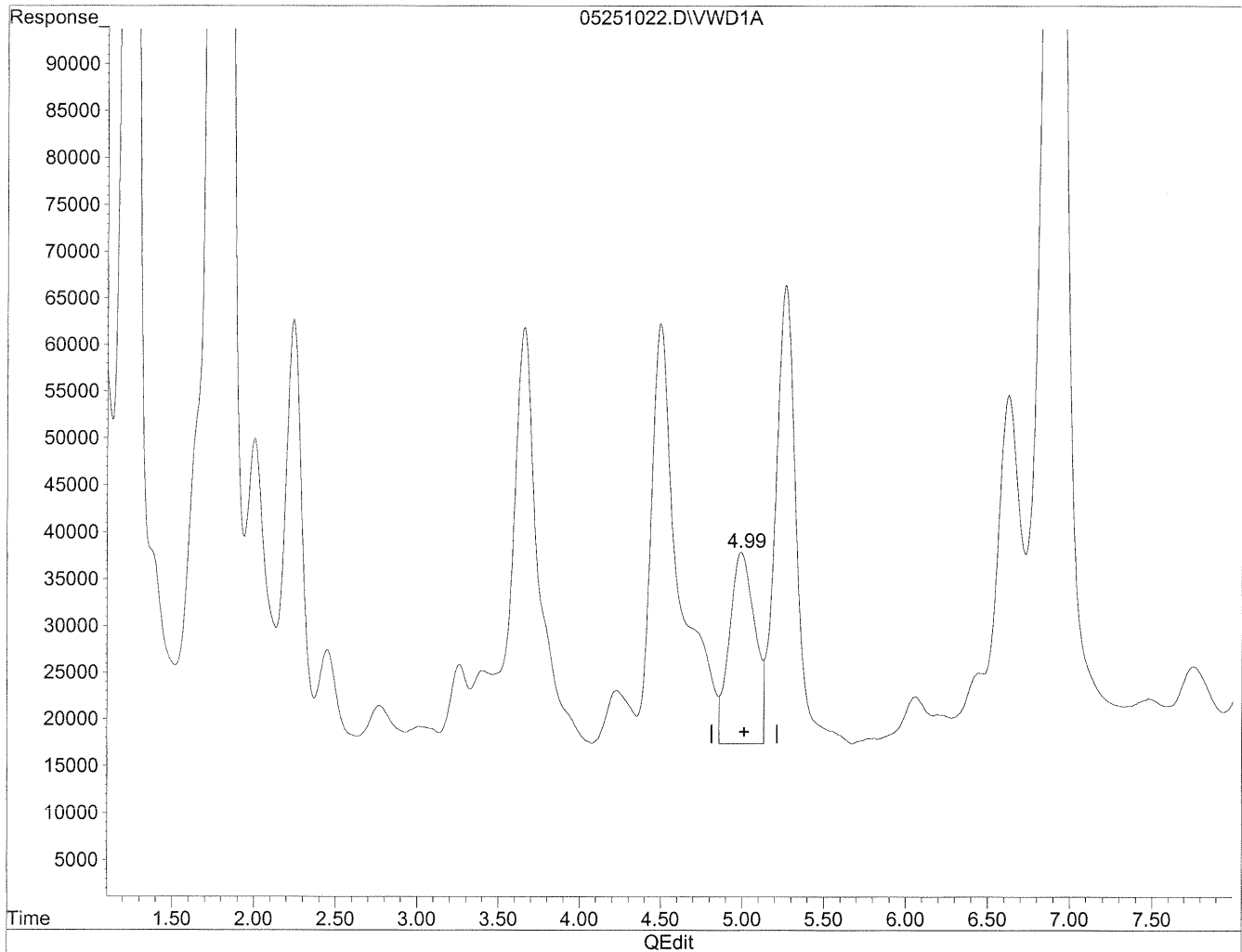
response 4339176

sh
MD
6/4/10
HLC
4/14/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:54 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

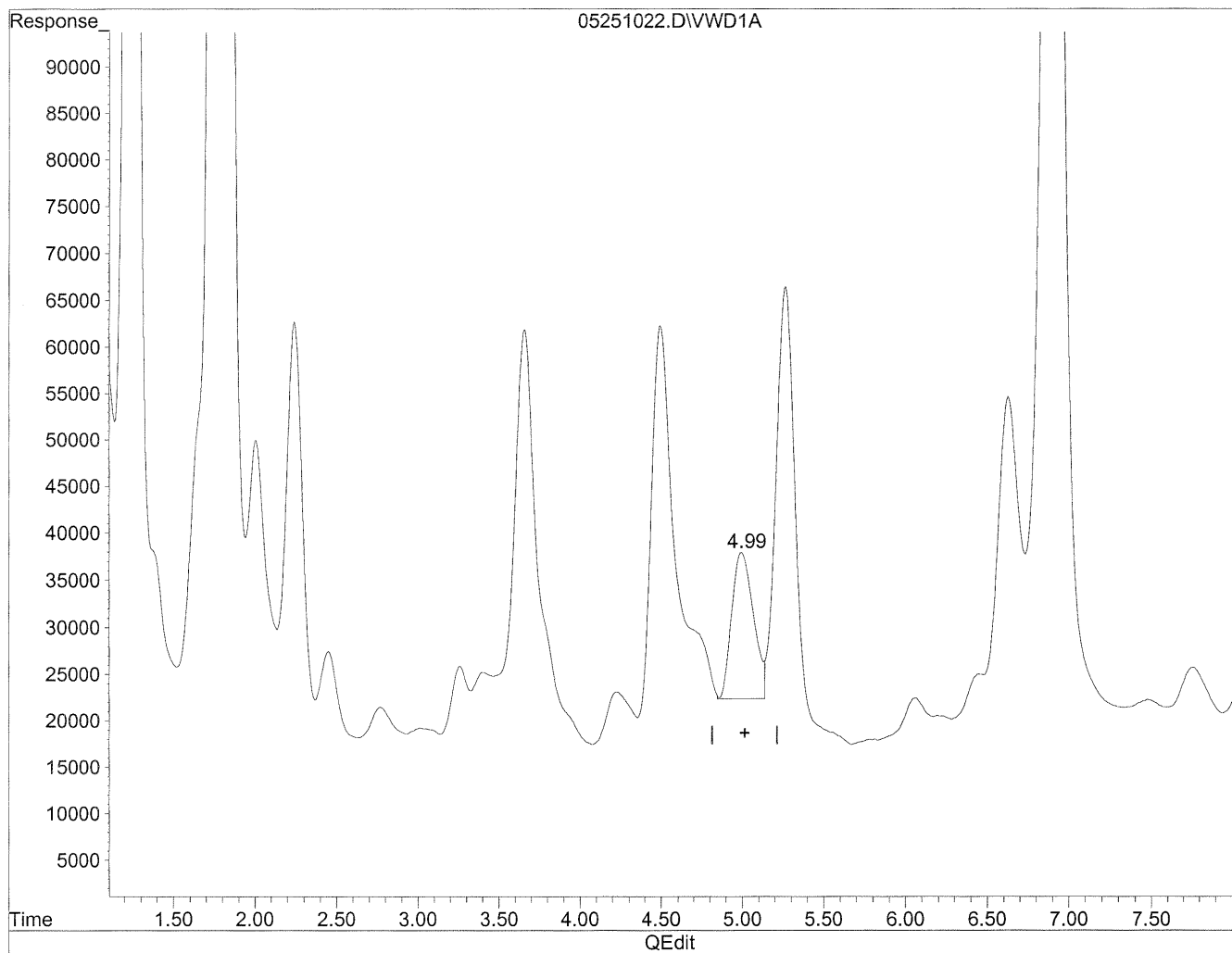


(7) Isovaleraldehyde
4.99min 628.098ng/ml
response 2228305

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:54 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.99min 406.210ng/ml m

response 1441113

He
6/4/10

12
MD
6/4/10

(+) = Expected Retention Time

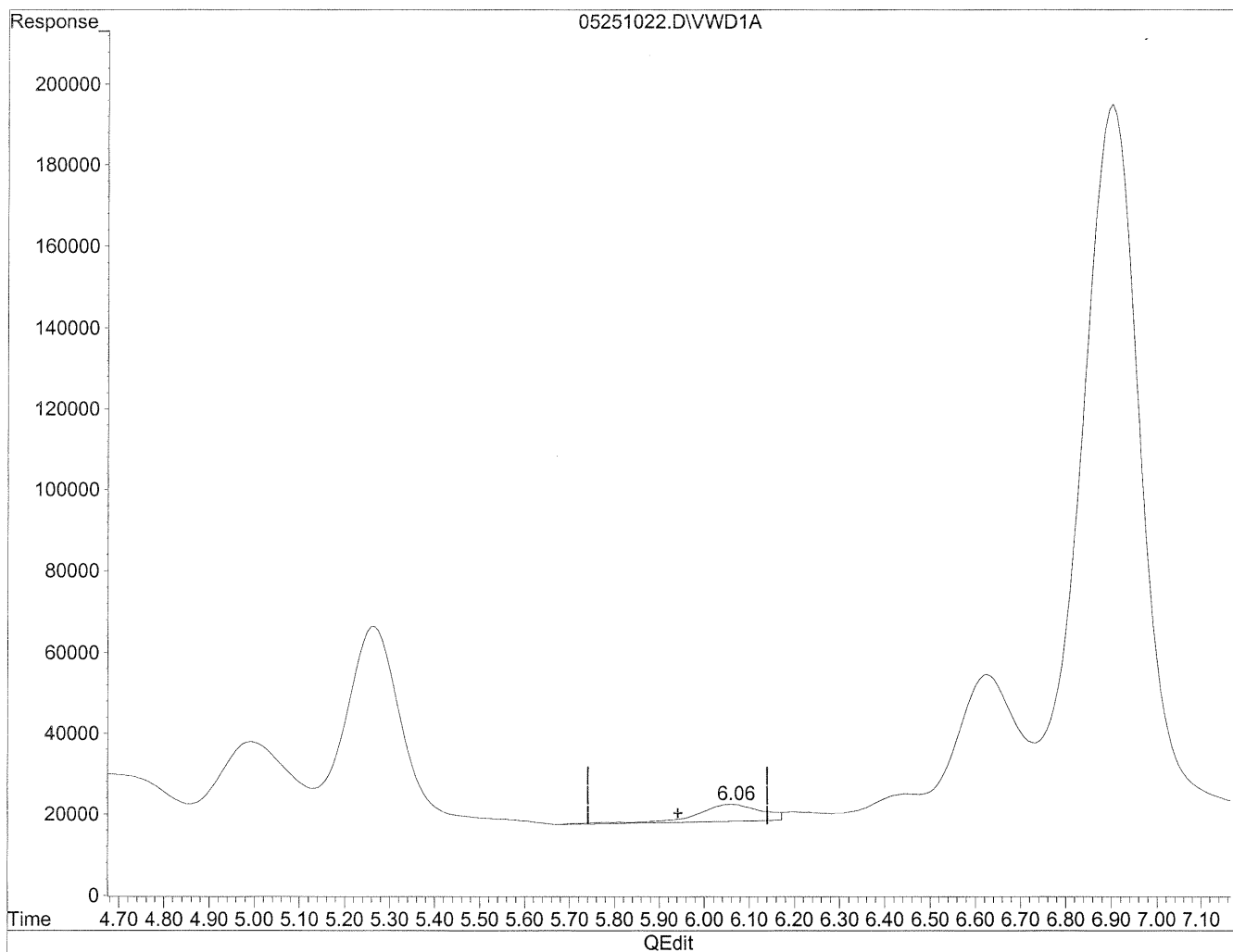
05251022.D TO110510.M

Fri May 28 10:51:49 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:54 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

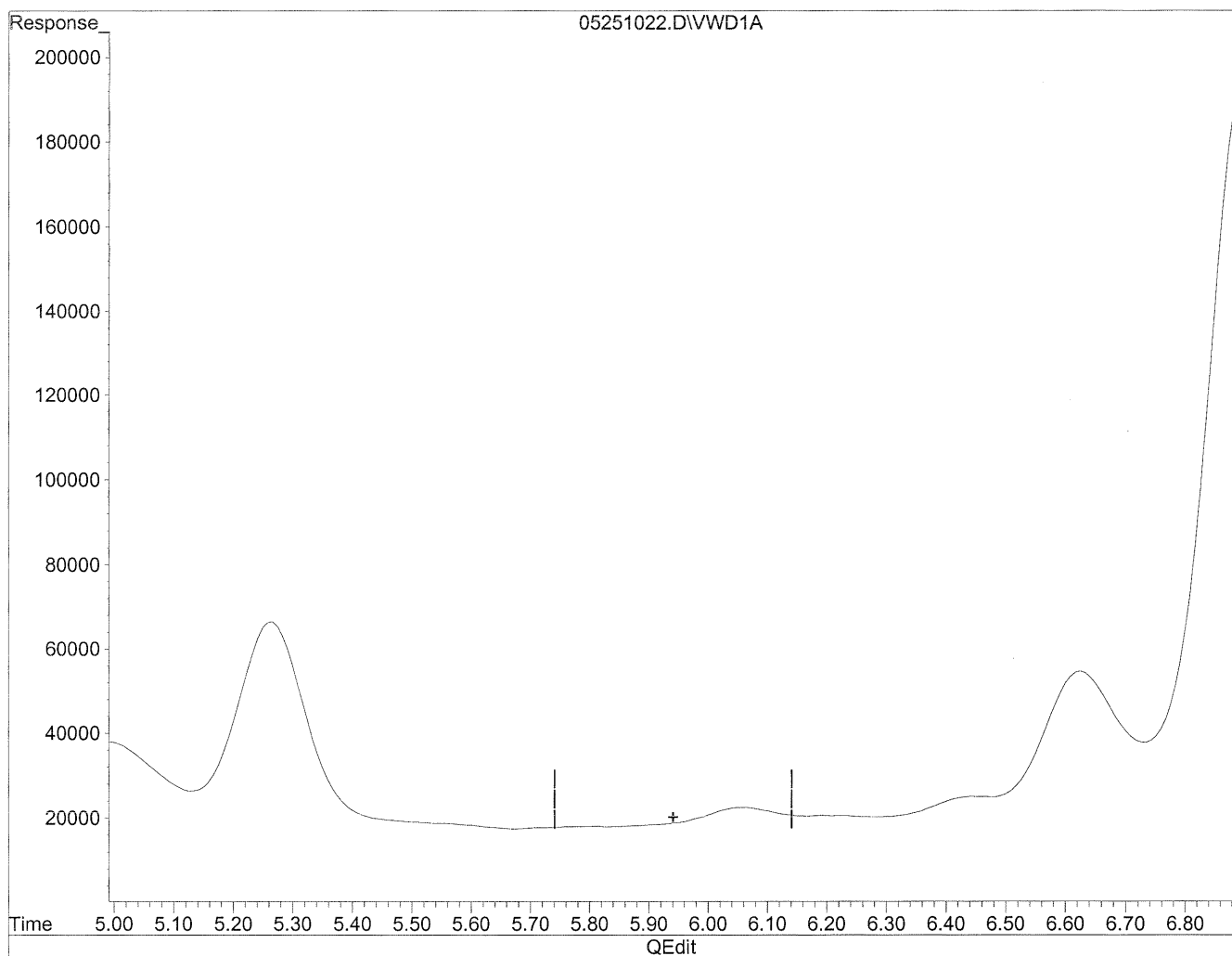
6.06min 177.848ng/ml

response 416629

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251022.D Vial: 113
Acq On : 25-May-2010, 15:08 Operator: MD
Sample : P1001793-011 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 15:54 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

0.00min 0.000ng/ml d

response 0

HC
6/4/10

not
real
mm
6/4/10

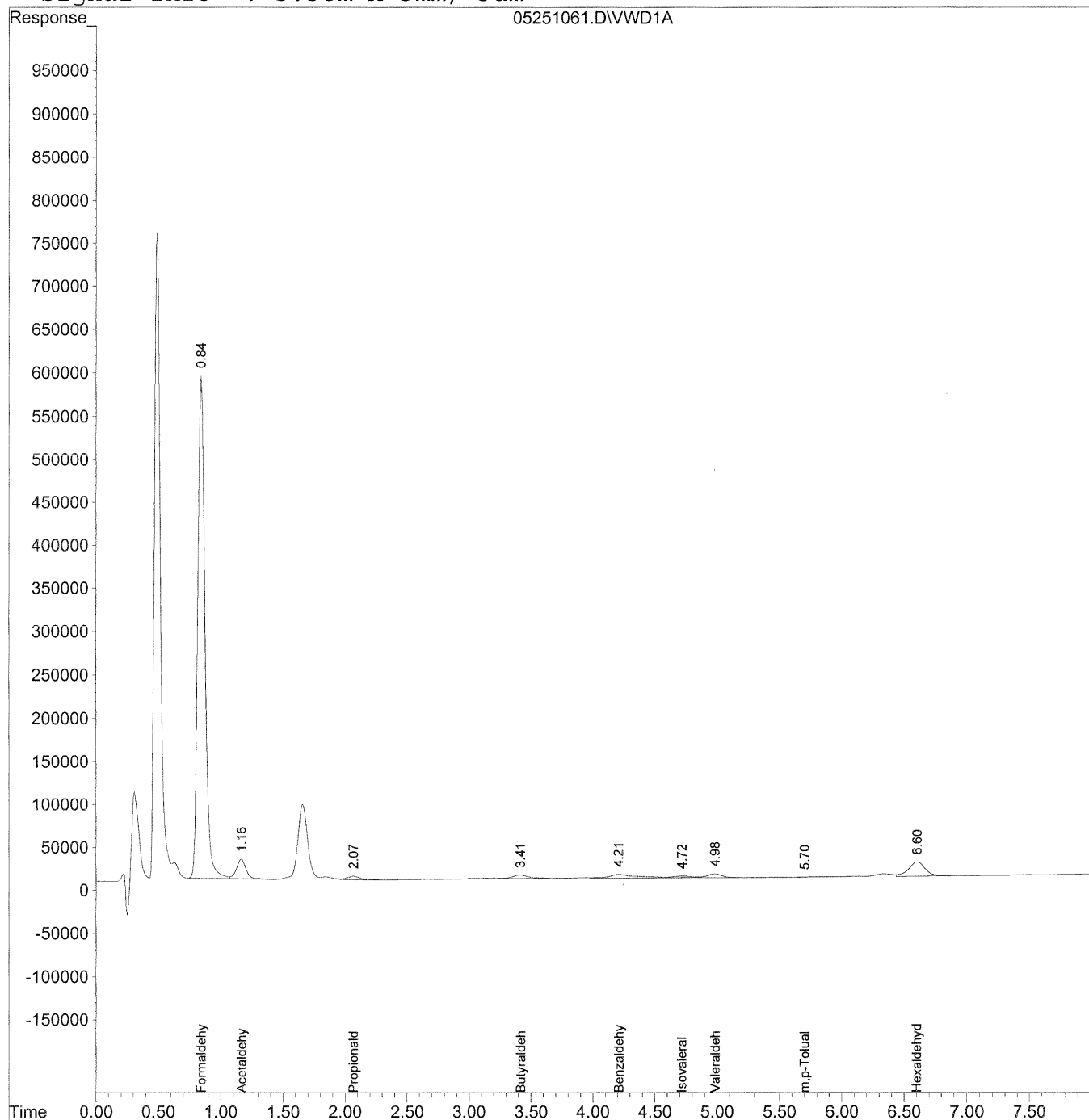
(+) = Expected Retention Time
05251022.D TO110510.M Fri May 28 10:52:23 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251061.D Vial: 142
Acq On : 25-May-2010, 21:54 Operator: MD
Sample : P1001793-011 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:57 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251061.D Vial: 142
Acq On : 25-May-2010, 21:54 Operator: MD
Sample : P1001793-011 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:57 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.85	23164729	2482.057 ng/ml
2)	Acetaldehyde	1.17	1244832	184.824 ng/ml
3)	Propionaldehyde	2.07	346015	71.167 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.42	388794	96.492 ng/ml
6)	Benzaldehyde	4.21	683888	252.663 ng/ml
7)	Isovaleraldehyde	4.72	197116	55.561 ng/ml
8)	Valeraldehyde	4.98	375585	111.961 ng/ml
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	5.71	9078	3.875 ng/ml
11)	Hexaldehyde	6.61	1546007	537.672 ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated

Client Sample ID: 110397

Client Project ID: 17131

CAS Project ID: P1001793

CAS Sample ID: P1001793-012

Test Code: EPA TO-11A

Instrument ID: HP1050/UV_Vis 360/LC2

Analyst: Madeleine Dangazyan

Sampling Media: Radiello Tube

Test Notes: BC

Date Collected: 5/21/10

Date Received: 5/22/10

Date Analyzed: 5/25/10

Desorption Volume: 2.0 ml

Sampling Time: NA Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	0.29	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

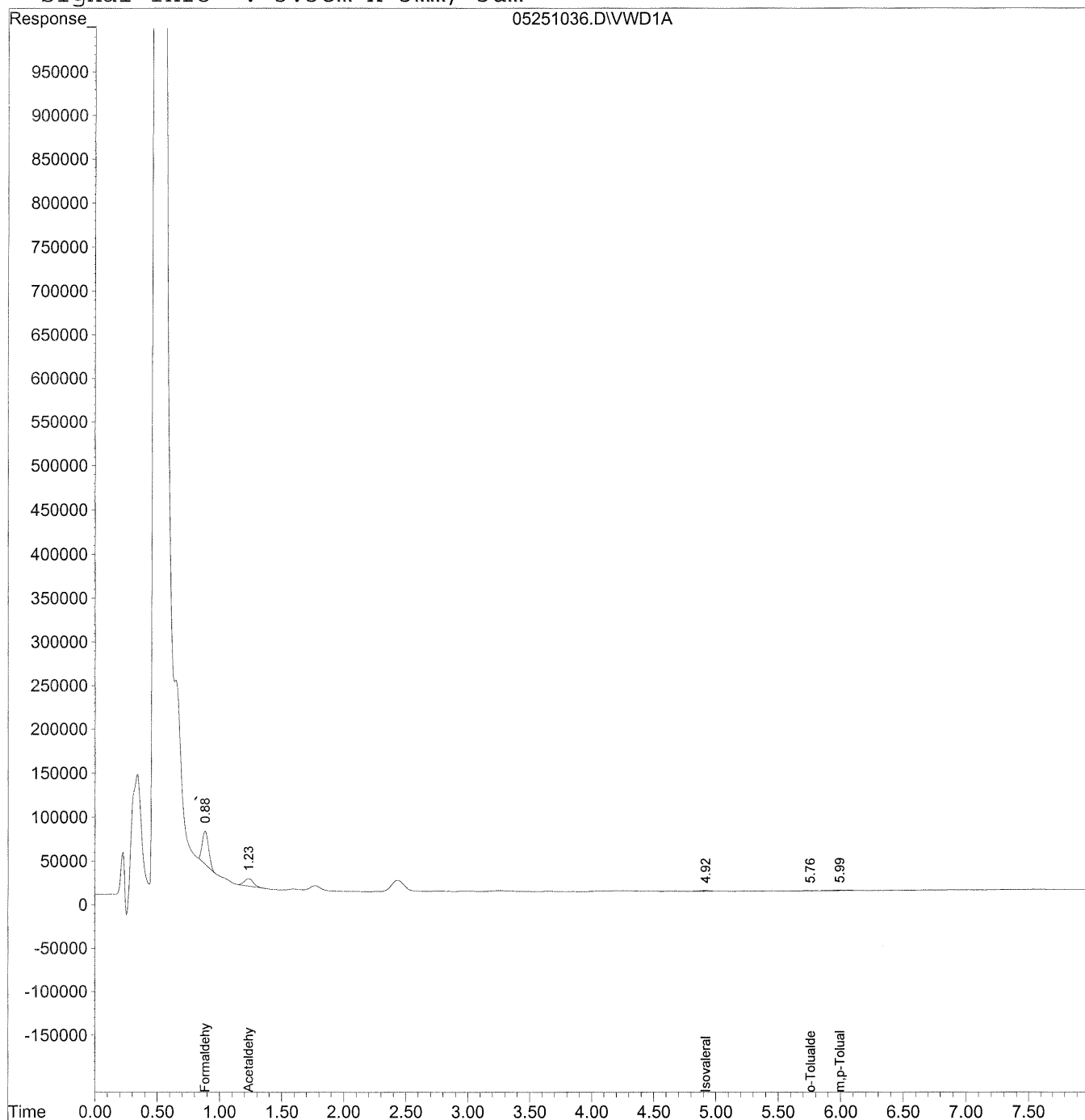
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251036.D Vial: 123
Acq On : 25-May-2010, 17:33 Operator: MD
Sample : P1001793-012 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:07 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251036.D Vial: 123
Acq On : 25-May-2010, 17:33 Operator: MD
Sample : P1001793-012 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:07 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

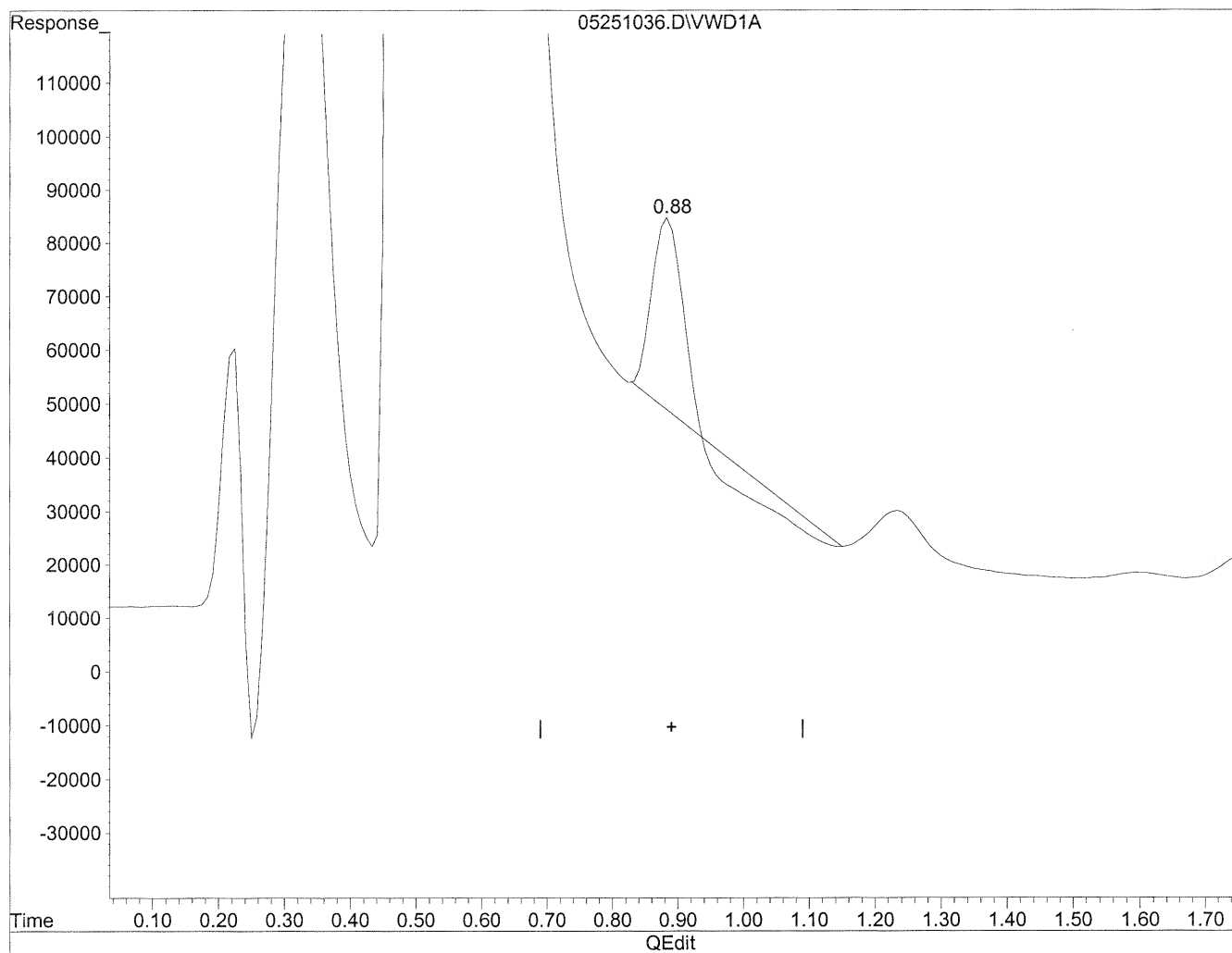
	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.88	1349351	144.580	ng/mlm
2)	Acetaldehyde	1.23	433906	64.423	ng/mlm
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	4.92f	76323	21.513	ng/ml
8)	Valeraldehyde	0.00	0	N.D.	ng/ml
9)	o-Tolualdehyde	5.76	21612	10.617	ng/ml
10)	m,p-Tolualdehyde	6.00	65522	27.970	ng/ml
11)	Hexaldehyde	0.00	0	N.D.	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251036.D Vial: 123
Acq On : 25-May-2010, 17:33 Operator: MD
Sample : P1001793-012 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:07 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



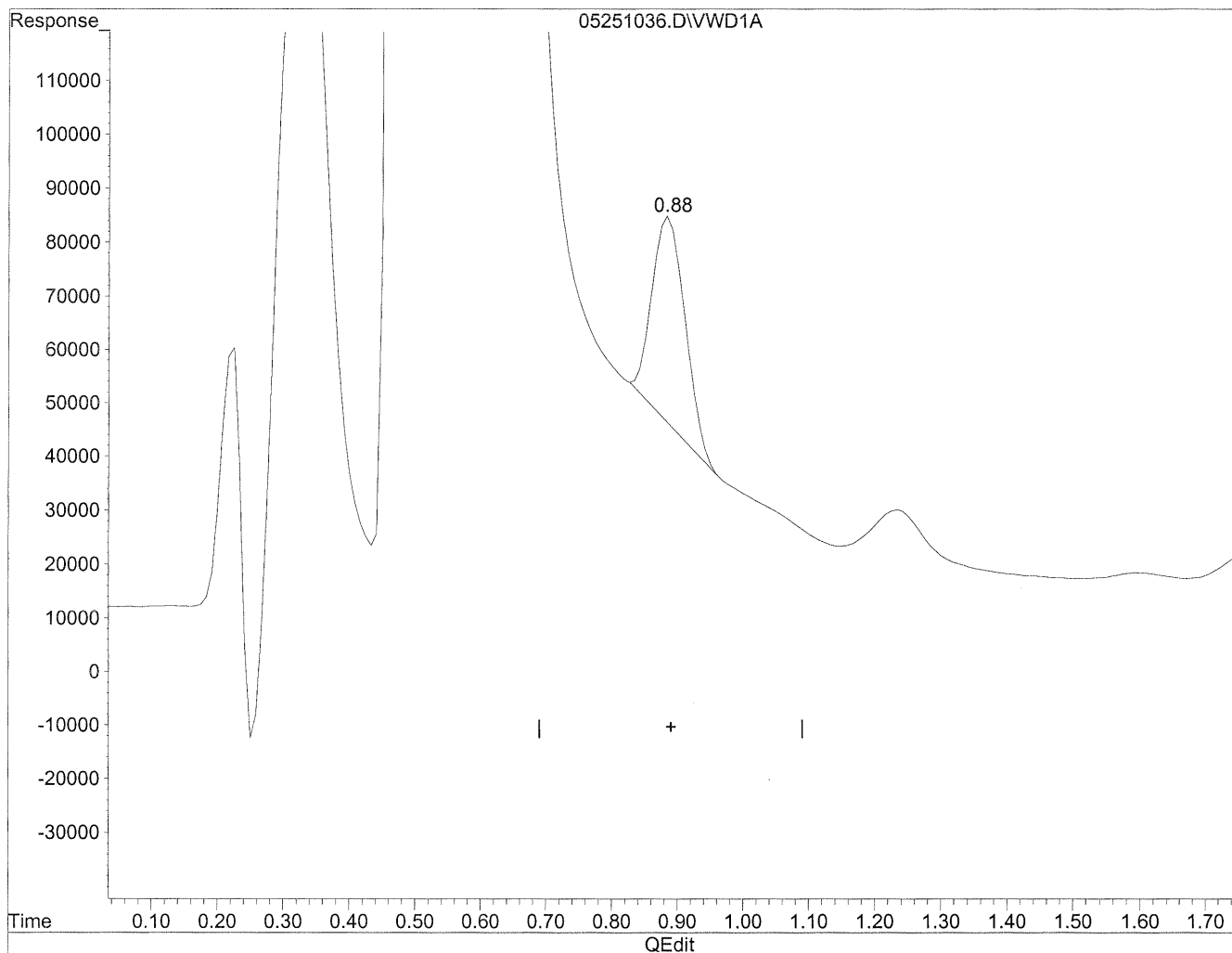
(1) Formaldehyde
0.89min 88.054ng/ml
response 821797

(+) = Expected Retention Time
05251036.D TO110510.M Fri May 28 11:07:10 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251036.D Vial: 123
Acq On : 25-May-2010, 17:33 Operator: MD
Sample : P1001793-012 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:07 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 144.580ng/ml m

response 1349351

HLC
6/4/10

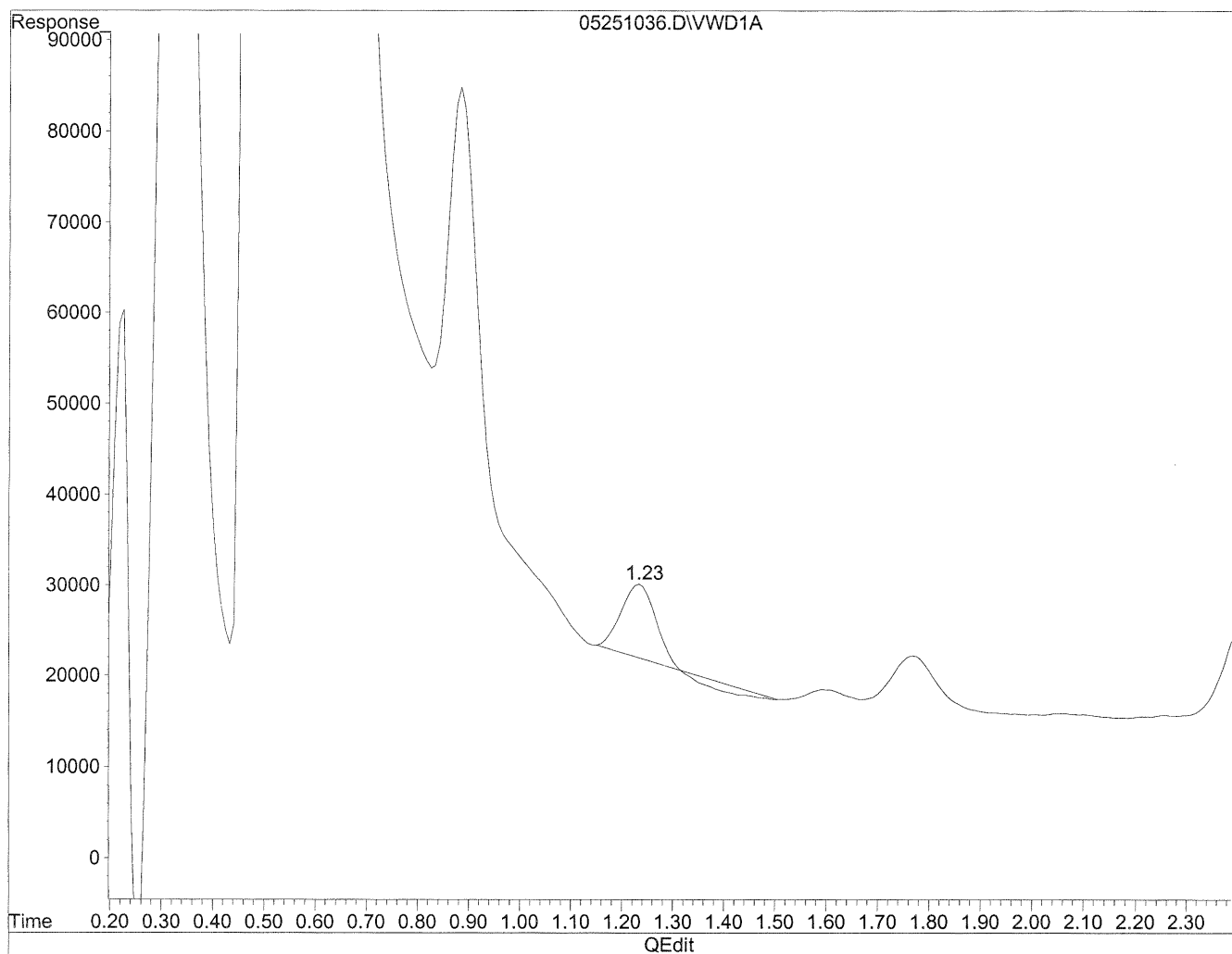
IC
mw
6/4/10

(+) = Expected Retention Time
05251036.D TO110510.M Fri May 28 11:07:17 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251036.D Vial: 123
Acq On : 25-May-2010, 17:33 Operator: MD
Sample : P1001793-012 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:07 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

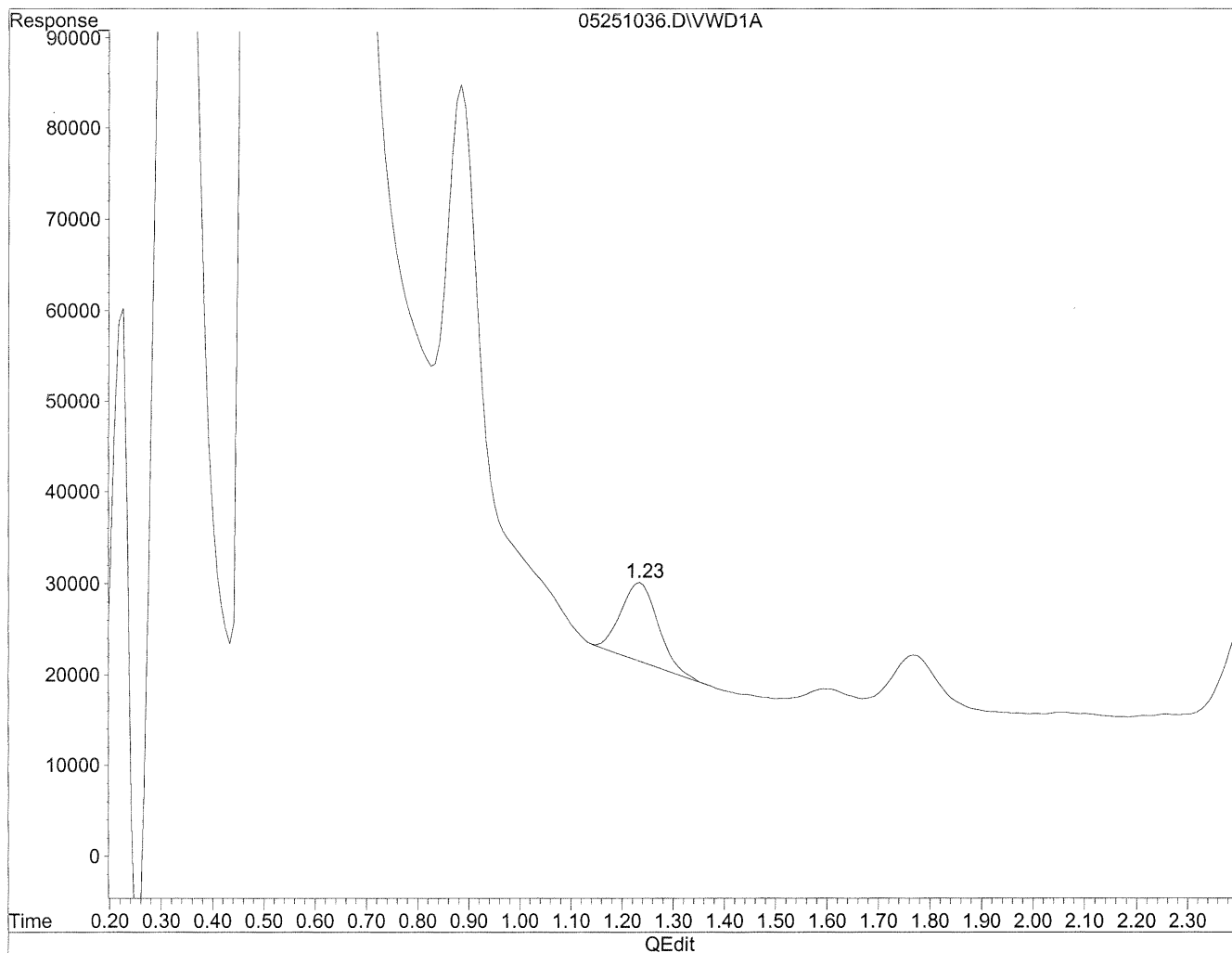


(2) Acetaldehyde
1.24min 49.340ng/ml
response 332317

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251036.D Vial: 123
Acq On : 25-May-2010, 17:33 Operator: MD
Sample : P1001793-012 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:07 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.23min 64.423ng/ml m

response 433906

HC
6/4/10

LPC
MD
6/4/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110398
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-013

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: 18335 Minutes

CAS #	Compound	Result	Result	MRL	Result	MRL	Data Qualifier
		µg/Sample	µg/m ³	µg/m ³	ppbV	ppbV	
50-00-0	Formaldehyde	51	28	0.11	23	0.090	
75-07-0	Acetaldehyde	3.3	2.2	0.13	1.2	0.072	
123-38-6	Propionaldehyde	0.98	1.4	0.28	0.57	0.12	
123-72-8	Butyraldehyde	1.9	9.7	0.99	3.3	0.34	
100-52-7	Benzaldehyde	2.5	1.5	0.12	0.34	0.027	
590-86-3	Isovaleraldehyde	0.78	0.70	0.18	0.20	0.051	
110-62-3	Valeraldehyde	2.0	4.0	0.40	1.1	0.11	
66-25-1	n-Hexaldehyde	9.5	29	0.61	7.0	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

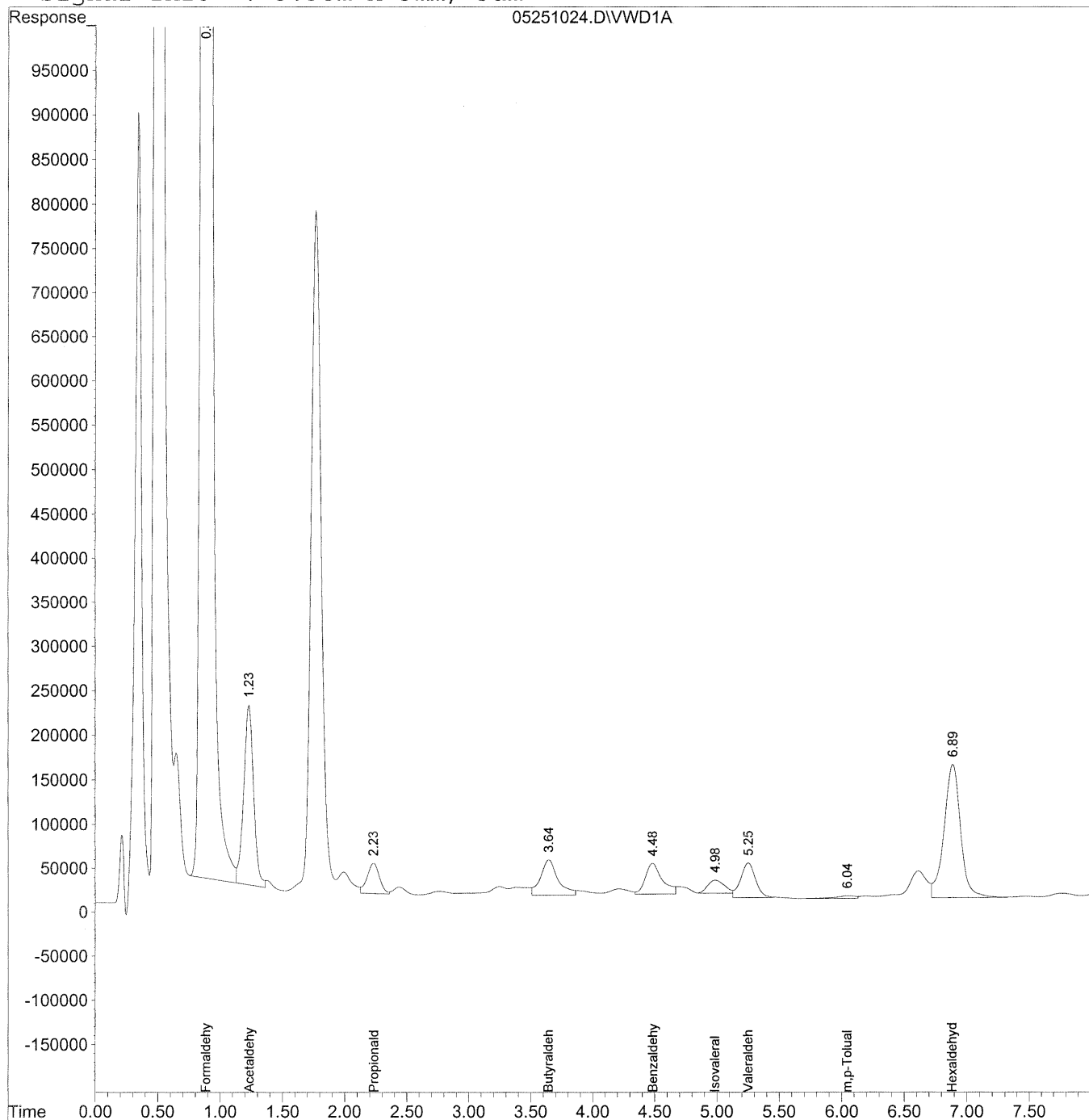
Verified By: Per Date: 6/2/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251024.D Vial: 115
 Acq On : 25-May-2010, 15:29 Operator: MD
 Sample : P1001793-013 2ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 10:55 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 14:13:10 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251024.D Vial: 115
Acq On : 25-May-2010, 15:29 Operator: MD
Sample : P1001793-013 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:55 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

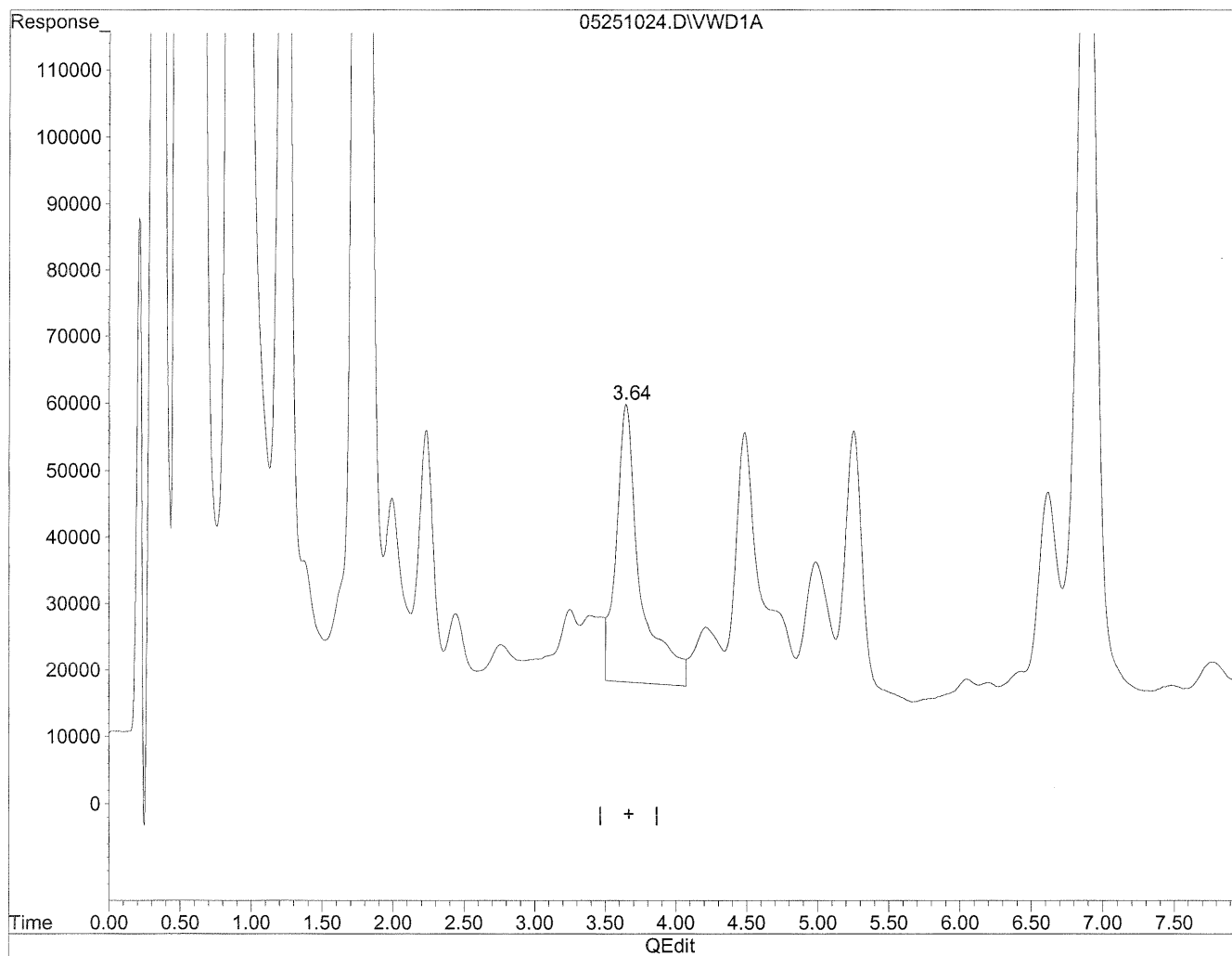
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.88	241535023	25880.025 ng/ml <i>dil</i>
2)	Acetaldehyde	1.23	11268047	1673.002 ng/ml
3)	Propionaldehyde	2.23	2370937	487.644 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.64	3927002	974.611 ng/mlm
6)	Benzaldehyde	4.48	3321806	1227.243 ng/mlm
7)	Isovaleraldehyde	4.98	1387721	391.160 ng/mlm
8)	Valeraldehyde	5.25	3307821	986.051 ng/mlm
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	6.05f	332591	141.975 ng/ml
11)	Hexaldehyde	6.89	13647380	4746.299 ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251024.D Vial: 115
Acq On : 25-May-2010, 15:29 Operator: MD
Sample : P1001793-013 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:09 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.65min 1218.652ng/ml

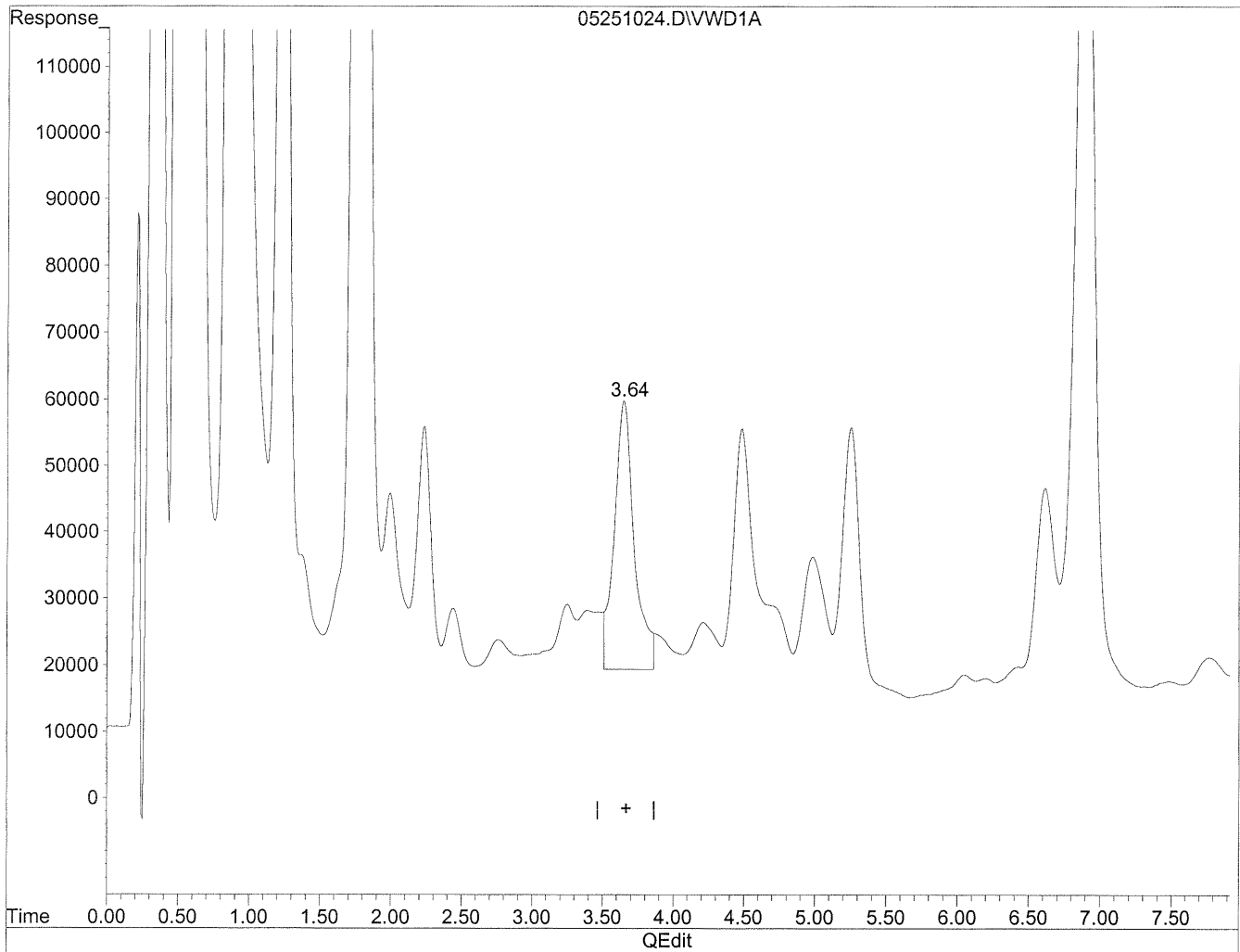
response 4910318

(+) = Expected Retention Time
05251024.D TO110510.M Fri May 28 10:53:43 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251024.D Vial: 115
Acq On : 25-May-2010, 15:29 Operator: MD
Sample : P1001793-013 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:09 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.64min 974.611ng/ml m

response 3927002

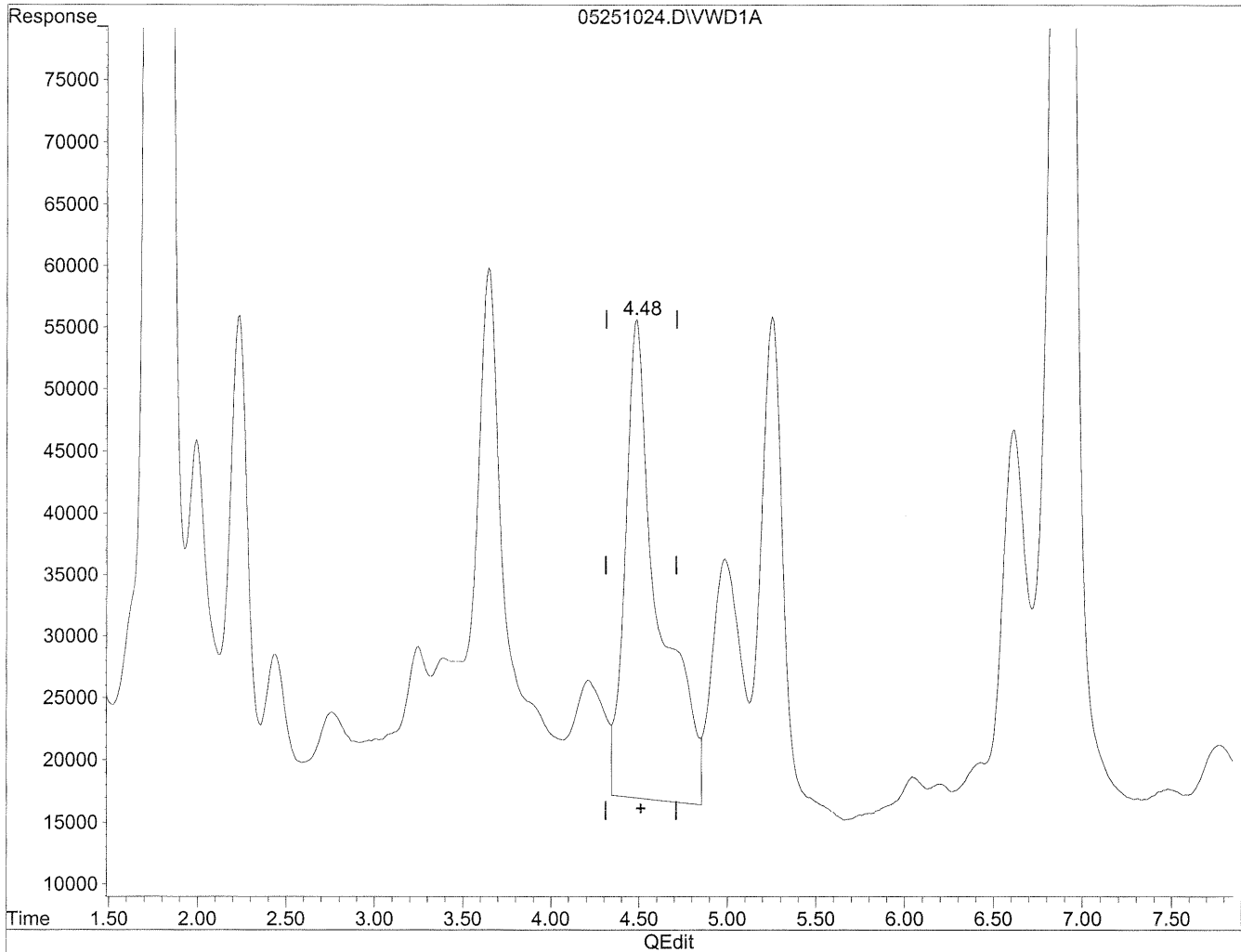
MD sh 6/4/10

HL 6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251024.D Vial: 115
Acq On : 25-May-2010, 15:29 Operator: MD
Sample : P1001793-013 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:09 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

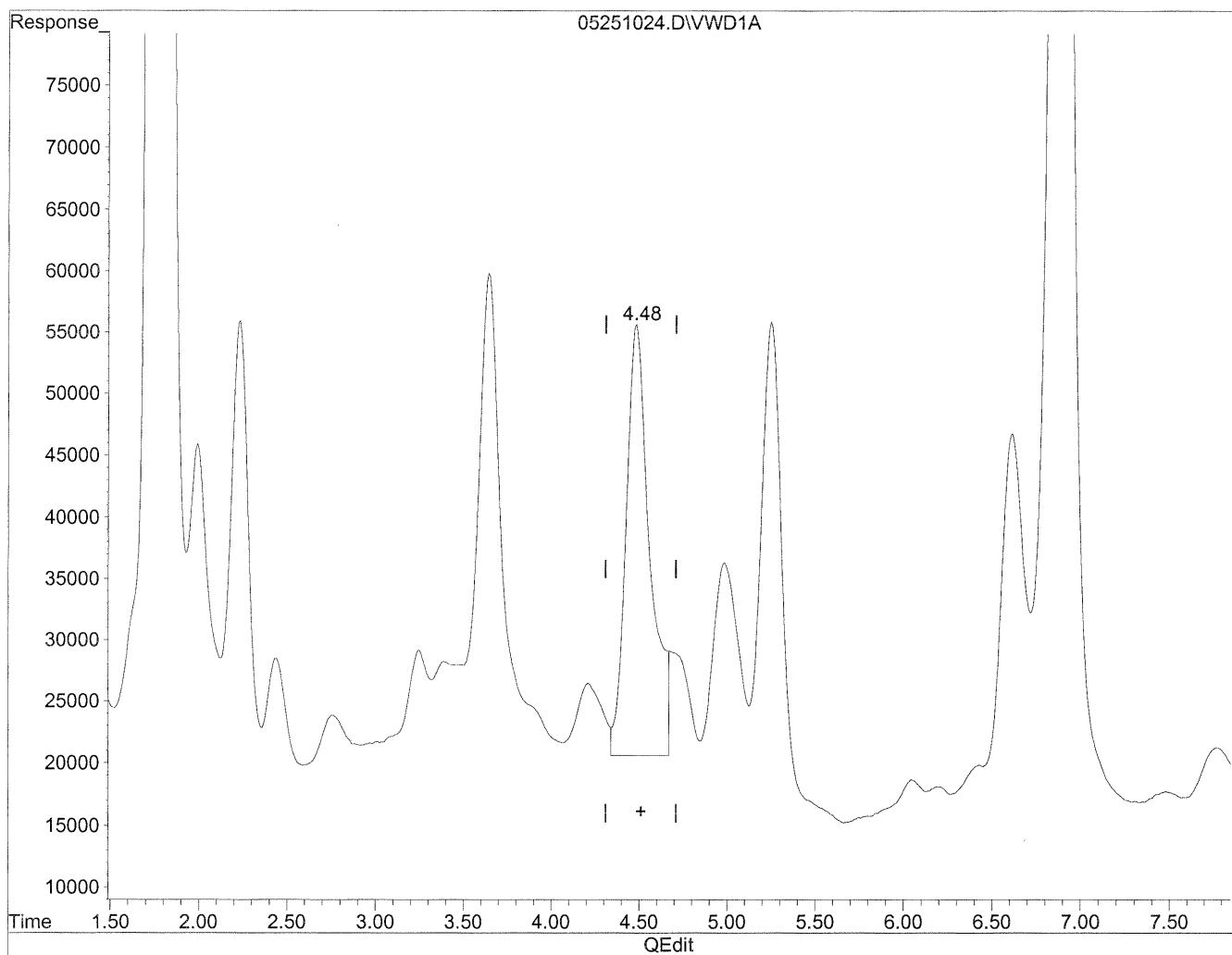
4.48min 1880.515ng/ml

response 5090032

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251024.D Vial: 115
Acq On : 25-May-2010, 15:29 Operator: MD
Sample : P1001793-013 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:09 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.48min 1227.243ng/ml m

response 3321806

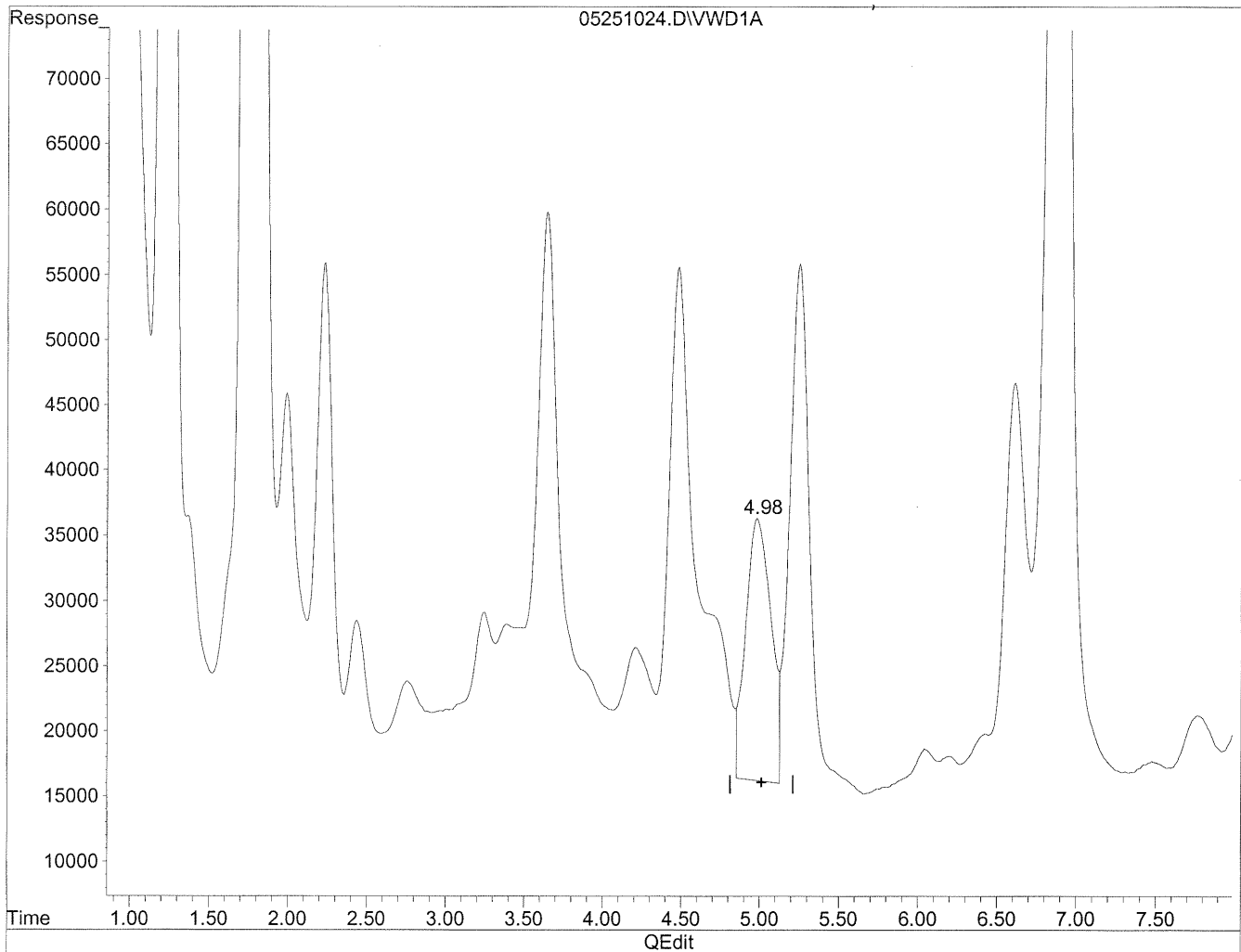
sh
MD
6/4/10

AC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251024.D Vial: 115
Acq On : 25-May-2010, 15:29 Operator: MD
Sample : P1001793-013 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:09 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

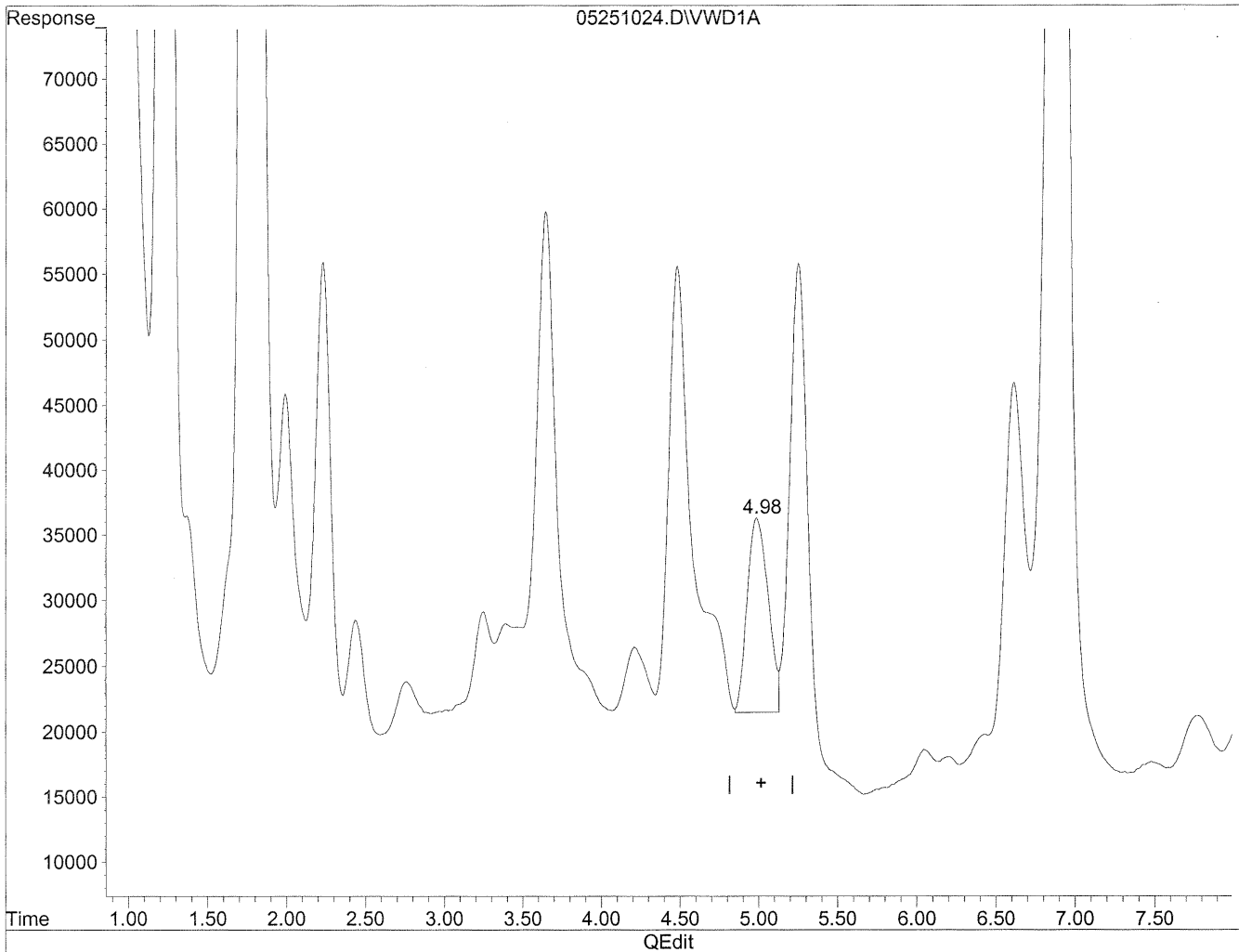


(7) Isovaleraldehyde
4.99min 633.156ng/ml
response 2246251

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251024.D Vial: 115
Acq On : 25-May-2010, 15:29 Operator: MD
Sample : P1001793-013 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:09 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.98min 391.160ng/ml m

response 1387721

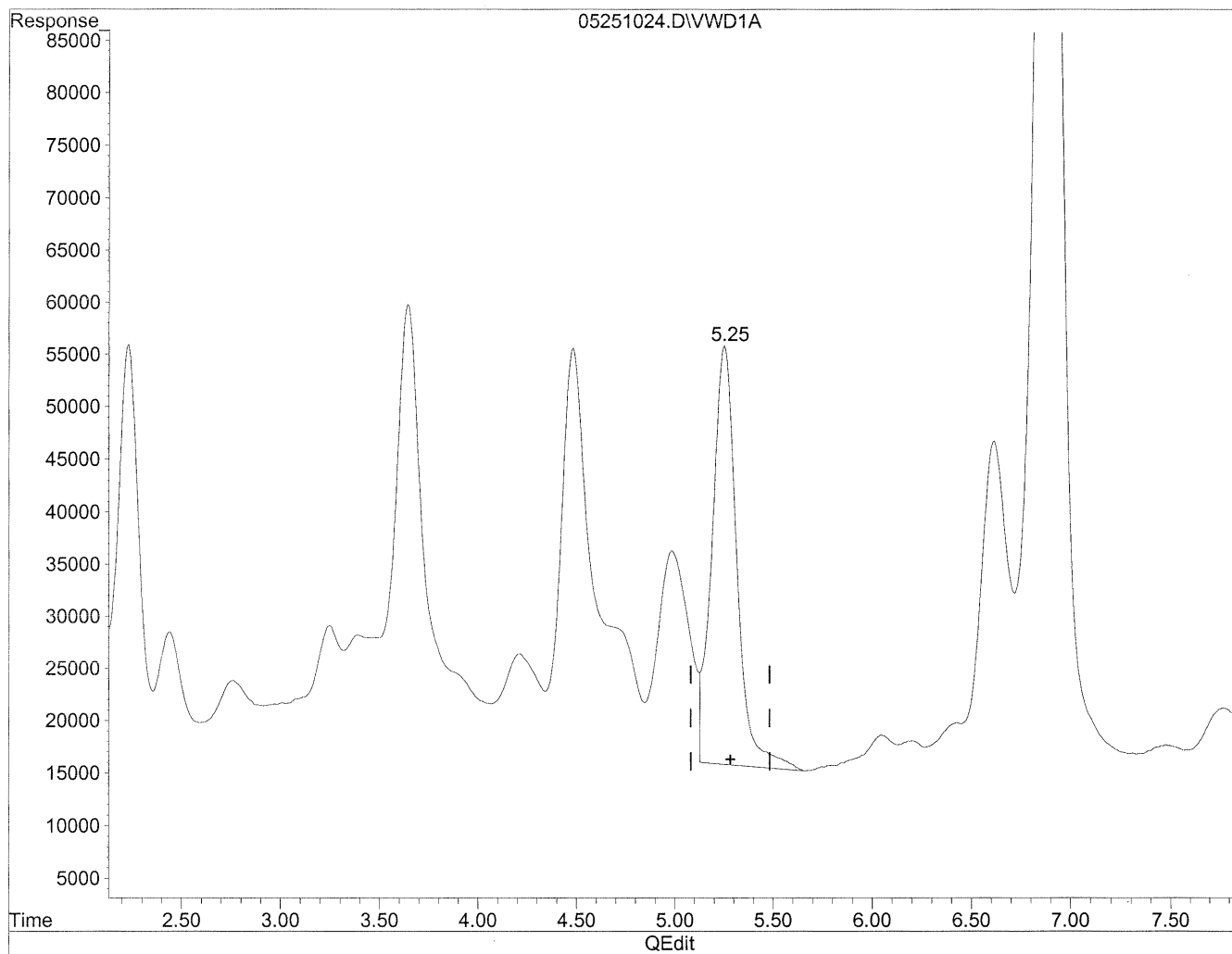
HC
6/4/10

12
MD
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251024.D Vial: 115
Acq On : 25-May-2010, 15:29 Operator: MD
Sample : P1001793-013 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:09 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.25min 1054.188ng/ml

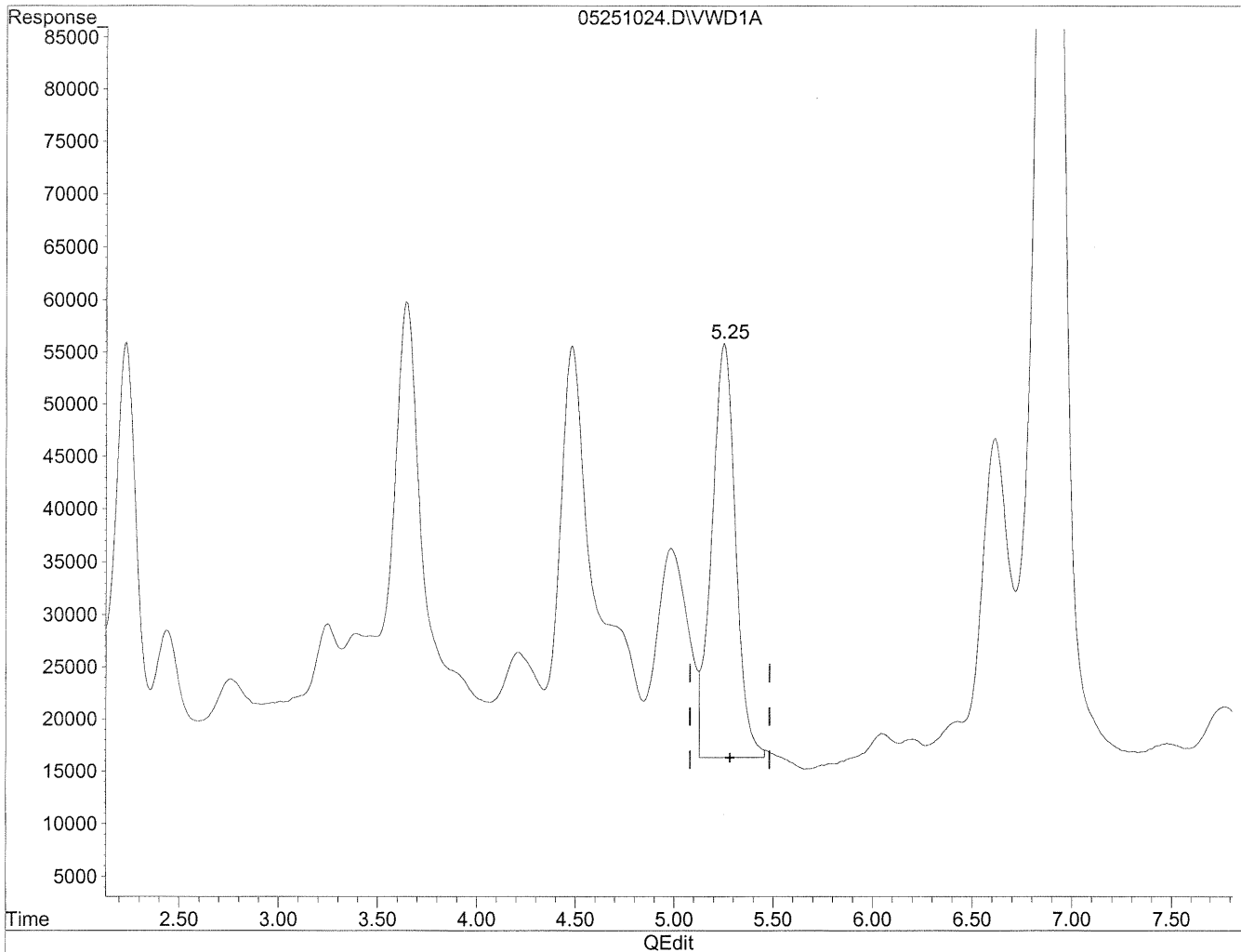
response 3536394

(+) = Expected Retention Time
05251024.D TO110510.M Fri May 28 10:55:03 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251024.D Vial: 115
Acq On : 25-May-2010, 15:29 Operator: MD
Sample : P1001793-013 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:09 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.25min 986.051ng/ml m

response 3307821

Sh
6/4/10
4/4/10

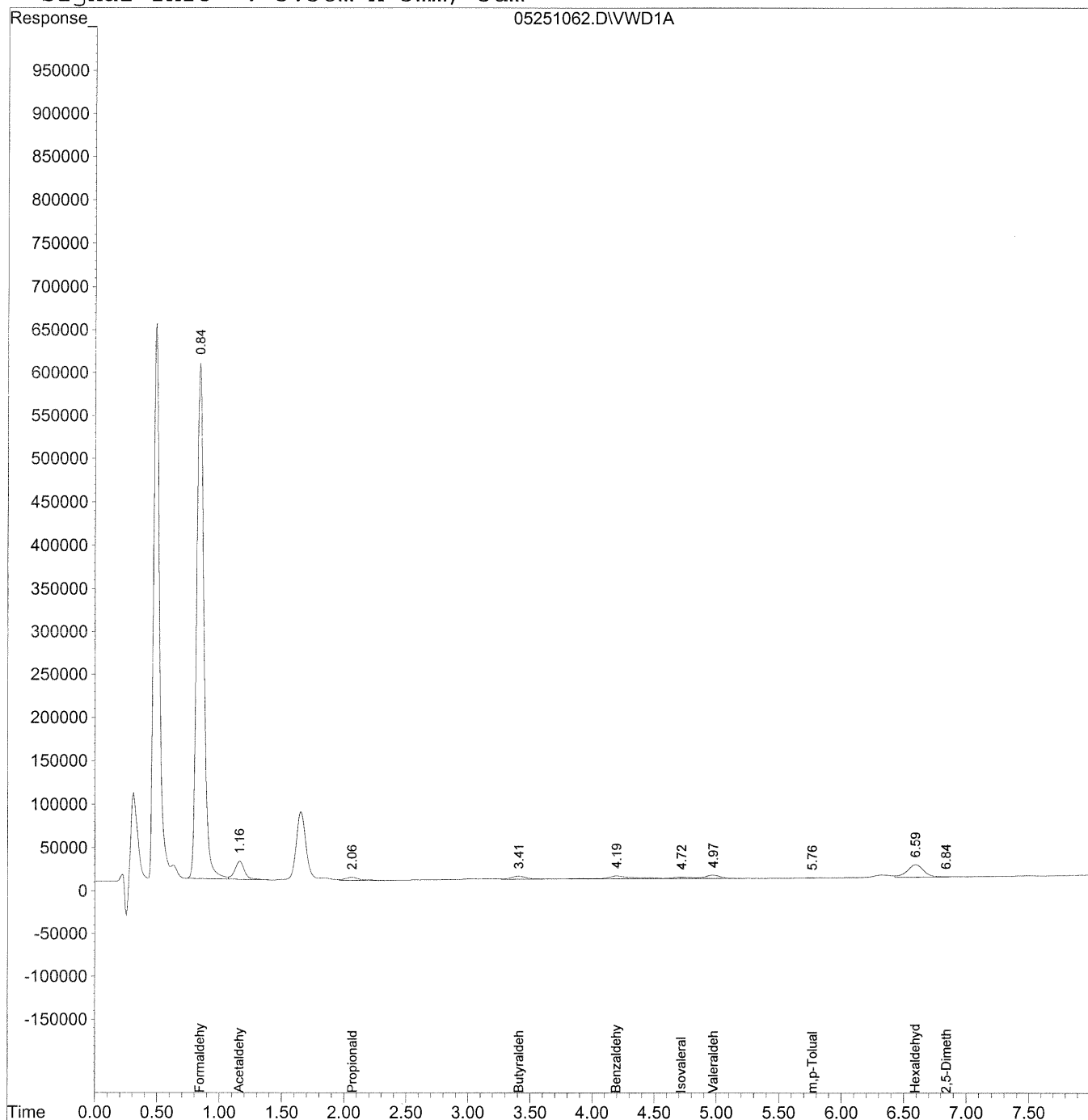
(+) = Expected Retention Time
05251024.D TO110510.M Fri May 28 10:55:15 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251062.D Vial: 143
 Acq On : 25-May-2010, 22:05 Operator: MD
 Sample : P1001793-013 2ml 10x dil Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 12:58 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 11:37:19 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251062.D Vial: 143
Acq On : 25-May-2010, 22:05 Operator: MD
Sample : P1001793-013 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:58 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.84	23817163	2551.964 ng/ml
2) Acetaldehyde	1.16	1167886	173.400 ng/ml
3) Propionaldehyde	2.07	297276	61.142 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.41	322324	79.995 ng/ml
6) Benzaldehyde	4.20	543037	200.625 ng/ml
7) Isovaleraldehyde	4.72	184193	51.919 ng/ml
8) Valeraldehyde	4.98	320236	95.461 ng/ml
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	5.77	14016	5.983 ng/ml
11) Hexaldehyde	6.60	1326564	461.354 ng/ml
12) 2,5-Dimethylbenzaldehyde	6.84	10027	5.212 ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110399
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-014

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: 18335 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	53	29	0.11	24	0.090	
75-07-0	Acetaldehyde	3.4	2.2	0.13	1.2	0.072	
123-38-6	Propionaldehyde	1.0	1.4	0.28	0.60	0.12	
123-72-8	Butyraldehyde	1.7	8.3	0.99	2.8	0.34	
100-52-7	Benzaldehyde	2.7	1.6	0.12	0.37	0.027	
590-86-3	Isovaleraldehyde	0.88	0.79	0.18	0.22	0.051	
110-62-3	Valeraldehyde	2.4	4.8	0.40	1.4	0.11	
66-25-1	n-Hexaldehyde	9.8	30	0.61	7.2	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

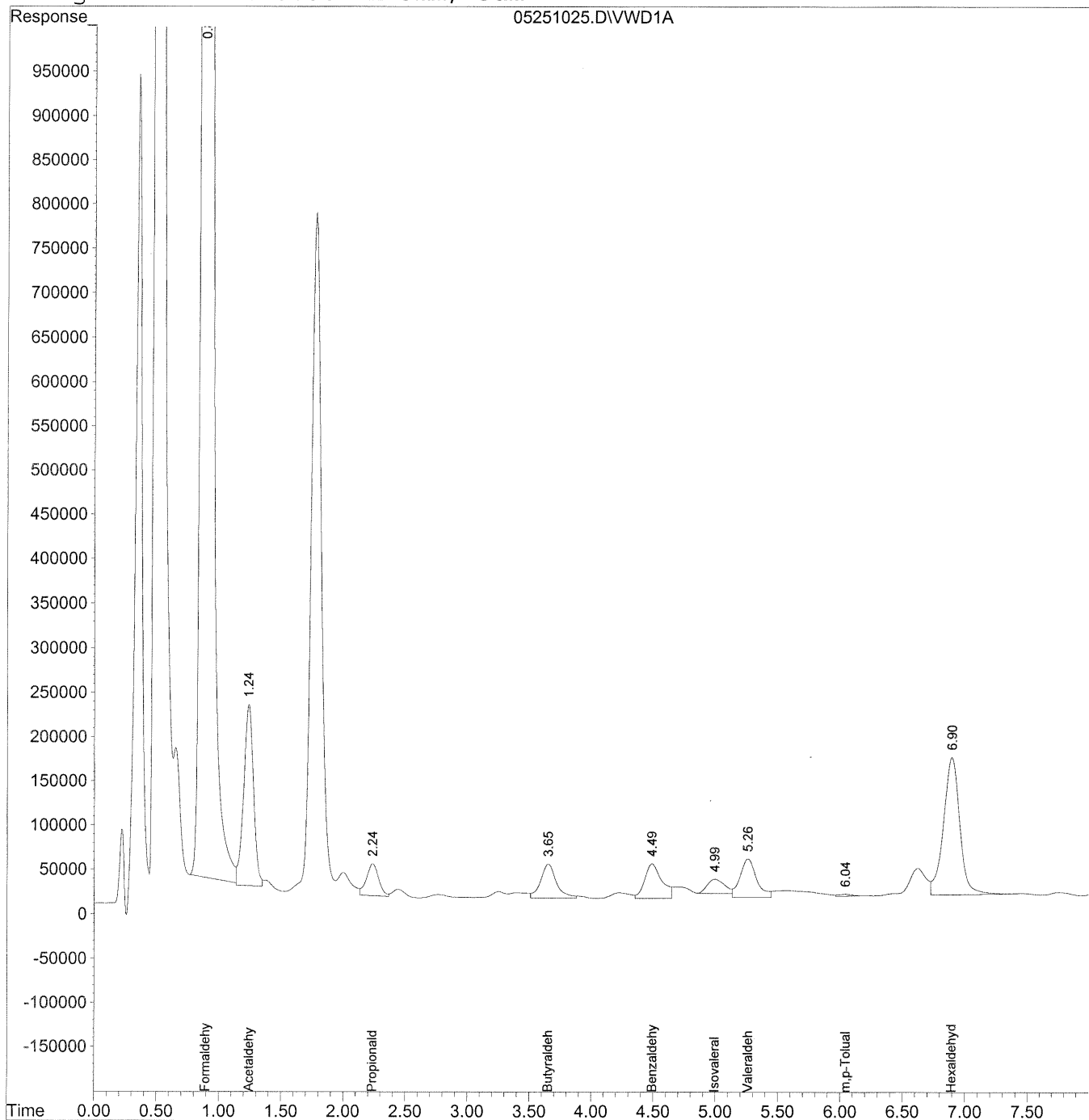
NA = Not applicable.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:58 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:58 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

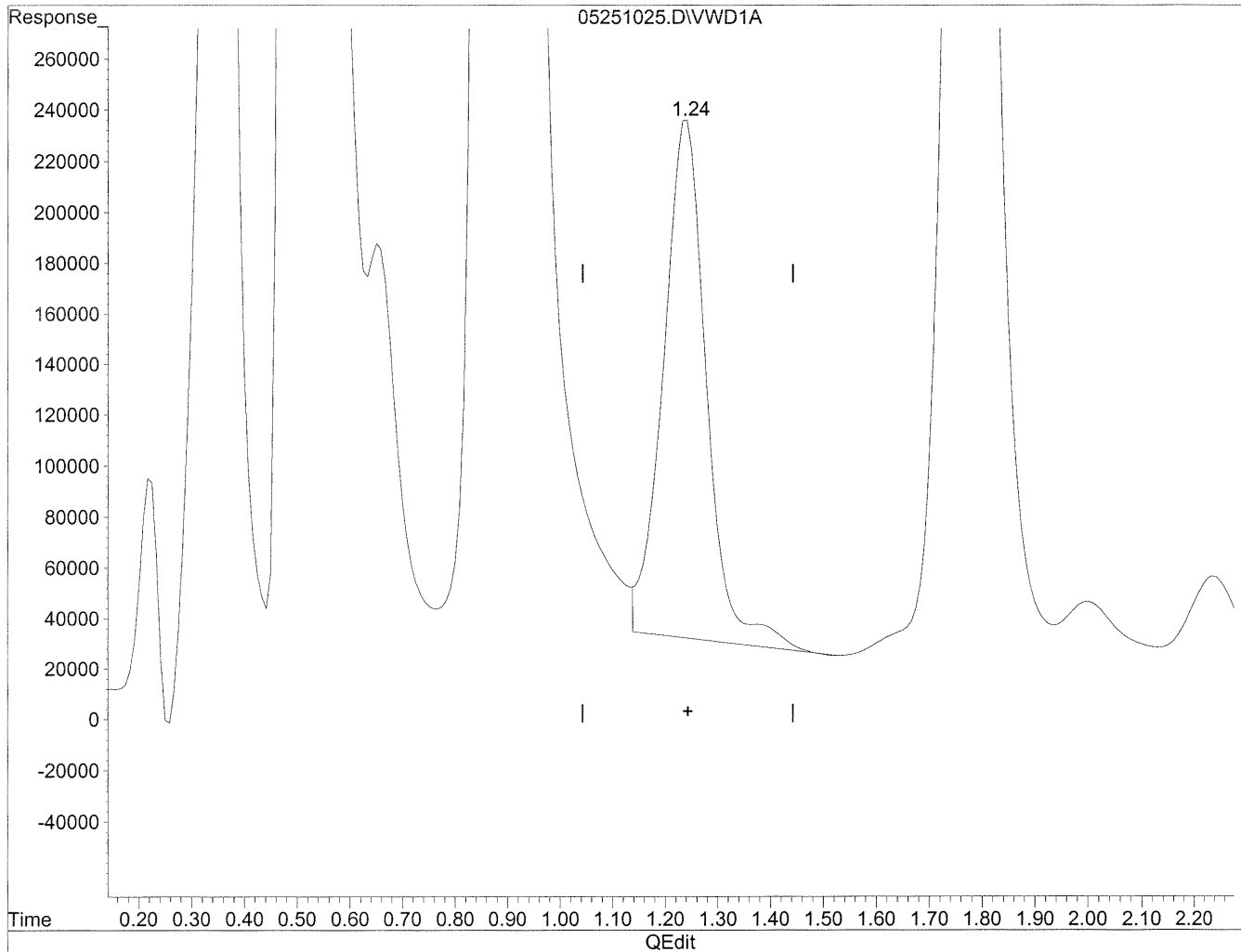
	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.89	250788217	26871.487 ng/ml <i>ceil</i>
2)	Acetaldehyde	1.24	11324617	1681.401 ng/mlm
3)	Propionaldehyde	2.24	2479946	510.065 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.65	3374890	837.586 ng/mlm
6)	Benzaldehyde	4.49	3669632	1355.747 ng/mlm
7)	Isovaleraldehyde	4.99	1558871	439.403 ng/mlm
8)	Valeraldehyde	5.26	3994693	1190.805 ng/mlm
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	6.05f	165841	70.793 ng/ml
11)	Hexaldehyde	6.90	14064680	4891.428 ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 1740.676ng/ml

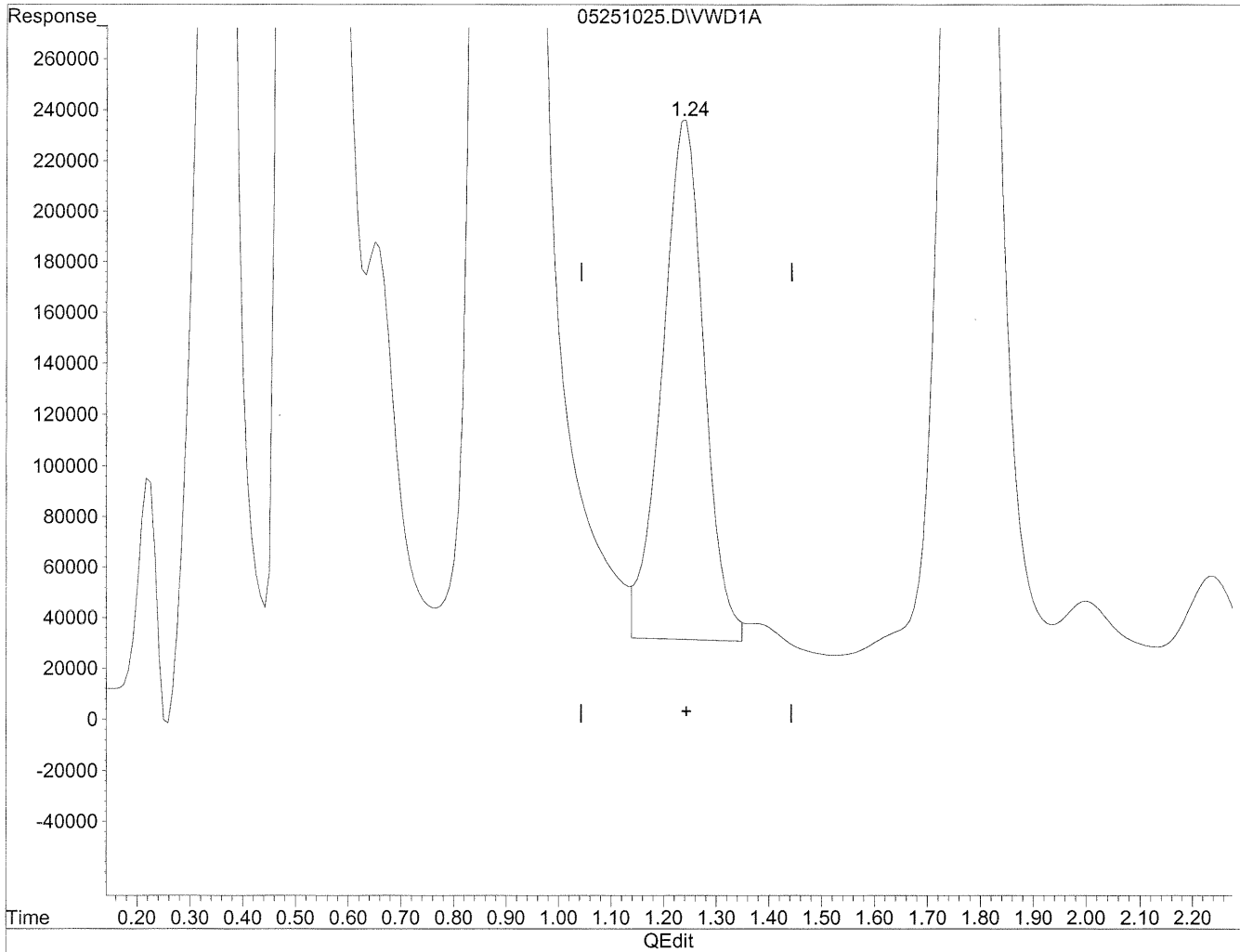
response 11723847

(+) = Expected Retention Time
05251025.D TO110510.M Fri May 28 10:55:59 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 1681.401ng/ml m

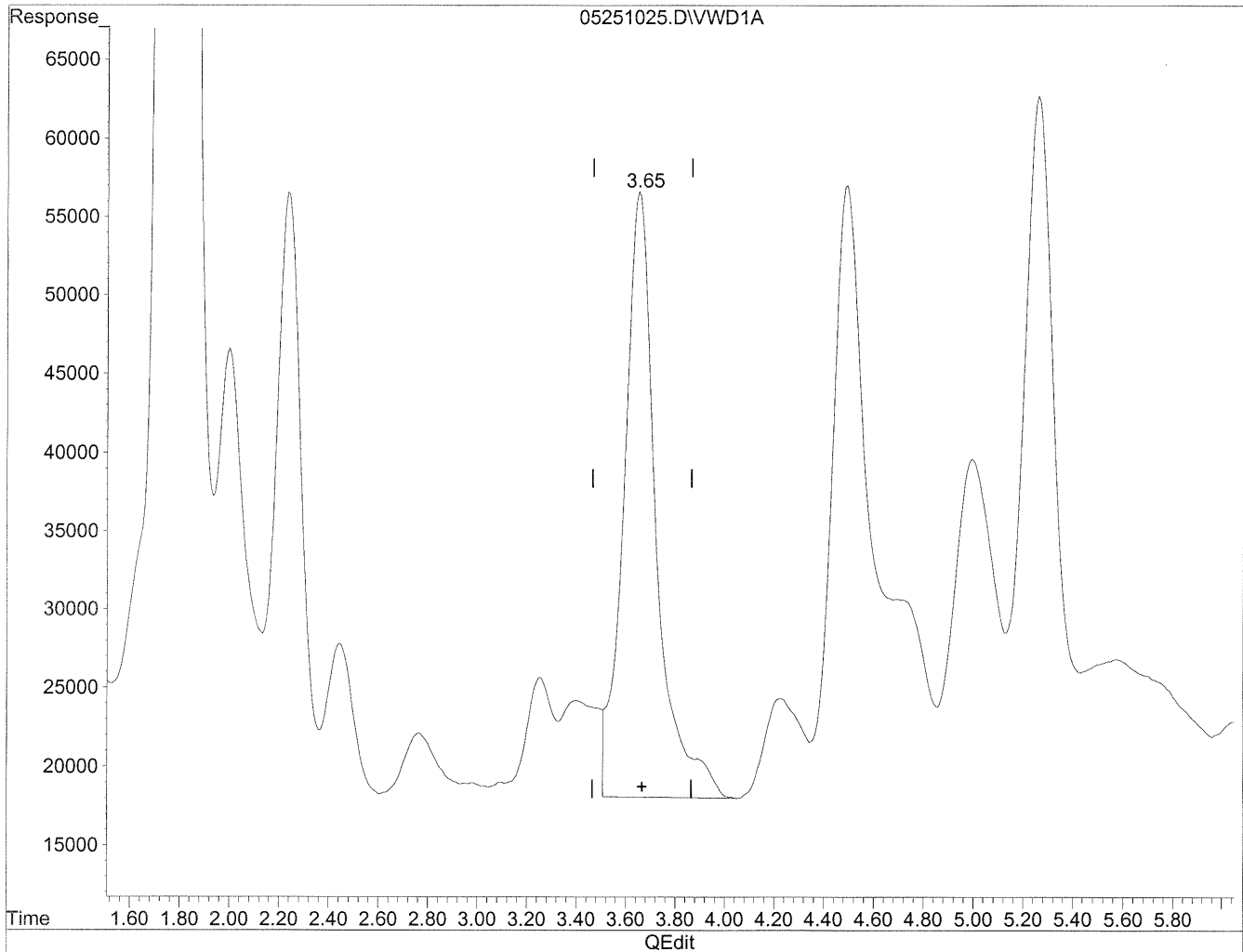
response 11324617

Sh
MN
6/4/10
HLC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.66min 875.416ng/ml

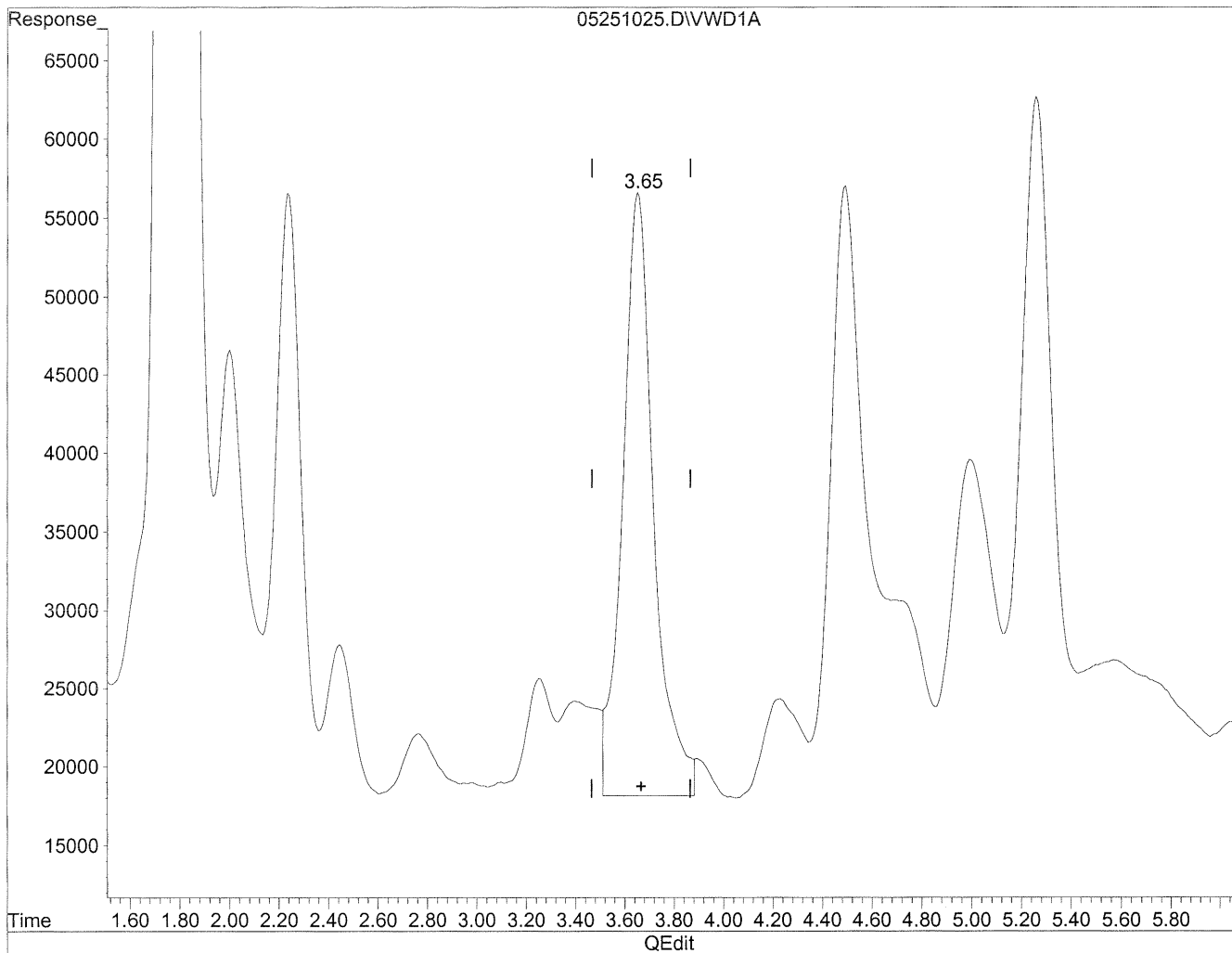
response 3527319

(+) = Expected Retention Time
05251025.D TO110510.M Fri May 28 10:56:20 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
 Acq On : 25-May-2010, 15:39 Operator: MD
 Sample : P1001793-014 2ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 25 16:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 10:30:37 2010
 Response via : Multiple Level Calibration



(5) Butyraldehyde

3.65min 837.586ng/ml m

response 3374890

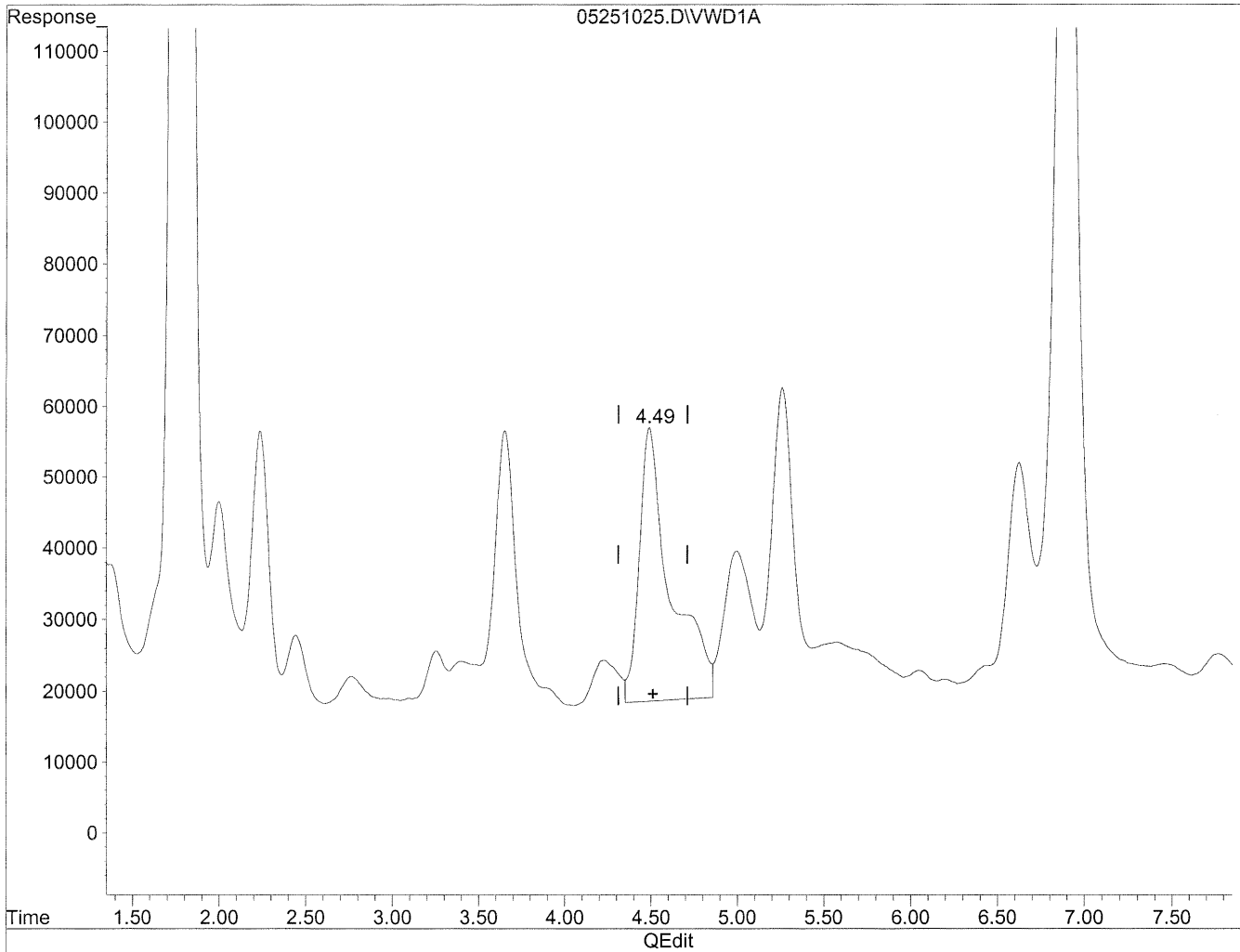
sh
 (m)
 6/4/10

HC
 6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

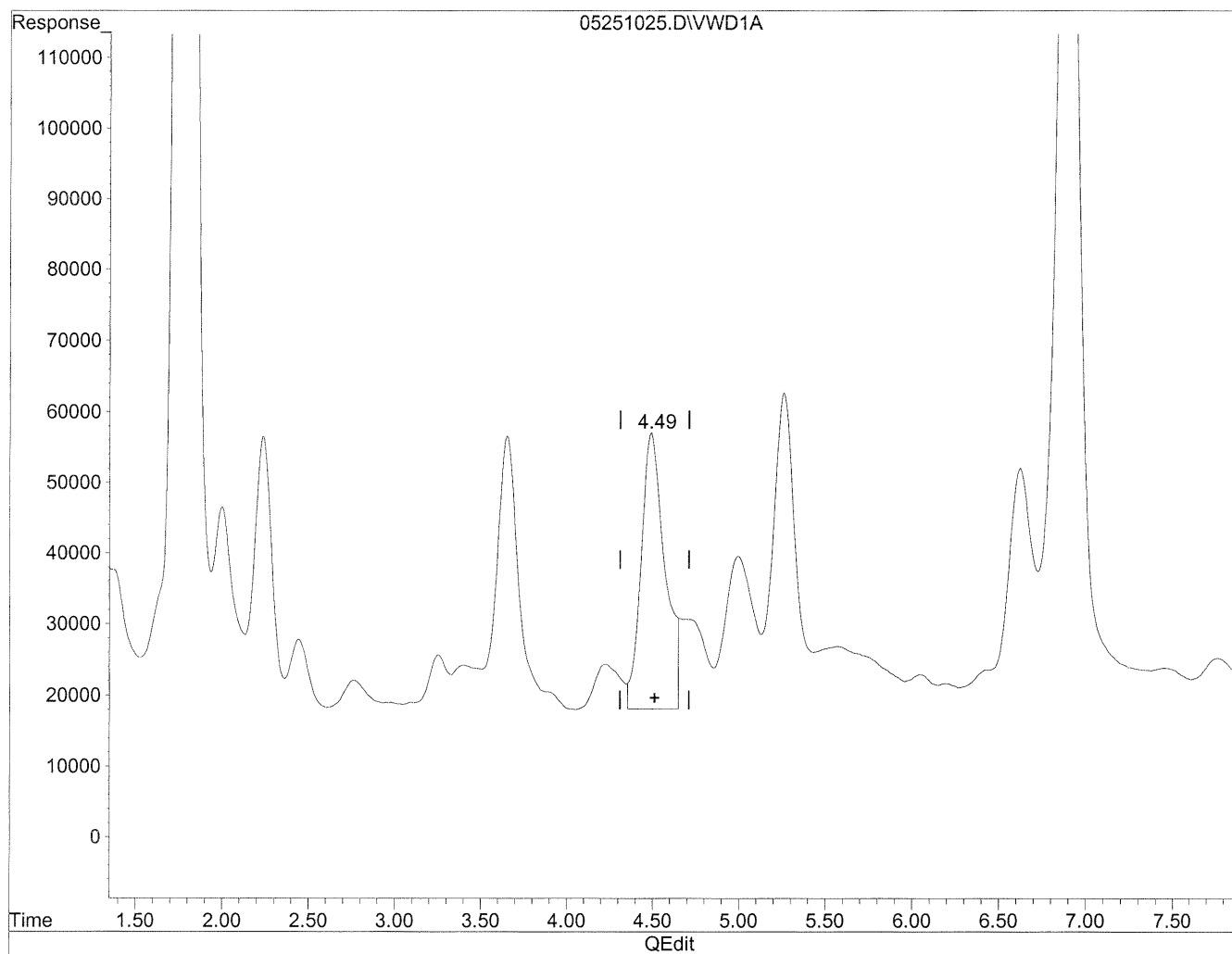
4.49min 1786.373ng/ml

response 4835216

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.49min 1355.747ng/ml m

response 3669632

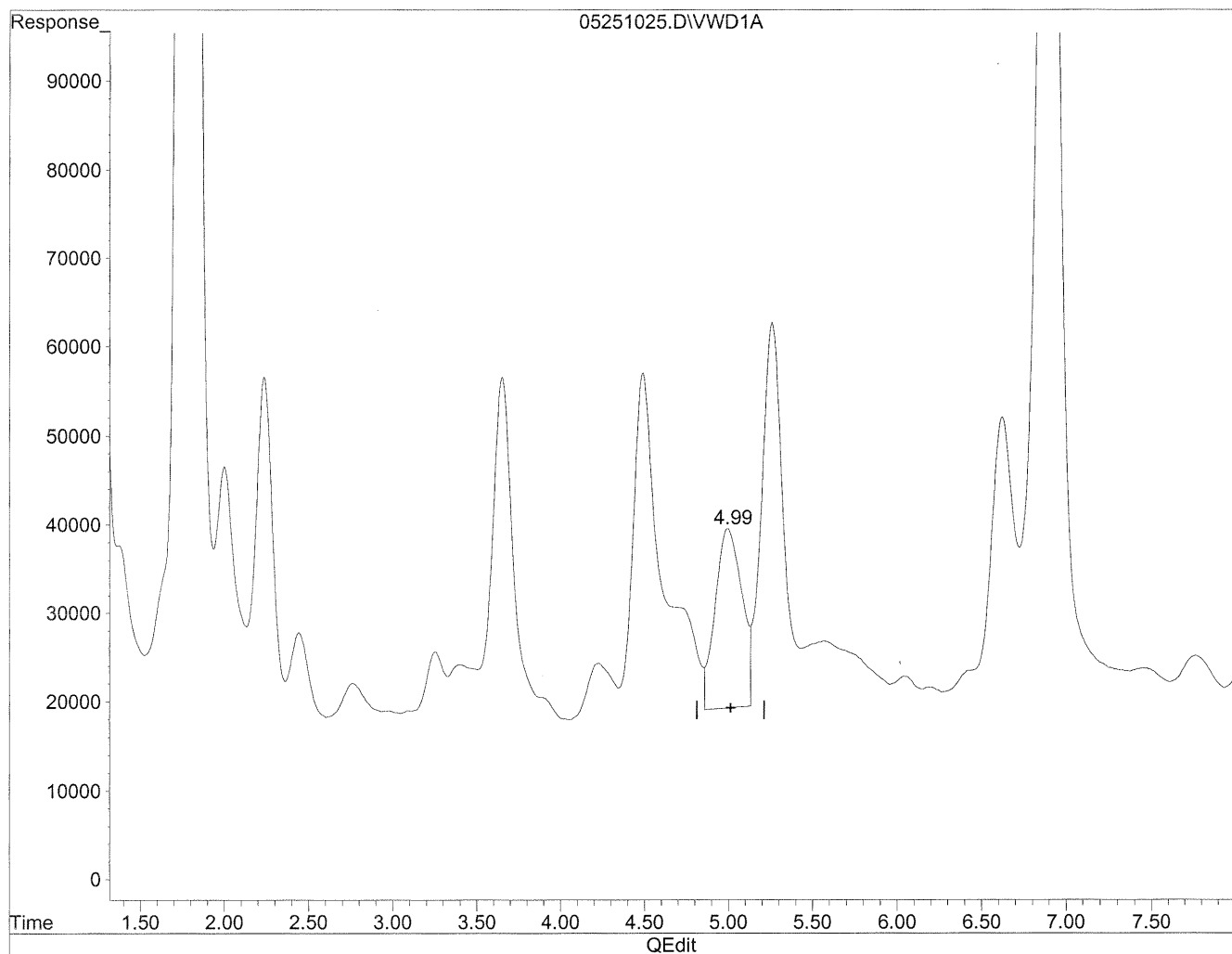
Sh
MD
6/4/10

HC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



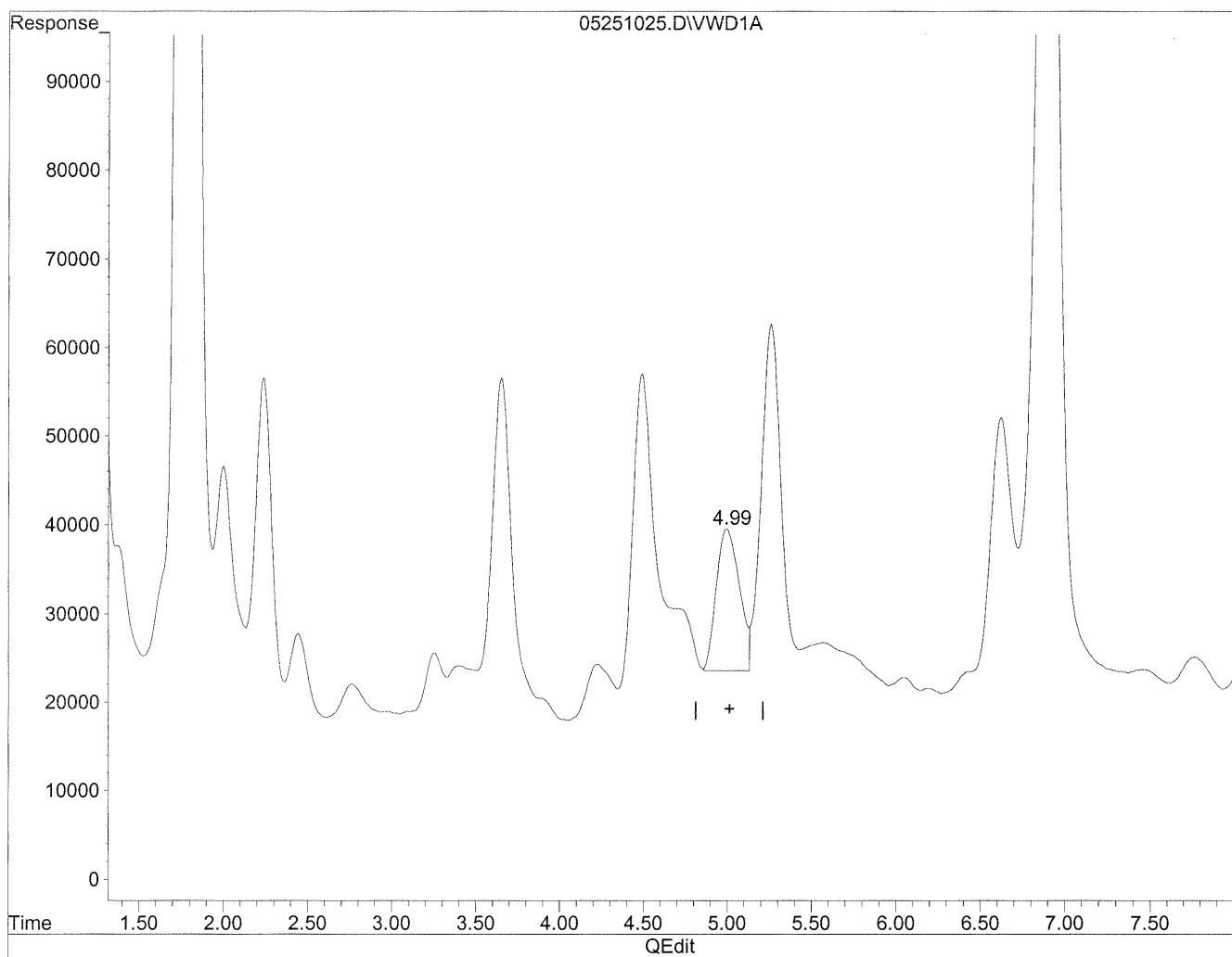
(7) Isovaleraldehyde
5.00min 632.065ng/ml
response 2242381

(+) = Expected Retention Time
05251025.D TO110510.M Fri May 28 10:57:13 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.99min 439.403ng/ml m

response 1558871

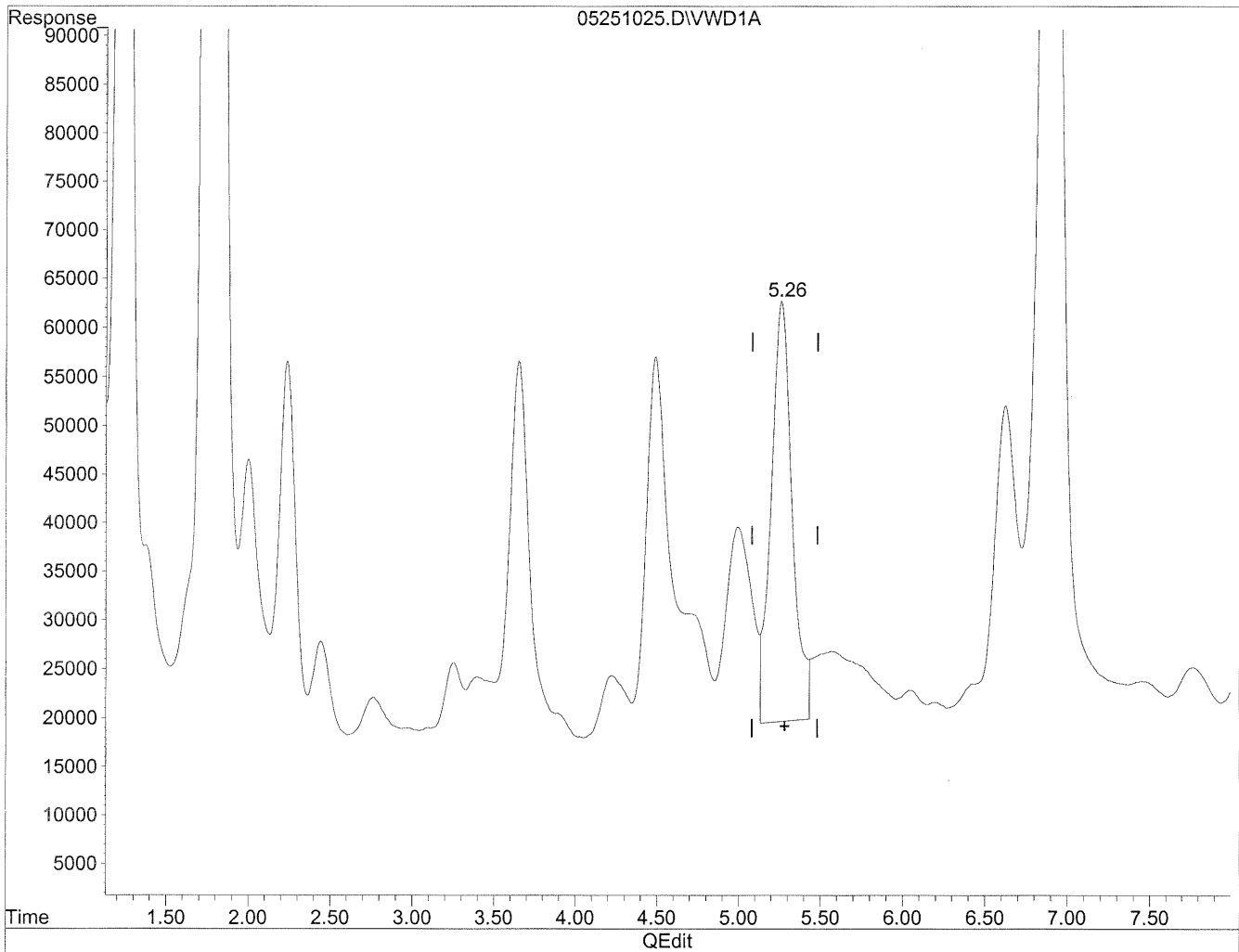
TC
mm
6/4/10

HC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

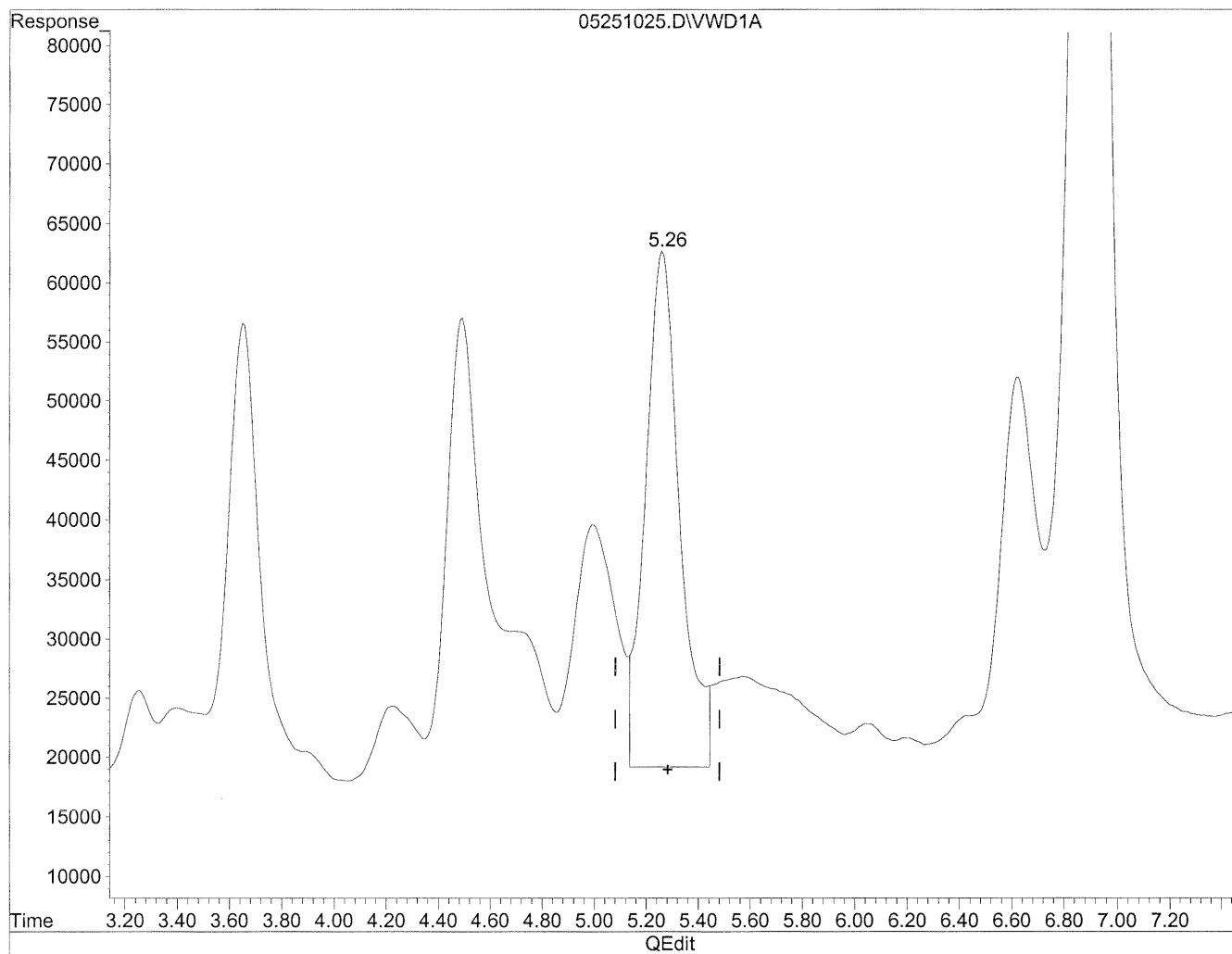
5.26min 1156.042ng/ml

response 3878076

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251025.D Vial: 116
Acq On : 25-May-2010, 15:39 Operator: MD
Sample : P1001793-014 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:58 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.26min 1190.805ng/ml m

response 3994693

Bc
mo
6/4/10

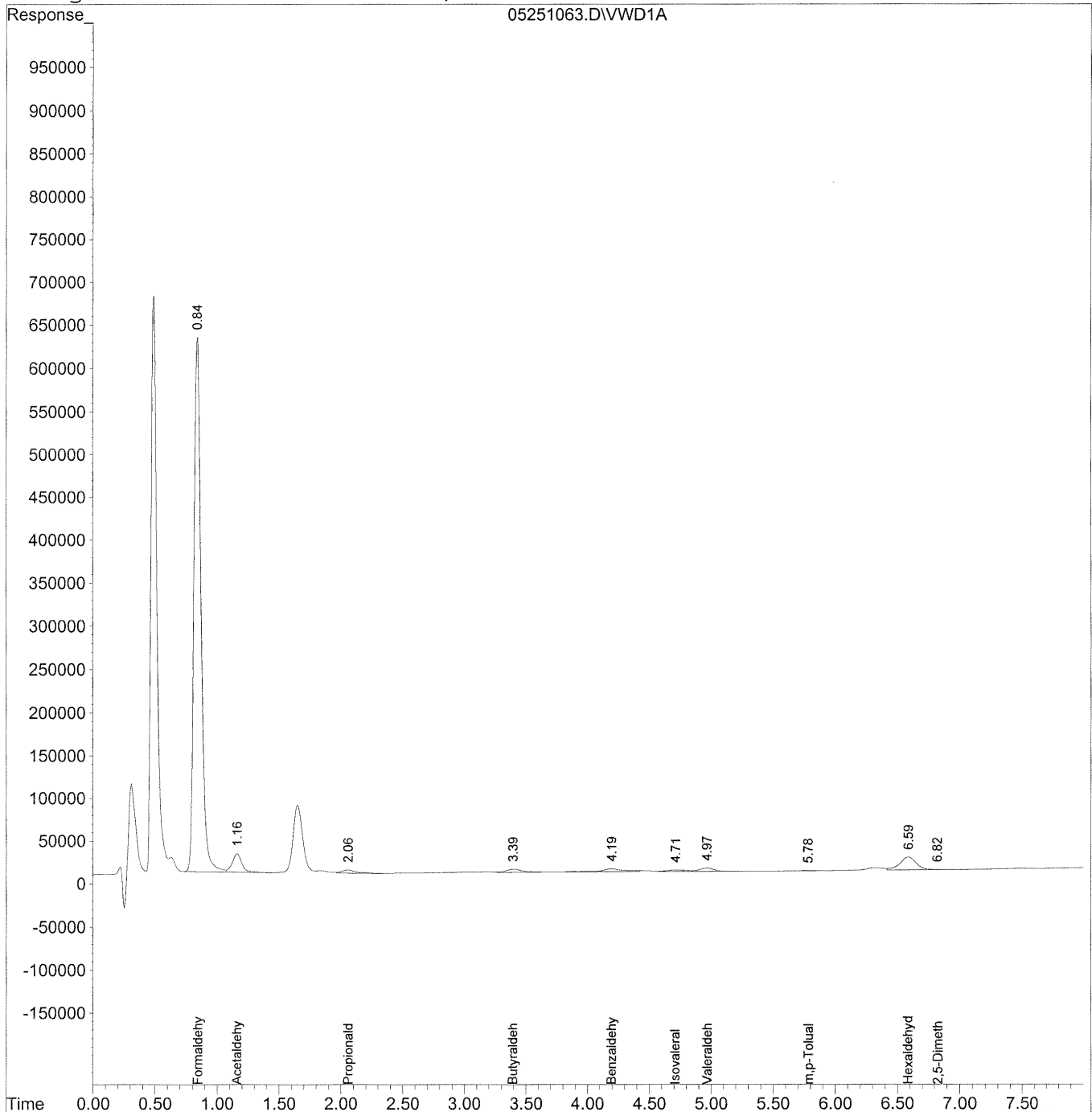
HC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251063.D Vial: 144
Acq On : 25-May-2010, 22:15 Operator: MD
Sample : P1001793-014 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:59 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251063.D Vial: 144
Acq On : 25-May-2010, 22:15 Operator: MD
Sample : P1001793-014 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:59 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.84	24889396	2666.852 ng/ml
2) Acetaldehyde	1.16	1183670	175.743 ng/ml
3) Propionaldehyde	2.06	309824	63.723 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.40	351257	87.176 ng/ml
6) Benzaldehyde	4.20	484169	178.876 ng/ml
7) Isovaleraldehyde	4.72	207693	58.543 ng/ml
8) Valeraldehyde	4.97	334599	99.743 ng/ml
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	5.78f	22913	9.781 ng/ml
11) Hexaldehyde	6.59	1391957	484.096 ng/ml
12) 2,5-Dimethylbenzaldehyde	6.82	9150	4.755 ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated

Client Sample ID: 110400

Client Project ID: 17131

CAS Project ID: P1001793

CAS Sample ID: P1001793-015

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: 18335 Minutes

CAS #	Compound	Result $\mu\text{g}/\text{Sample}$	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	2.5	1.4	0.11	1.1	0.090	
75-07-0	Acetaldehyde	0.73	0.47	0.13	0.26	0.072	
123-38-6	Propionaldehyde	< 0.20	ND	0.28	ND	0.12	
123-72-8	Butyraldehyde	0.27	1.3	0.99	0.45	0.34	
100-52-7	Benzaldehyde	< 0.20	ND	0.12	ND	0.027	
590-86-3	Isovaleraldehyde	0.26	0.23	0.18	0.066	0.051	
110-62-3	Valeraldehyde	0.24	0.48	0.40	0.14	0.11	
66-25-1	n-Hexaldehyde	0.56	1.7	0.61	0.41	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

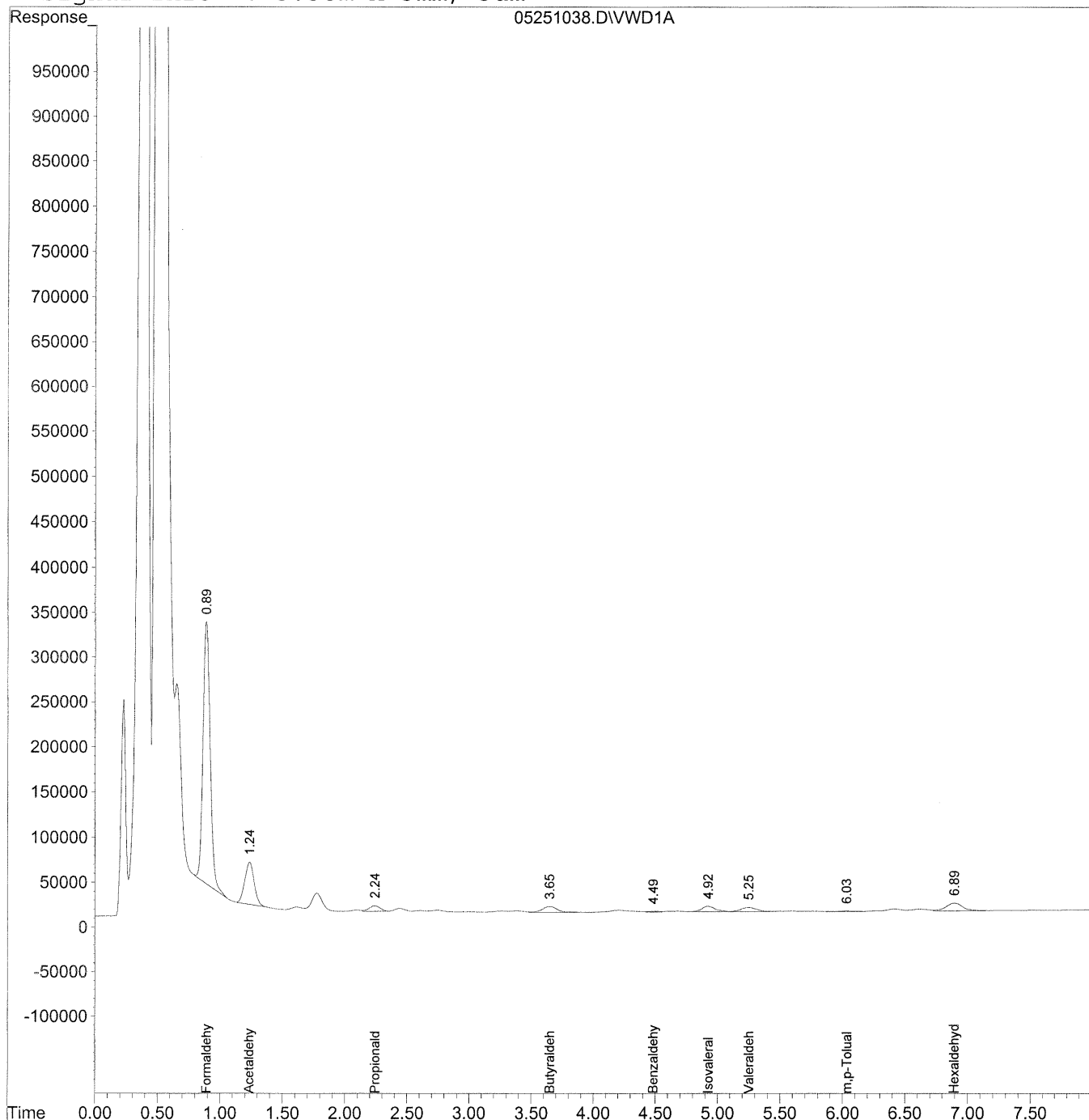
Verified By: RC Date: 5/21/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:15 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:15 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

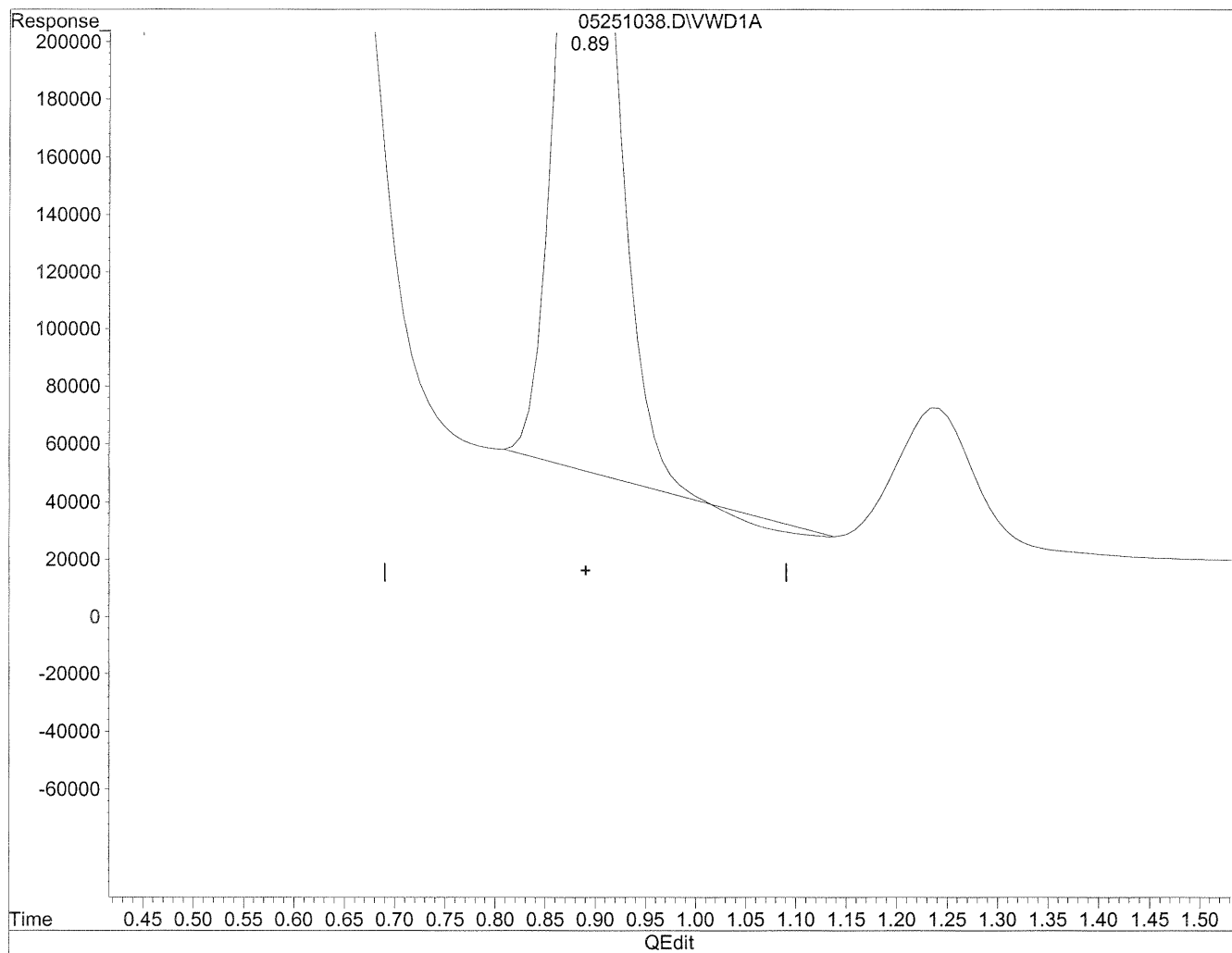
	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.89	11697960	1253.414	ng/mlm
2)	Acetaldehyde	1.24	2460819	365.365	ng/mlm
3)	Propionaldehyde	2.24	384777	79.139	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	3.65	537542	133.408	ng/mlm
6)	Benzaldehyde	4.49	59523	21.991	ng/ml
7)	Isovaleraldehyde	4.92f	459239	129.447	ng/mlm
8)	Valeraldehyde	5.25	398539	118.803	ng/mlm
9)	o-Tolualdehyde	0.00	0	N.D.	ng/ml
10)	m,p-Tolualdehyde	6.03	41791	17.839	ng/ml
11)	Hexaldehyde	6.90	802720	279.171	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.89min 1211.236ng/ml

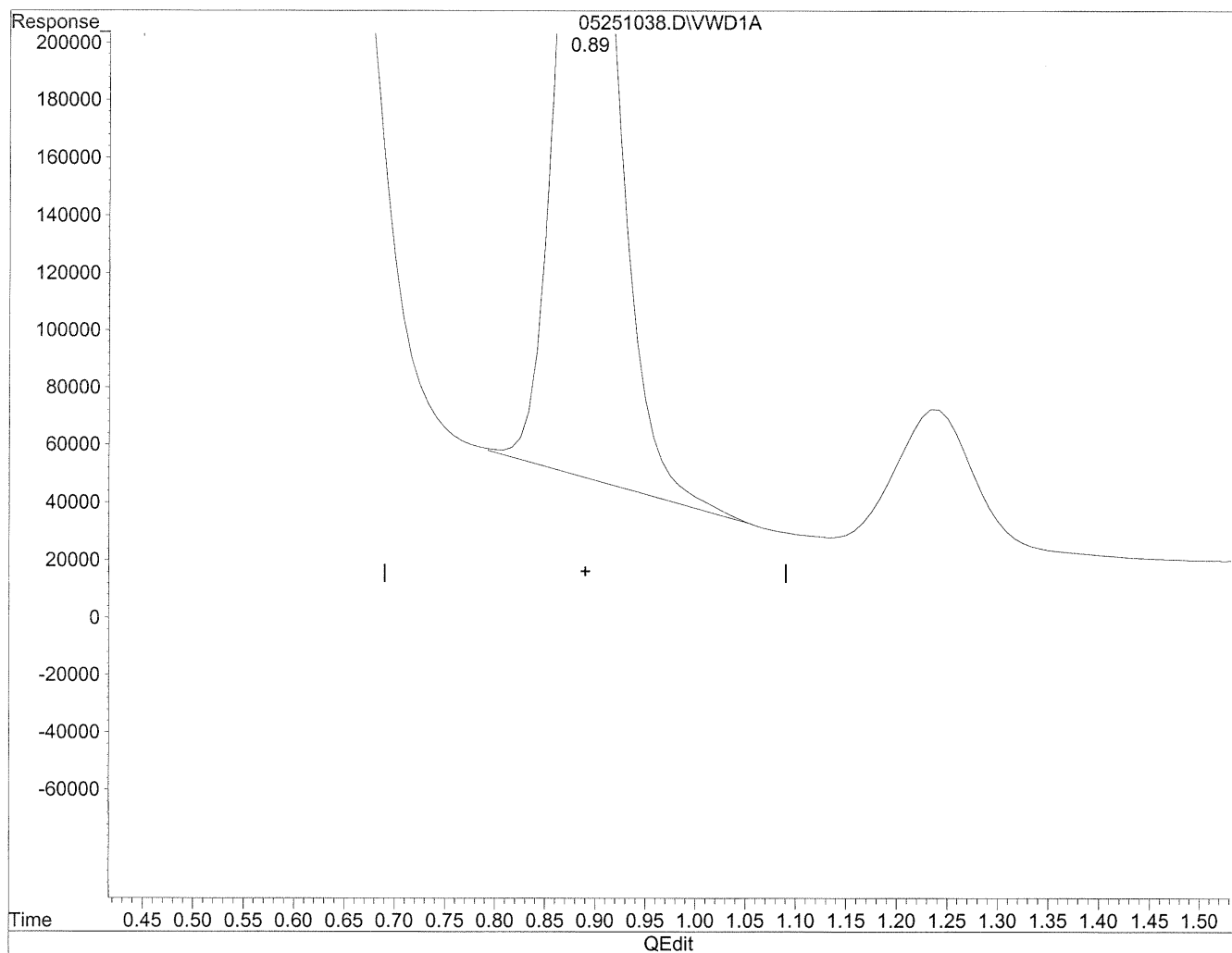
response 11304315

(+) = Expected Retention Time
05251038.D TO110510.M Fri May 28 11:10:24 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.89min 1253.414ng/ml m

response 11697960

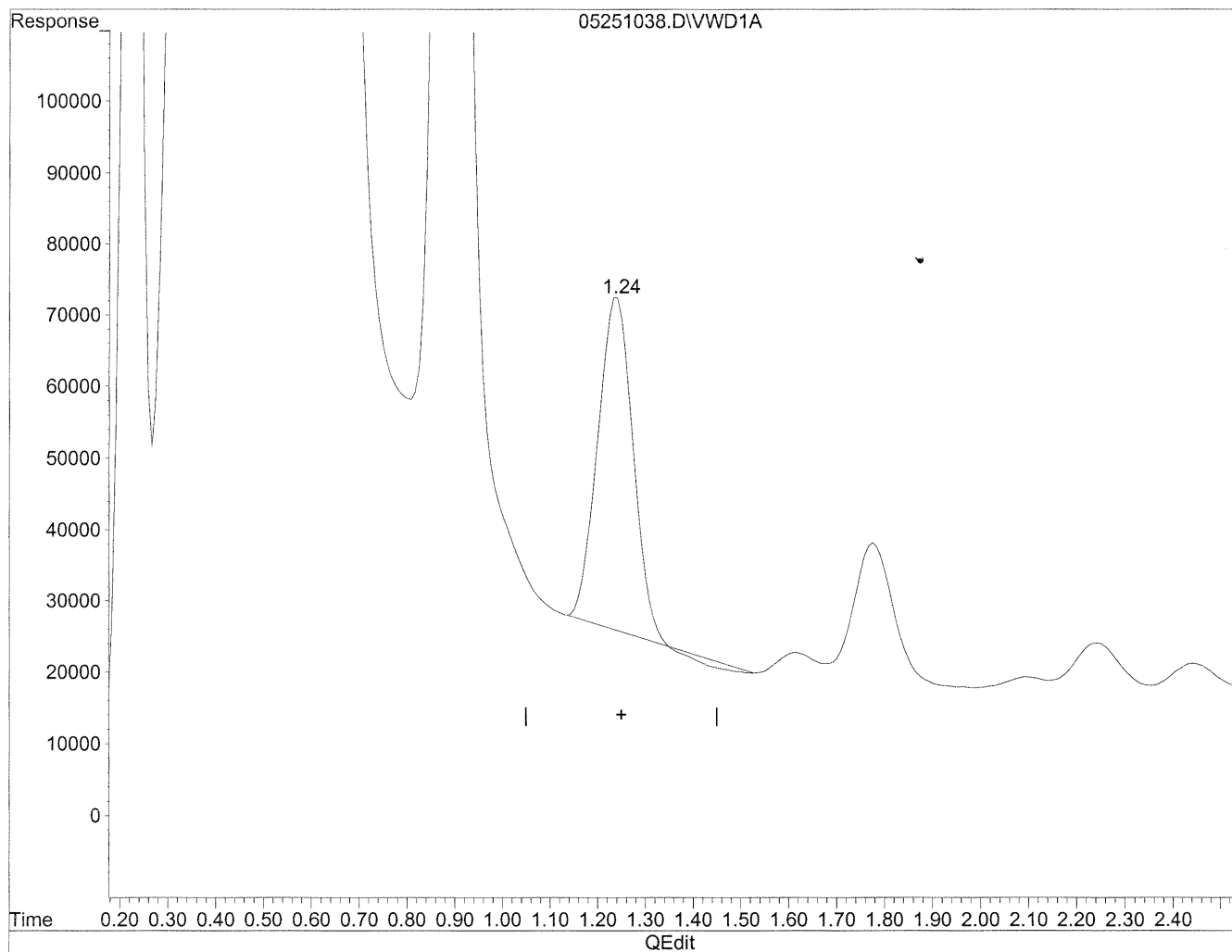
RZ
mm
6/4/10

PC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



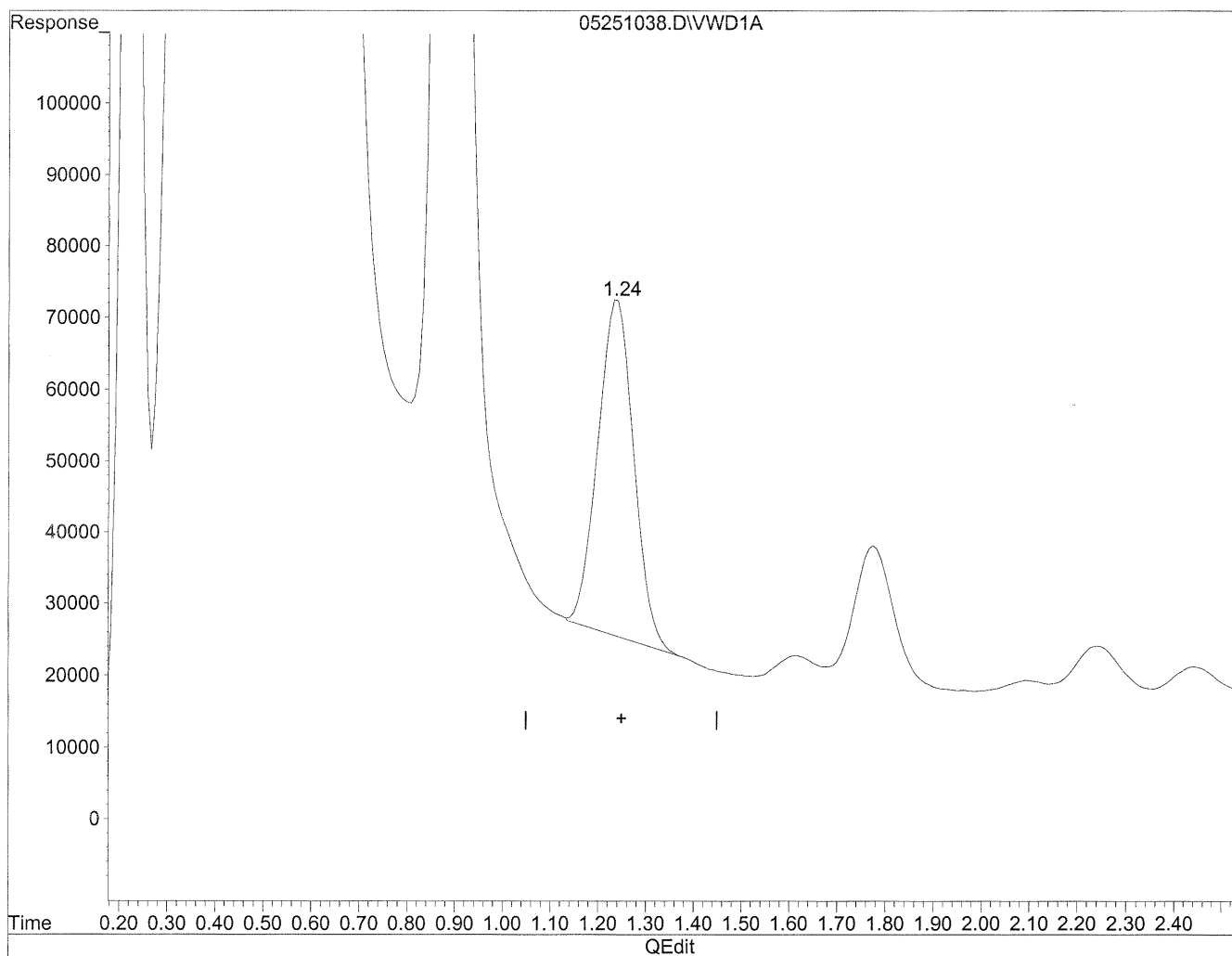
(2) Acetaldehyde
1.24min 350.538ng/ml
response 2360955

(+) = Expected Retention Time
05251038.D TO110510.M Fri May 28 11:14:36 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 365.365ng/ml m

response 2460819

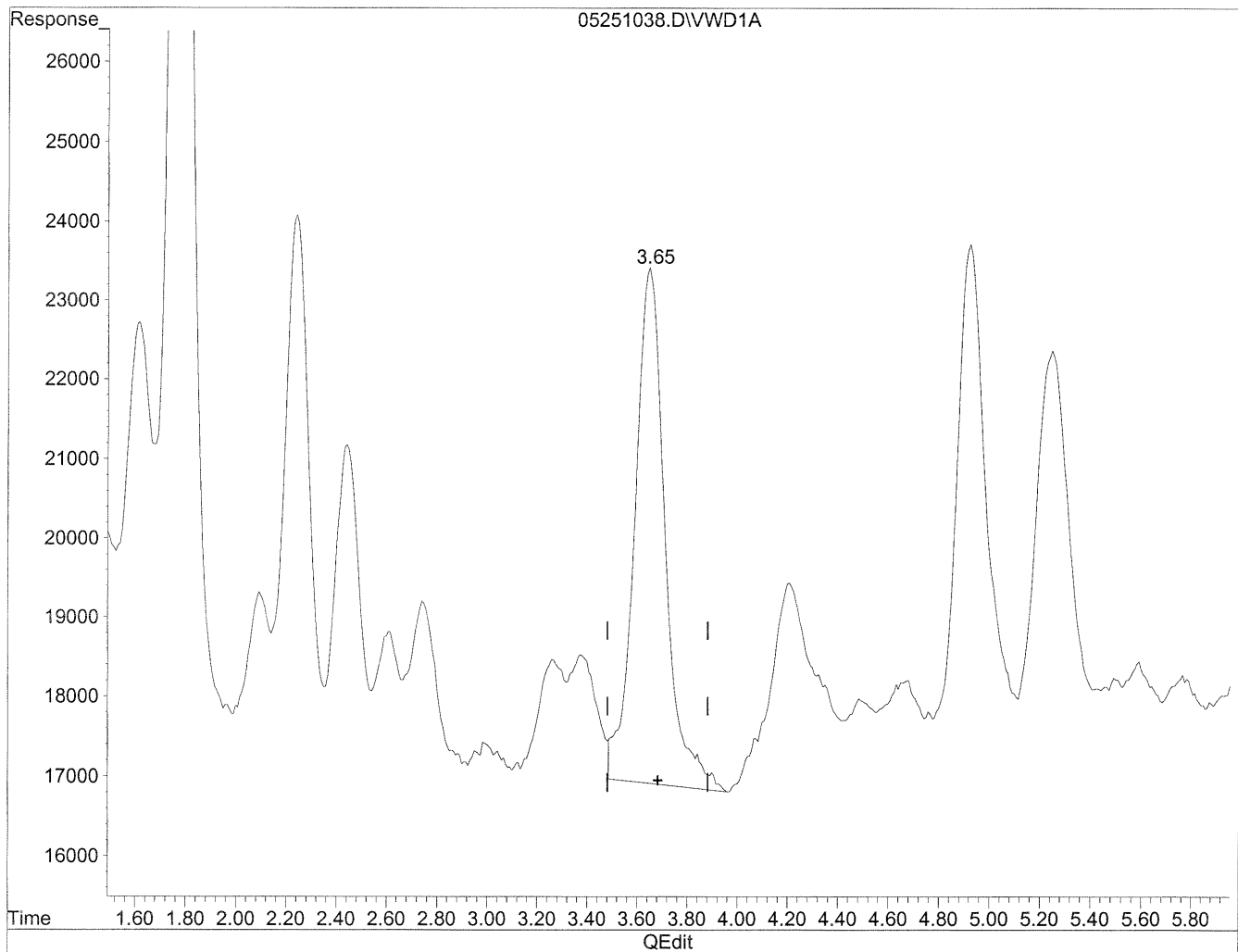
12
6/4/10
4C
6/4/10

(+) = Expected Retention Time
05251038.D TO110510.M Fri May 28 11:14:41 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

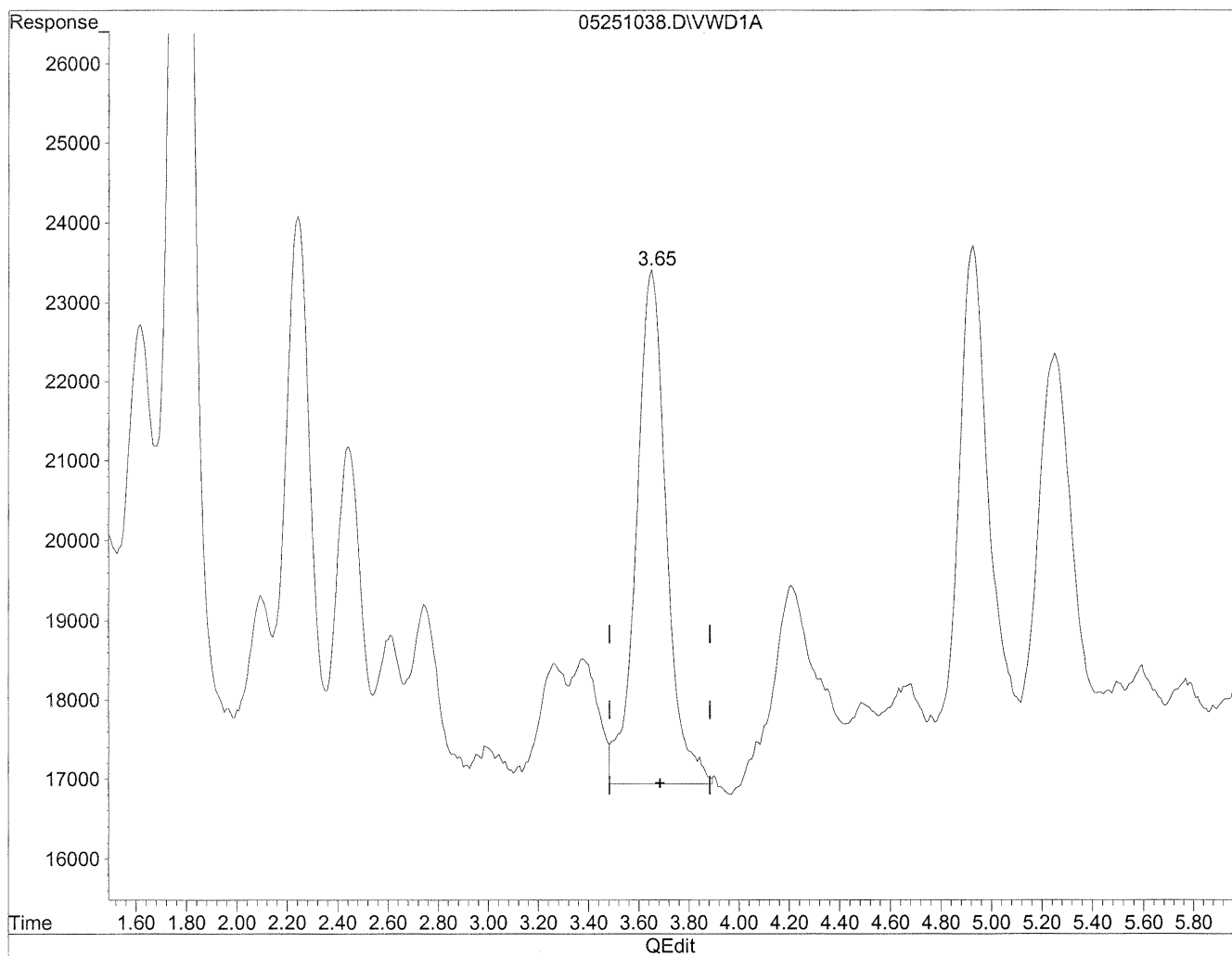
3.65min 136.766ng/ml

response 551071

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.65min 133.408ng/ml m

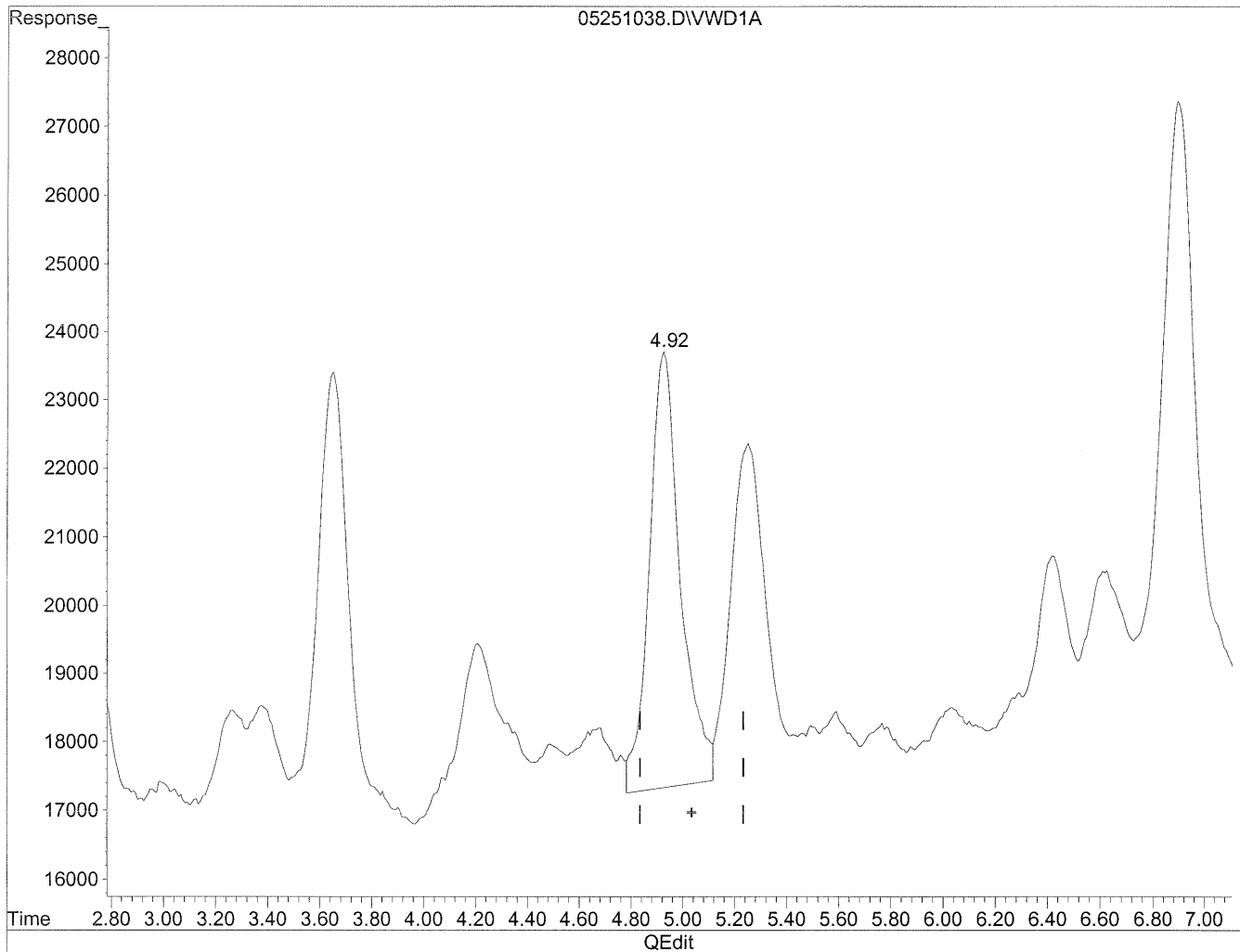
response 537542

12
6/4/10
HIC
6/14/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



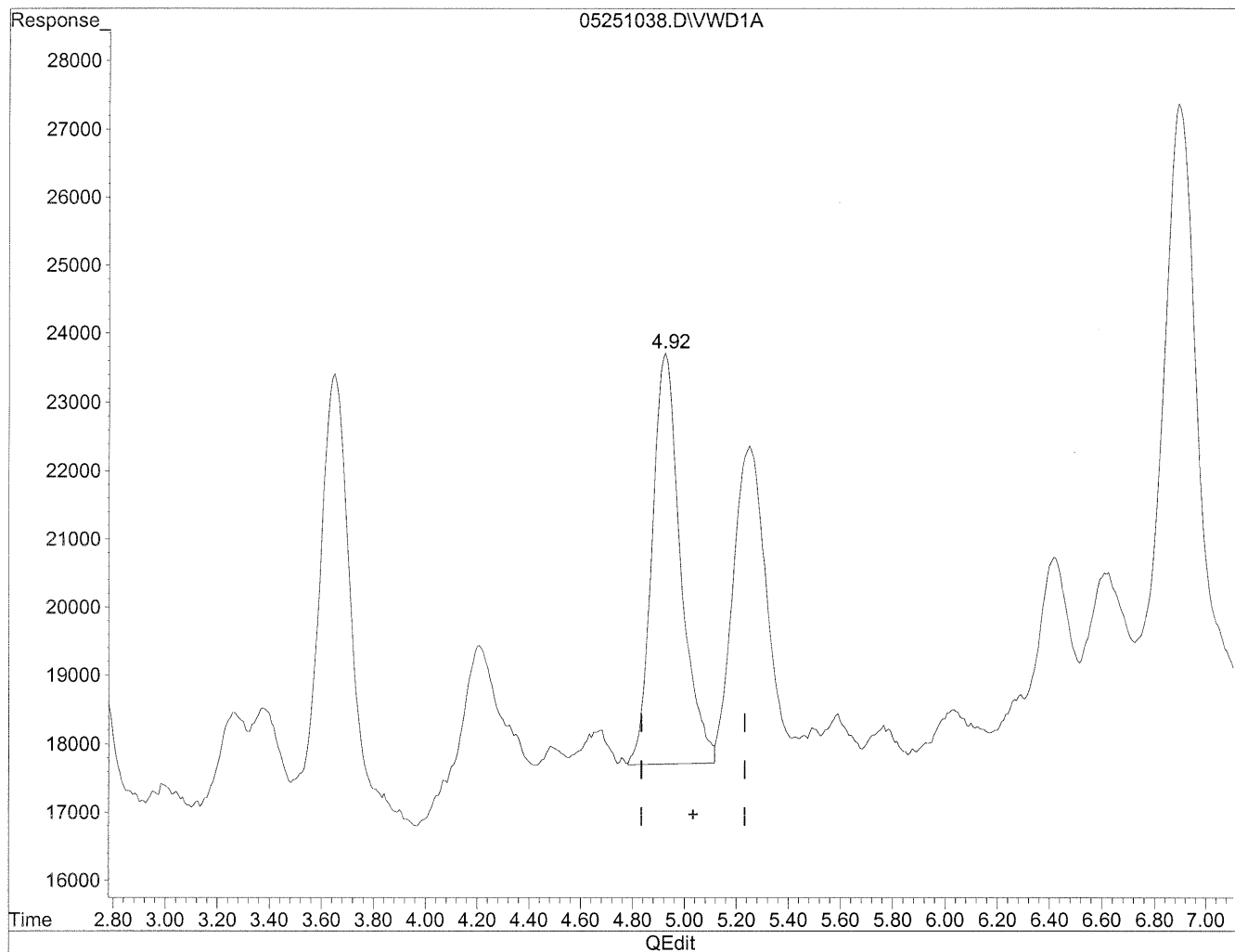
(7) Isovaleraldehyde
4.93min 150.277ng/ml
response 533139

(+) = Expected Retention Time
05251038.D TO110510.M Fri May 28 11:15:07 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.92min 129.447ng/ml m

response 459239

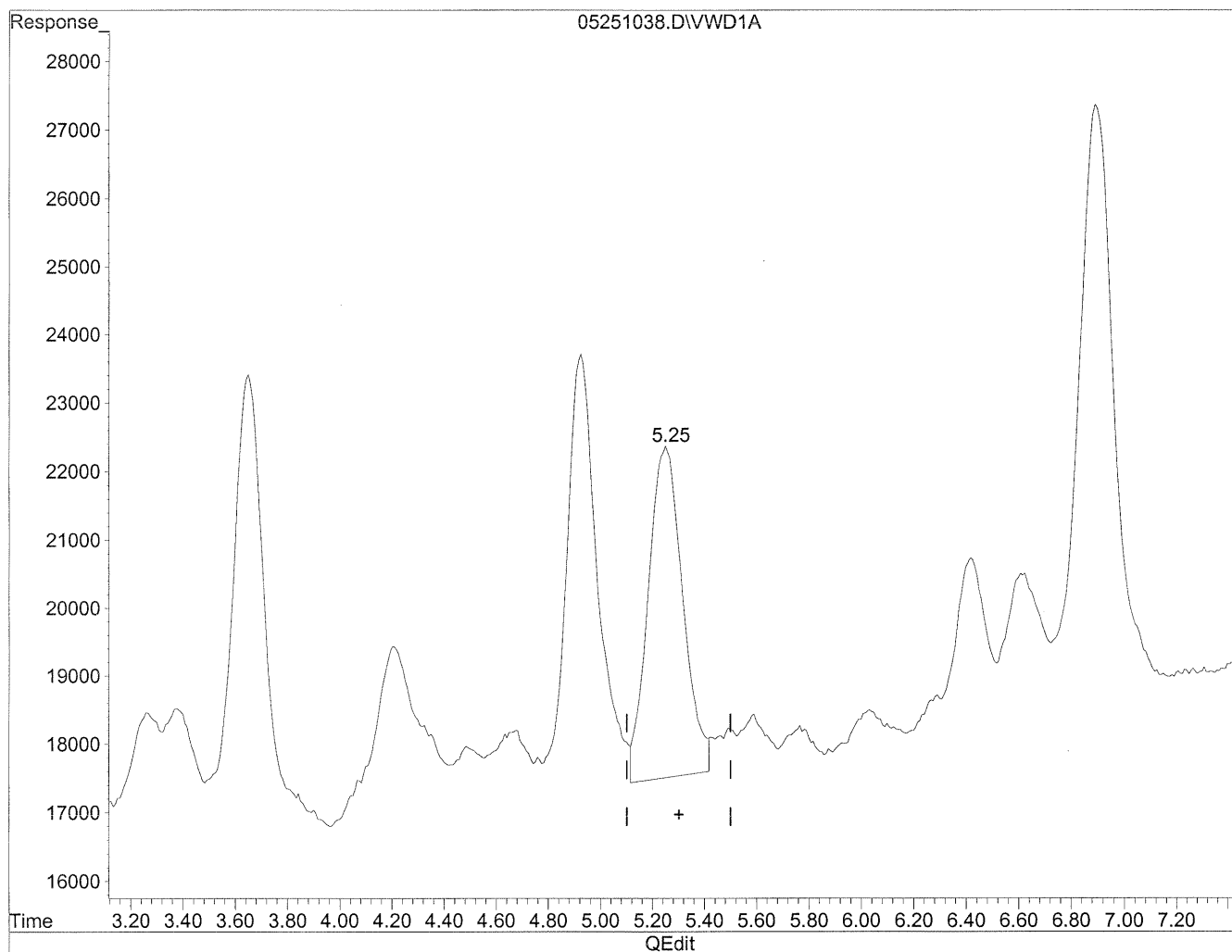
BC
MD
6/4/10
HC
6/4/10

(+) = Expected Retention Time
05251038.D TO110510.M Fri May 28 11:15:13 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.25min 133.828ng/ml

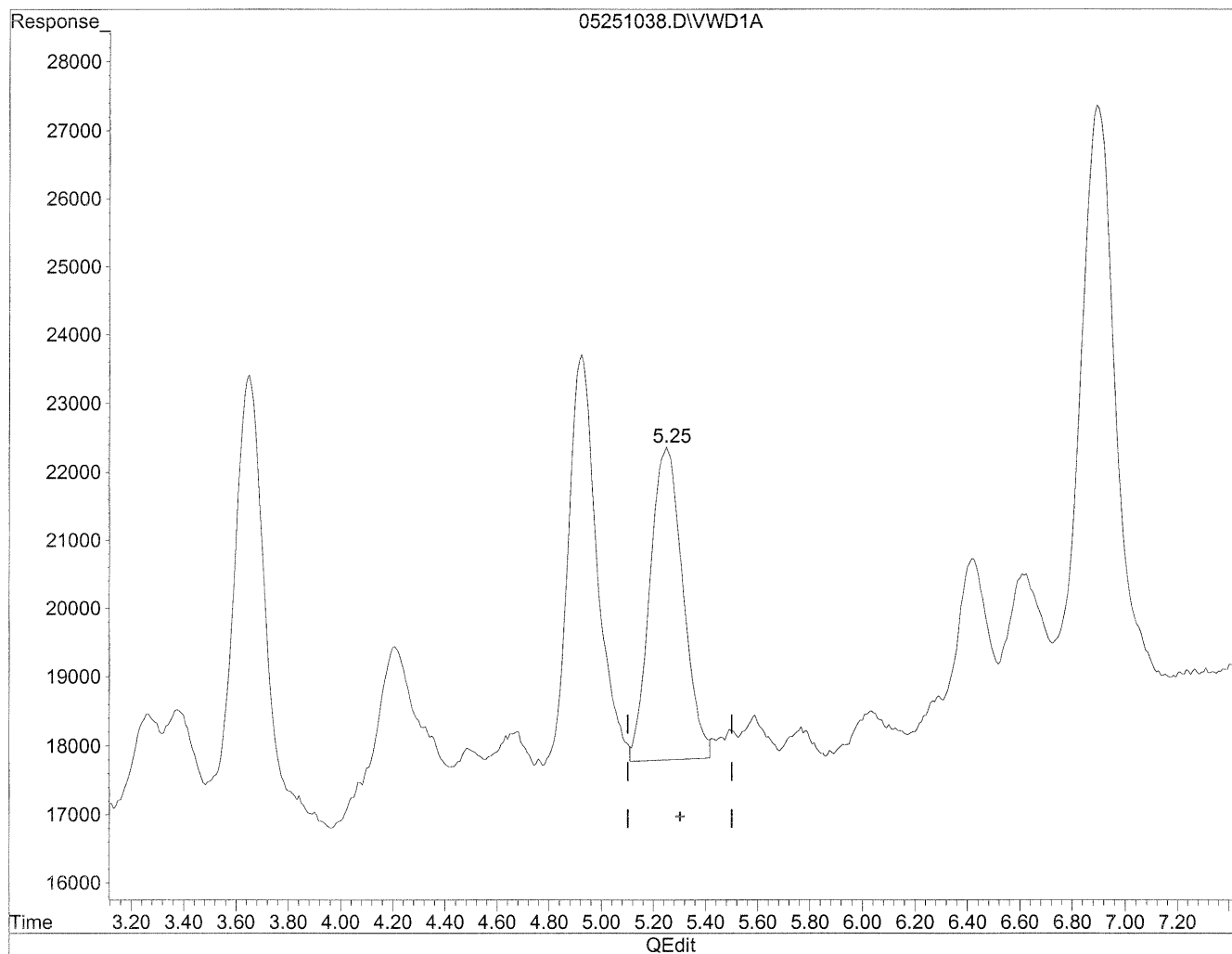
response 448942

(+) = Expected Retention Time
05251038.D TO110510.M Fri May 28 11:15:21 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251038.D Vial: 125
Acq On : 25-May-2010, 17:54 Operator: MD
Sample : P1001793-015 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:10 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.25min 118.803ng/ml m

response 398539

BC
6/9/10
HC
6/4/10

(+) = Expected Retention Time
05251038.D TO110510.M Fri May 28 11:15:27 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110294
Client Project ID: 17131

CAS Project ID: P1001793
 CAS Sample ID: P1001793-016

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: 21450 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	3.5	1.7	0.094	1.4	0.077	
75-07-0	Acetaldehyde	1.2	0.68	0.11	0.38	0.062	
123-38-6	Propionaldehyde	< 0.20	ND	0.24	ND	0.10	
123-72-8	Butyraldehyde	0.33	1.4	0.85	0.47	0.29	
100-52-7	Benzaldehyde	< 0.20	ND	0.10	ND	0.023	
590-86-3	Isovaleraldehyde	0.31	0.24	0.15	0.068	0.043	
110-62-3	Valeraldehyde	0.23	0.40	0.35	0.11	0.098	
66-25-1	n-Hexaldehyde	0.34	0.87	0.52	0.21	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

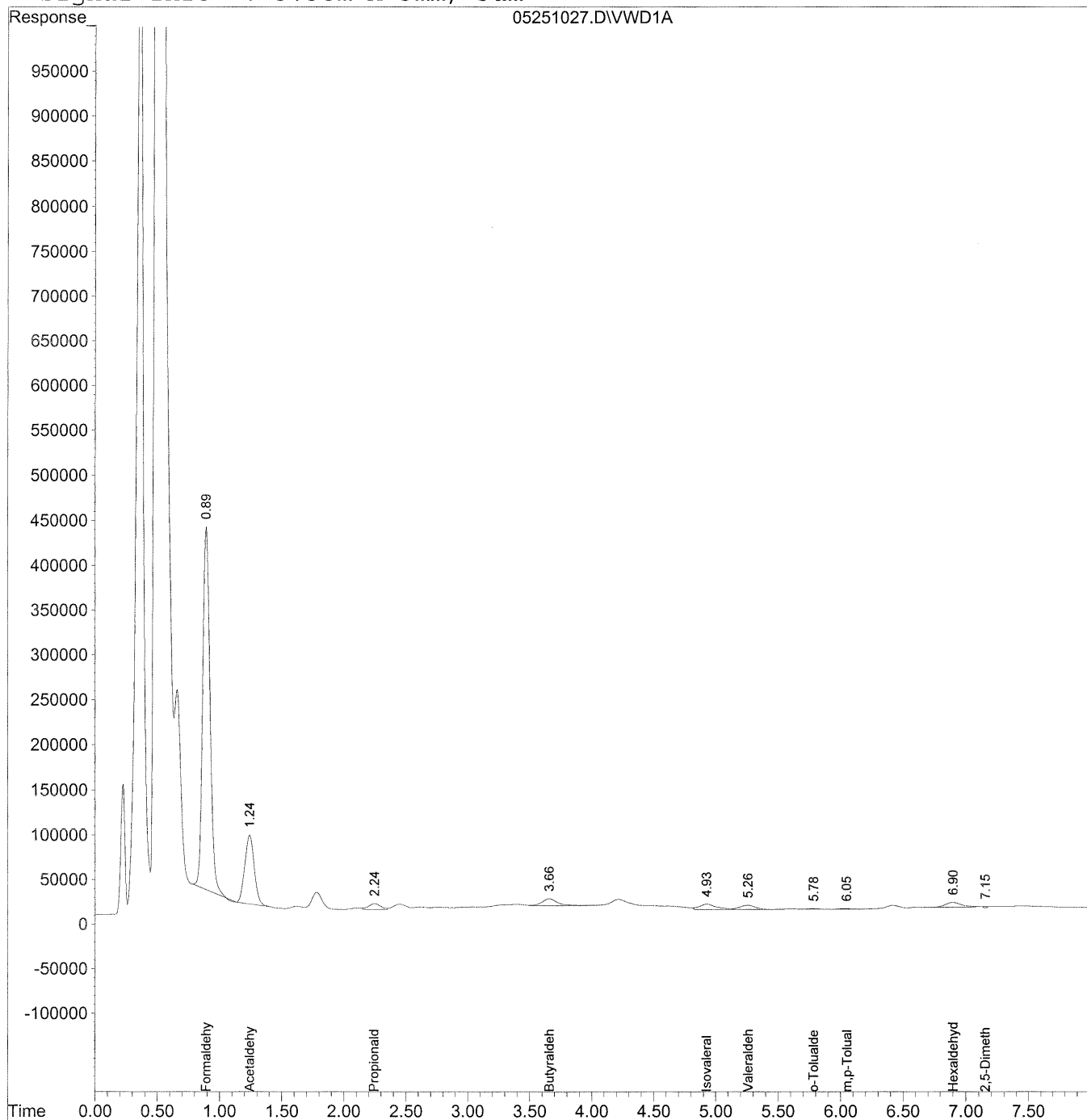
Verified By: KE Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251027.D Vial: 118
 Acq On : 25-May-2010, 16:01 Operator: MD
 Sample : P1001793-016 2ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 11:00 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 14:13:10 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251027.D Vial: 118
Acq On : 25-May-2010, 16:01 Operator: MD
Sample : P1001793-016 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:00 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

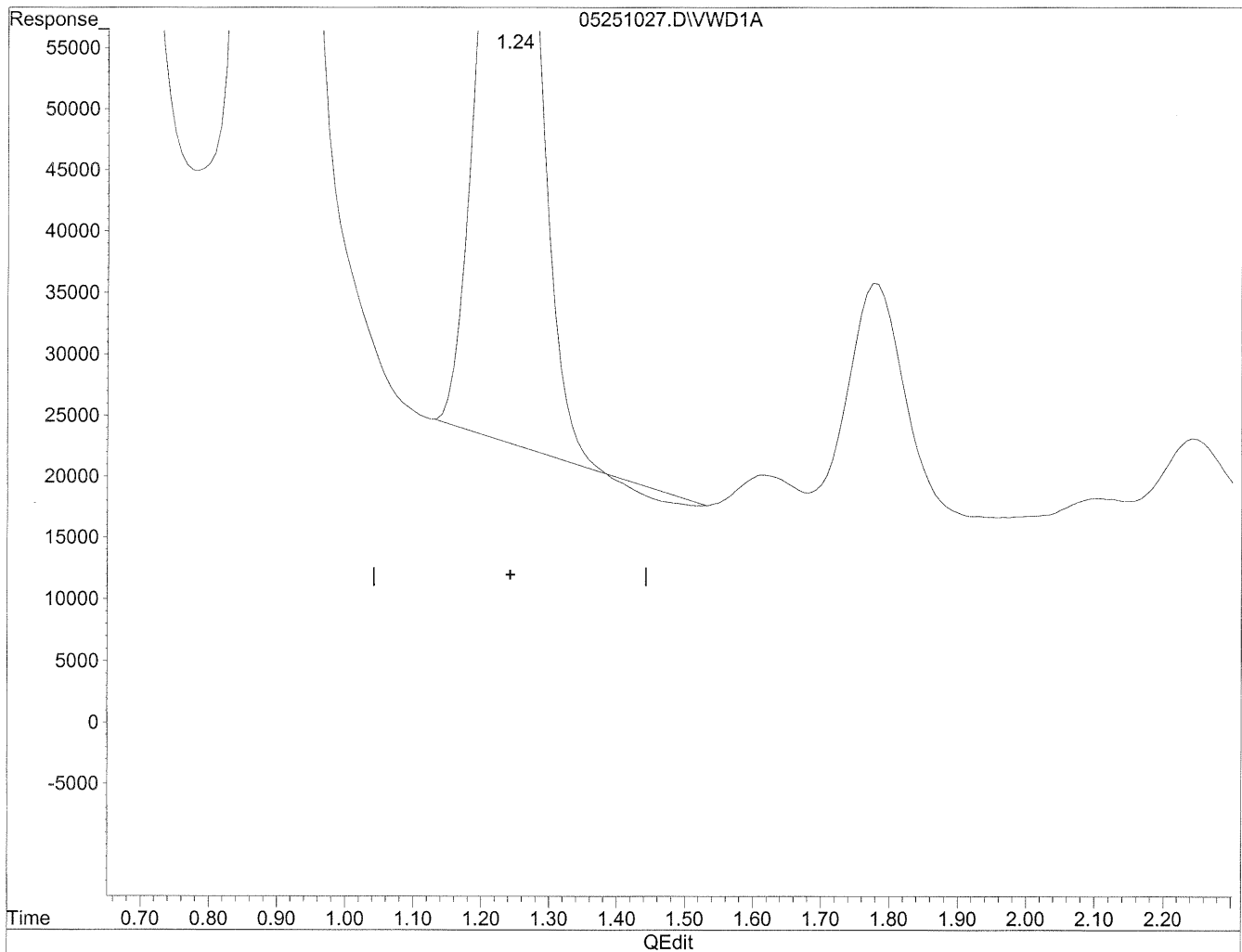
Compound		R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.89	16436281	1761.117	ng/ml
2)	Acetaldehyde	1.24	4118576	611.498	ng/mlm
3)	Propionaldehyde	2.25	431189	88.685	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	3.66	657952	163.292	ng/mlm
6)	Benzaldehyde	0.00	0	N.D.	ng/mld
7)	Isovaleraldehyde	4.93	554104	156.186	ng/ml
8)	Valeraldehyde	5.26	385723	114.983	ng/ml
9)	o-Tolualdehyde	5.79	32880	16.153	ng/ml
10)	m,p-Tolualdehyde	6.05f	45924	19.604	ng/ml
11)	Hexaldehyde	6.90	483099	168.013	ng/mlm
12)	2,5-Dimethylbenzaldehyde	7.16	26196	13.615	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251027.D Vial: 118
Acq On : 25-May-2010, 16:01 Operator: MD
Sample : P1001793-016 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

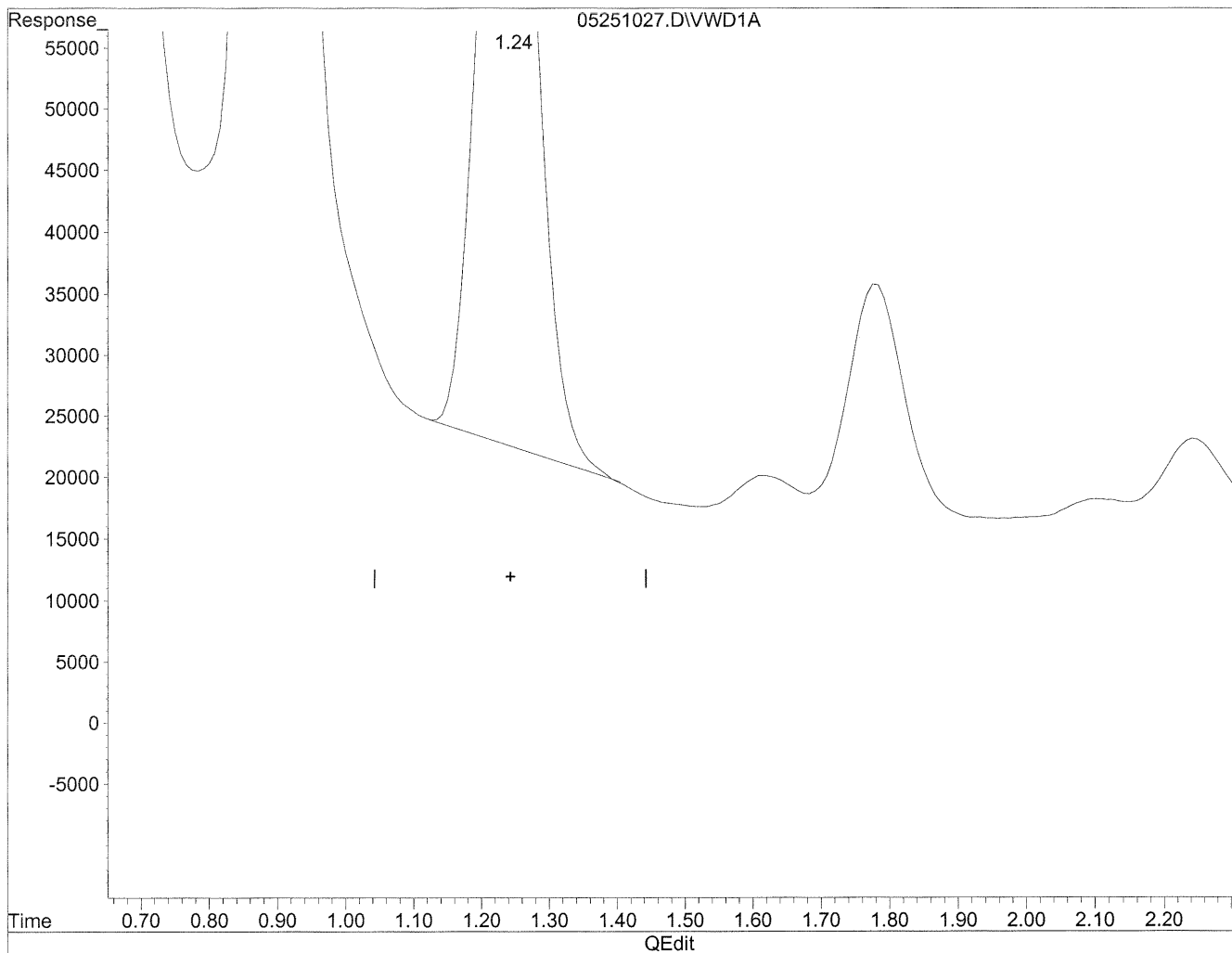


(2) Acetaldehyde
1.24min 602.734ng/ml
response 4059552

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251027.D Vial: 118
Acq On : 25-May-2010, 16:01 Operator: MD
Sample : P1001793-016 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 611.498ng/ml m

response 4118576

MC 6/4/10

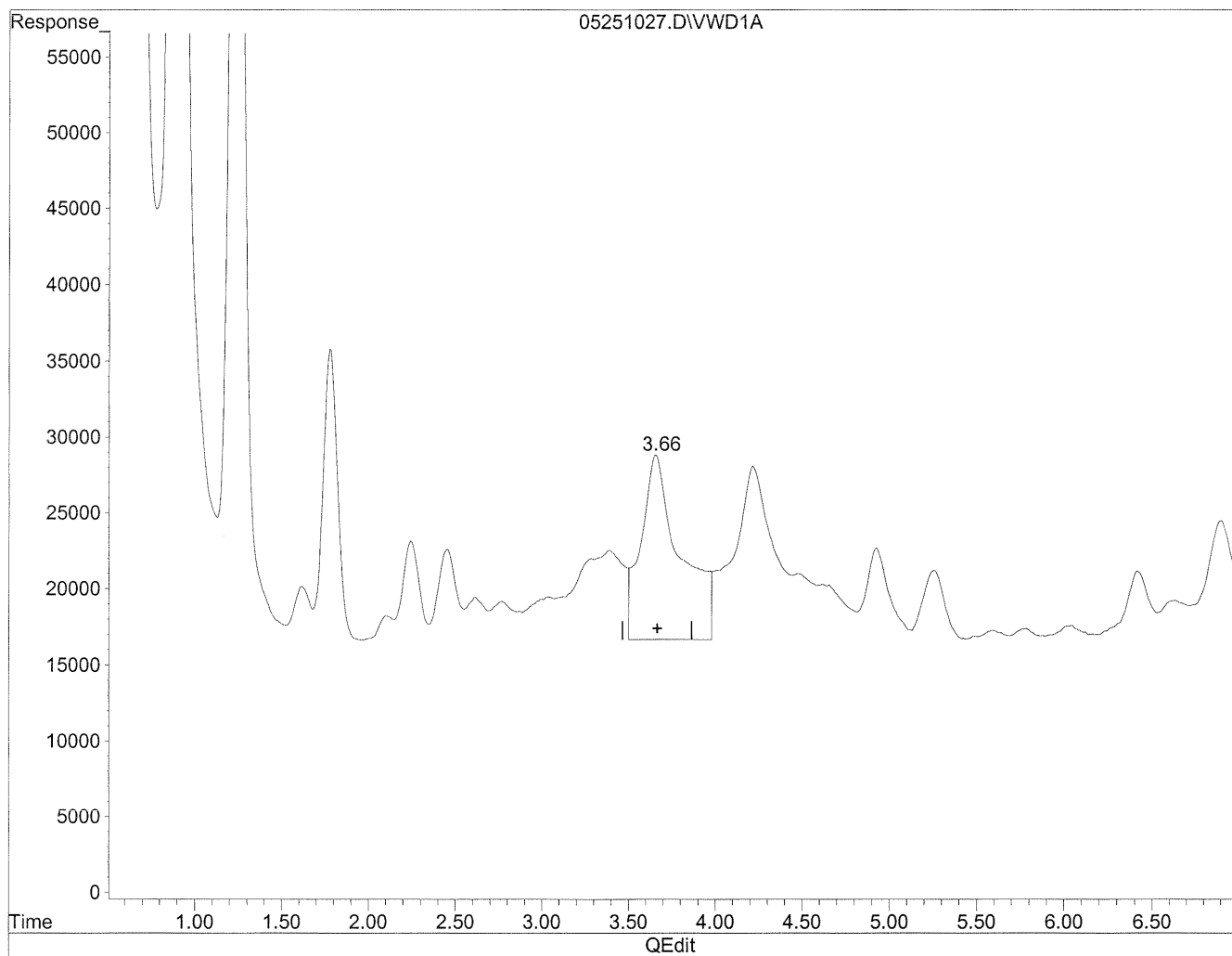
PC MD 6/4/10

(+) = Expected Retention Time
05251027.D TO110510.M Fri May 28 10:59:52 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251027.D Vial: 118
Acq On : 25-May-2010, 16:01 Operator: MD
Sample : P1001793-016 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

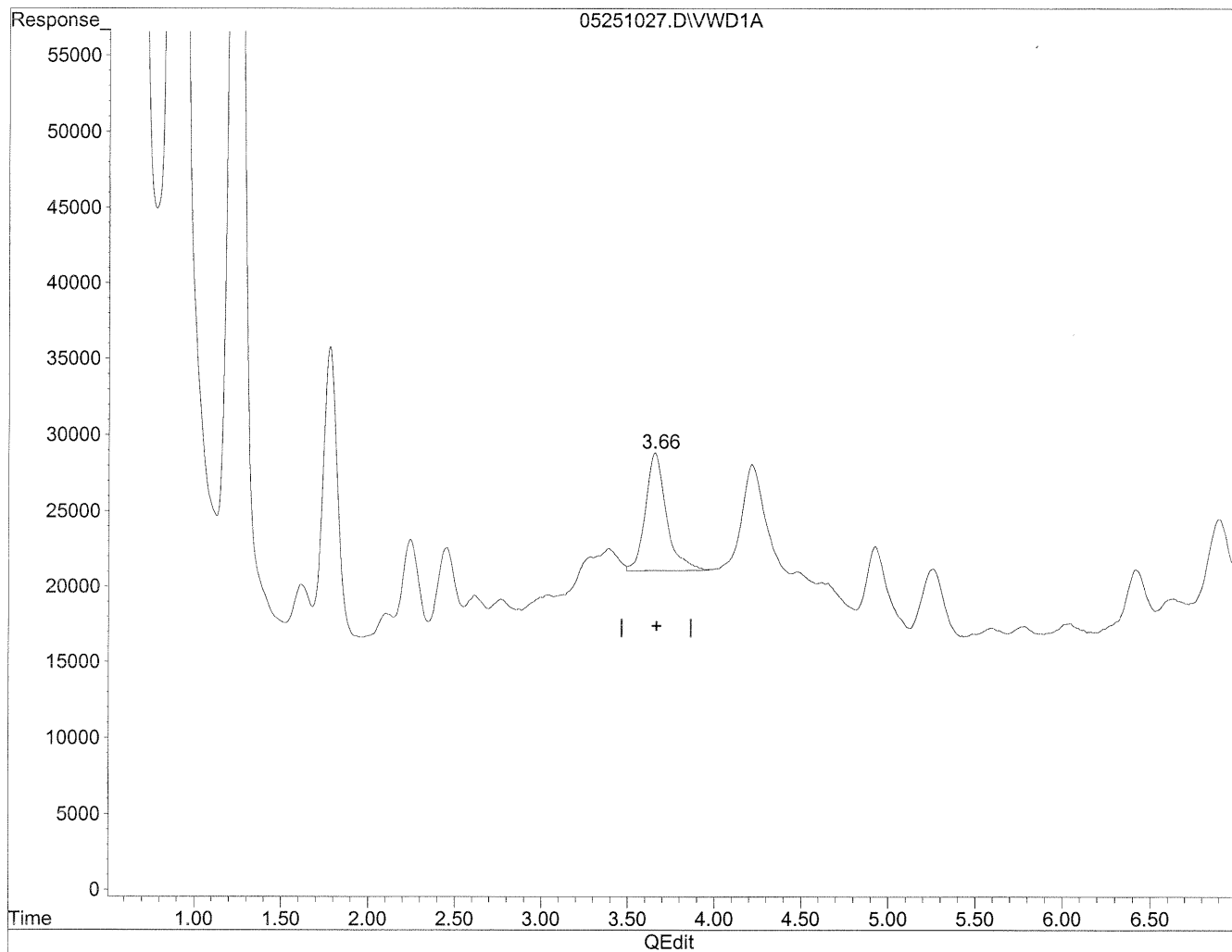


(5) Butyraldehyde
3.66min 477.044ng/ml
response 1922154

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251027.D Vial: 118
Acq On : 25-May-2010, 16:01 Operator: MD
Sample : P1001793-016 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.66min 163.292ng/ml m

response 657952

AC
6/4/10

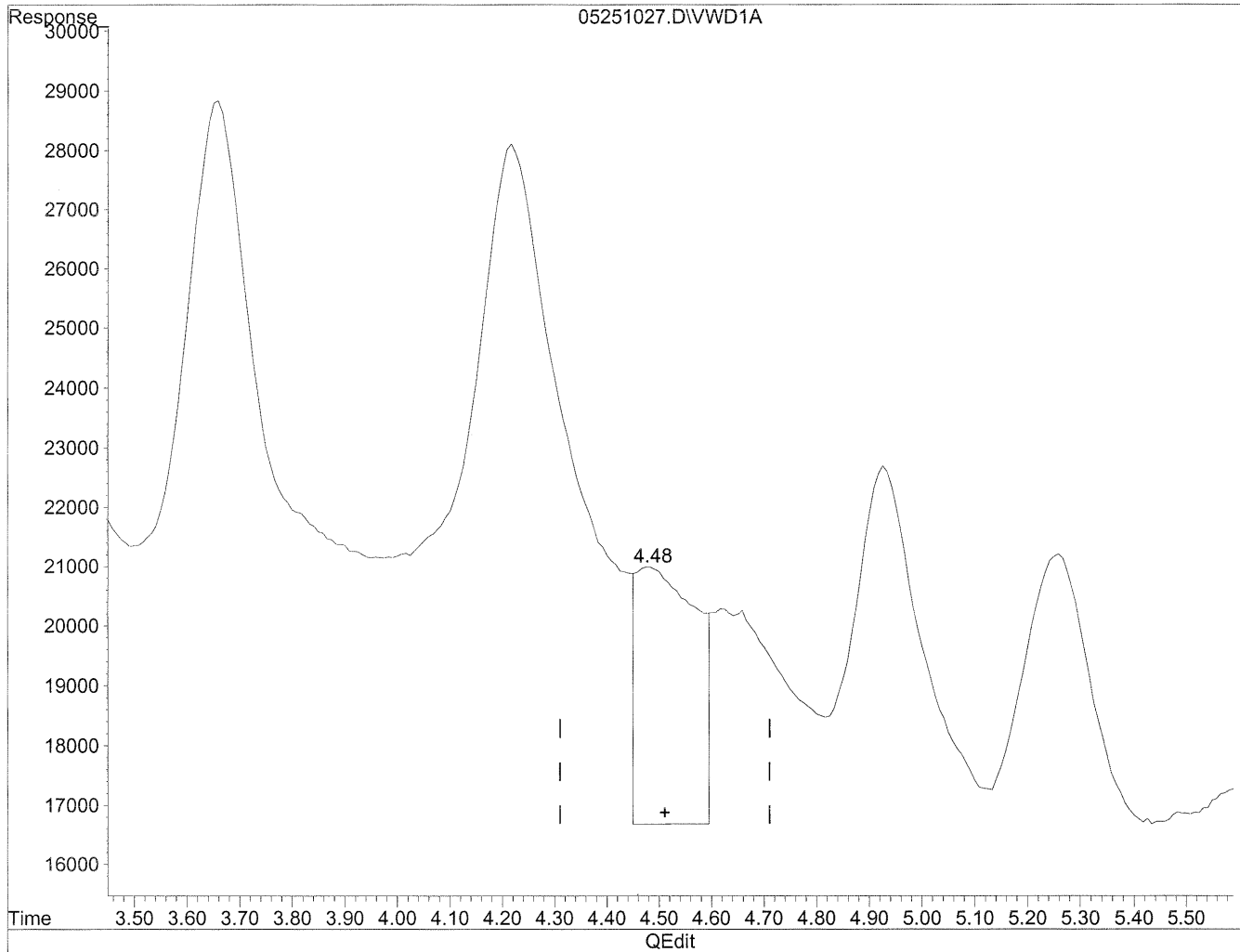
IC
6/4/10

(+) = Expected Retention Time
05251027.D TO110510.M Fri May 28 11:00:17 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251027.D Vial: 118
Acq On : 25-May-2010, 16:01 Operator: MD
Sample : P1001793-016 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



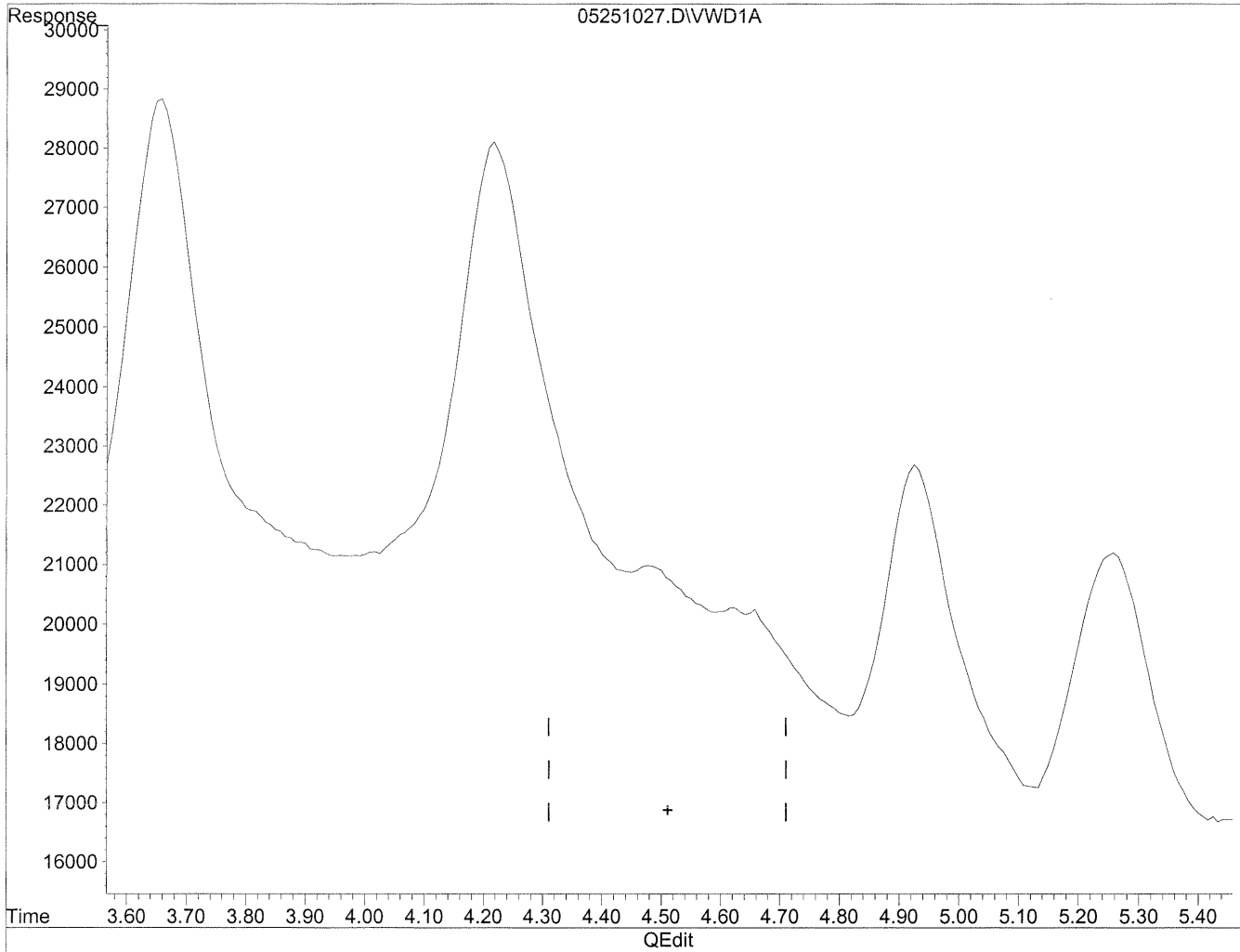
(6) Benzaldehyde
4.48min 127.881ng/ml
response 346139

(+) = Expected Retention Time
05251027.D TO110510.M Fri May 28 11:00:21 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251027.D Vial: 118
Acq On : 25-May-2010, 16:01 Operator: MD
Sample : P1001793-016 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde
0.00min 0.000ng/ml d
response 0

HE
6/4/10

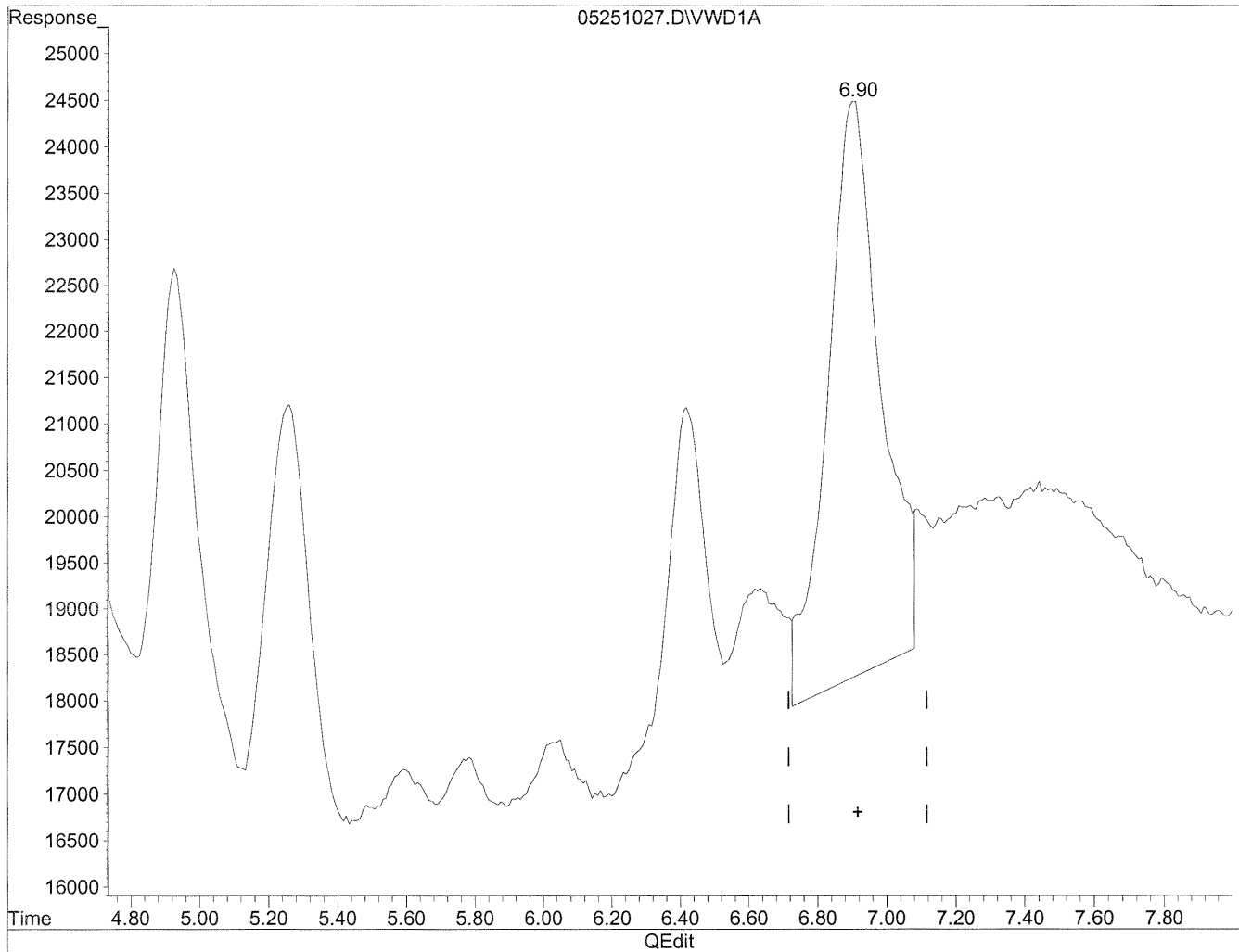
not
Real
(MD)
6/4/10

(+) = Expected Retention Time
05251027.D TO110510.M Fri May 28 11:00:23 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251027.D Vial: 118
Acq On : 25-May-2010, 16:01 Operator: MD
Sample : P1001793-016 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



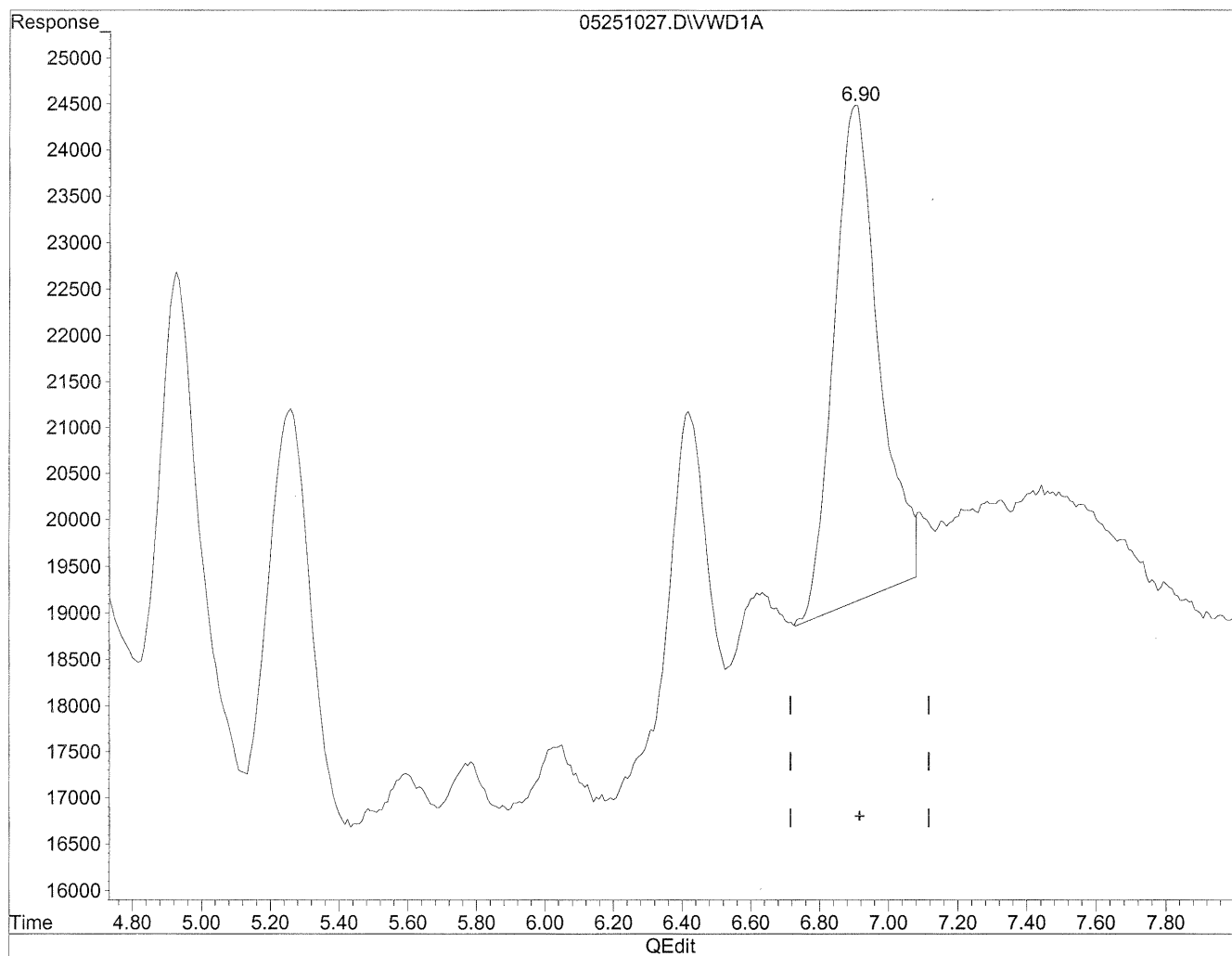
(11) Hexaldehyde
6.91min 231.799ng/ml
response 666507

(+) = Expected Retention Time
05251027.D TO110510.M Fri May 28 11:00:53 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251027.D Vial: 118
Acq On : 25-May-2010, 16:01 Operator: MD
Sample : P1001793-016 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:11 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.90min 168.013ng/ml m

response 483099

HL
6/4/10

IC
MD
6/4/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110301
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-017

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: 21450 Minutes

CAS #	Compound	Result	Result	MRL	Result	MRL	Data Qualifier
		µg/Sample	µg/m ³	µg/m ³	ppbV	ppbV	
50-00-0	Formaldehyde	51	24	0.094	19	0.077	
75-07-0	Acetaldehyde	5.6	3.1	0.11	1.7	0.062	
123-38-6	Propionaldehyde	1.3	1.5	0.24	0.64	0.10	
123-72-8	Butyraldehyde	1.9	8.2	0.85	2.8	0.29	
100-52-7	Benzaldehyde	3.7	1.9	0.10	0.43	0.023	M
590-86-3	Isovaleraldehyde	2.4	1.8	0.15	0.52	0.043	
110-62-3	Valeraldehyde	4.6	7.9	0.35	2.3	0.098	
66-25-1	n-Hexaldehyde	23	59	0.52	14	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

M = Matrix interference; results may be biased .

NA = Not applicable.

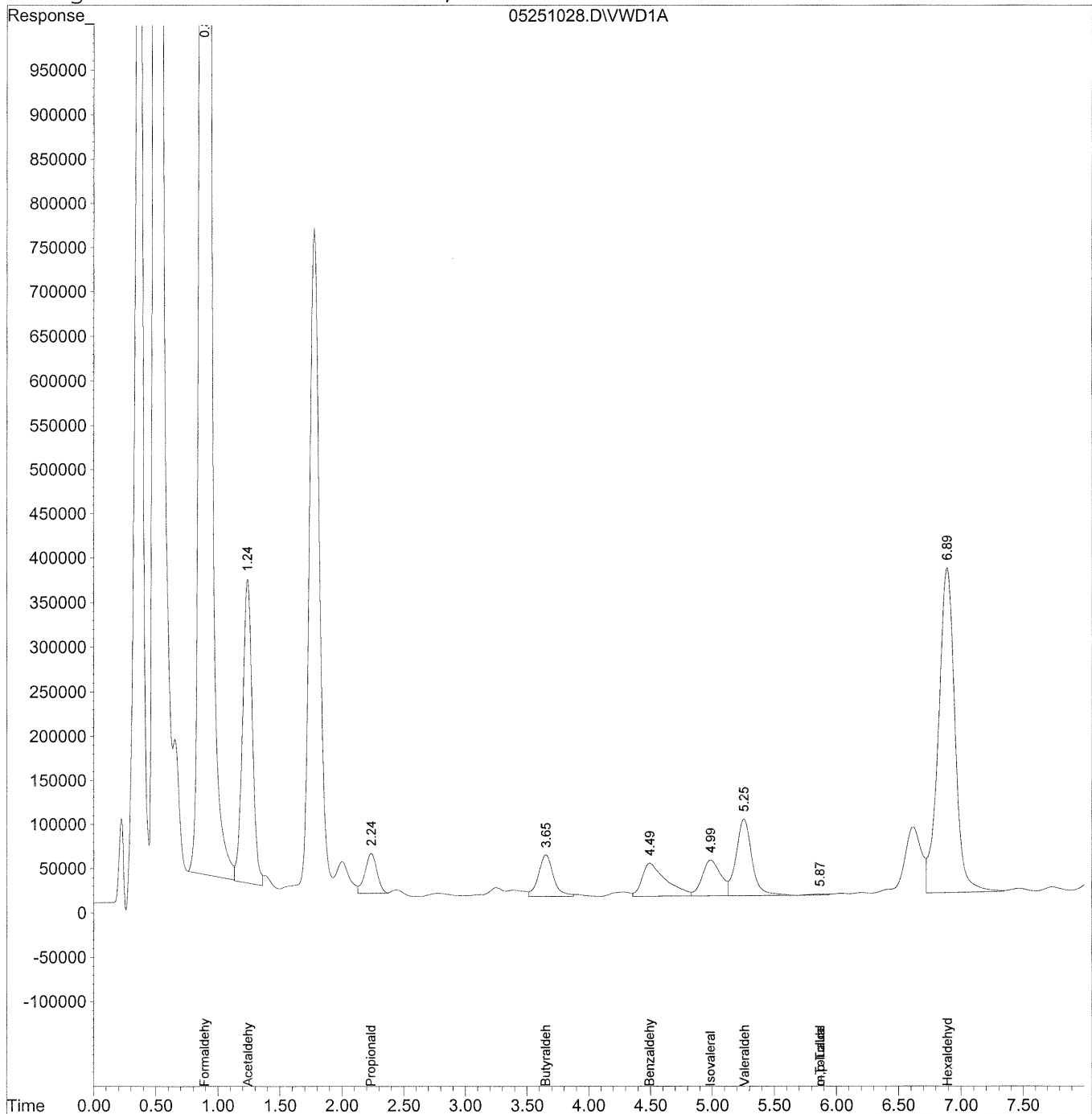
Verified By: Res Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251028.D Vial: 119
Acq On : 25-May-2010, 16:11 Operator: MD
Sample : P1001793-017 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:02 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251028.D Vial: 119
Acq On : 25-May-2010, 16:11 Operator: MD
Sample : P1001793-017 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:02 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

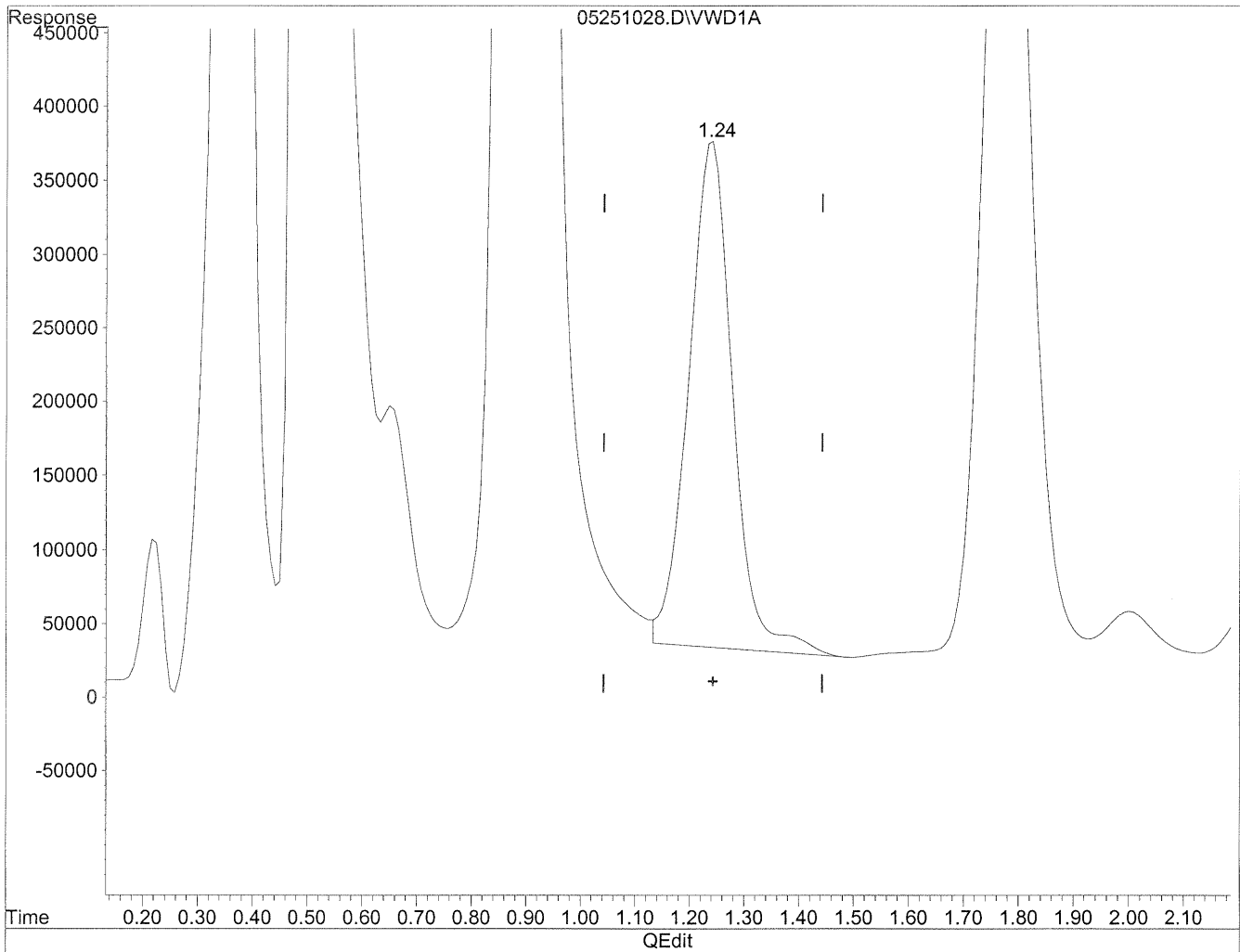
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.89	239076121	25616.558 ng/ml <i>oil</i>
2)	Acetaldehyde	1.24	18783090	2788.783 ng/mlm
3)	Propionaldehyde	2.24	3075661	632.589 ng/mlm
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.65	3889550	965.316 ng/mlm
6)	Benzaldehyde	4.50	4971959	1836.892 ng/ml <i>* mfg.</i>
7)	Isovaleraldehyde	4.99	4211153	1187.007 ng/ml
8)	Valeraldehyde	5.26	7716544	2300.277 ng/ml
9)	o-Tolualdehyde	5.87f	100143	49.197 ng/ml
10)	m,p-Tolualdehyde	5.87	100143	42.748 ng/ml
11)	Hexaldehyde	6.89	33230440	11556.914 ng/ml <i>oil</i>
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251028.D Vial: 119
Acq On : 25-May-2010, 16:11 Operator: MD
Sample : P1001793-017 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 2847.243ng/ml

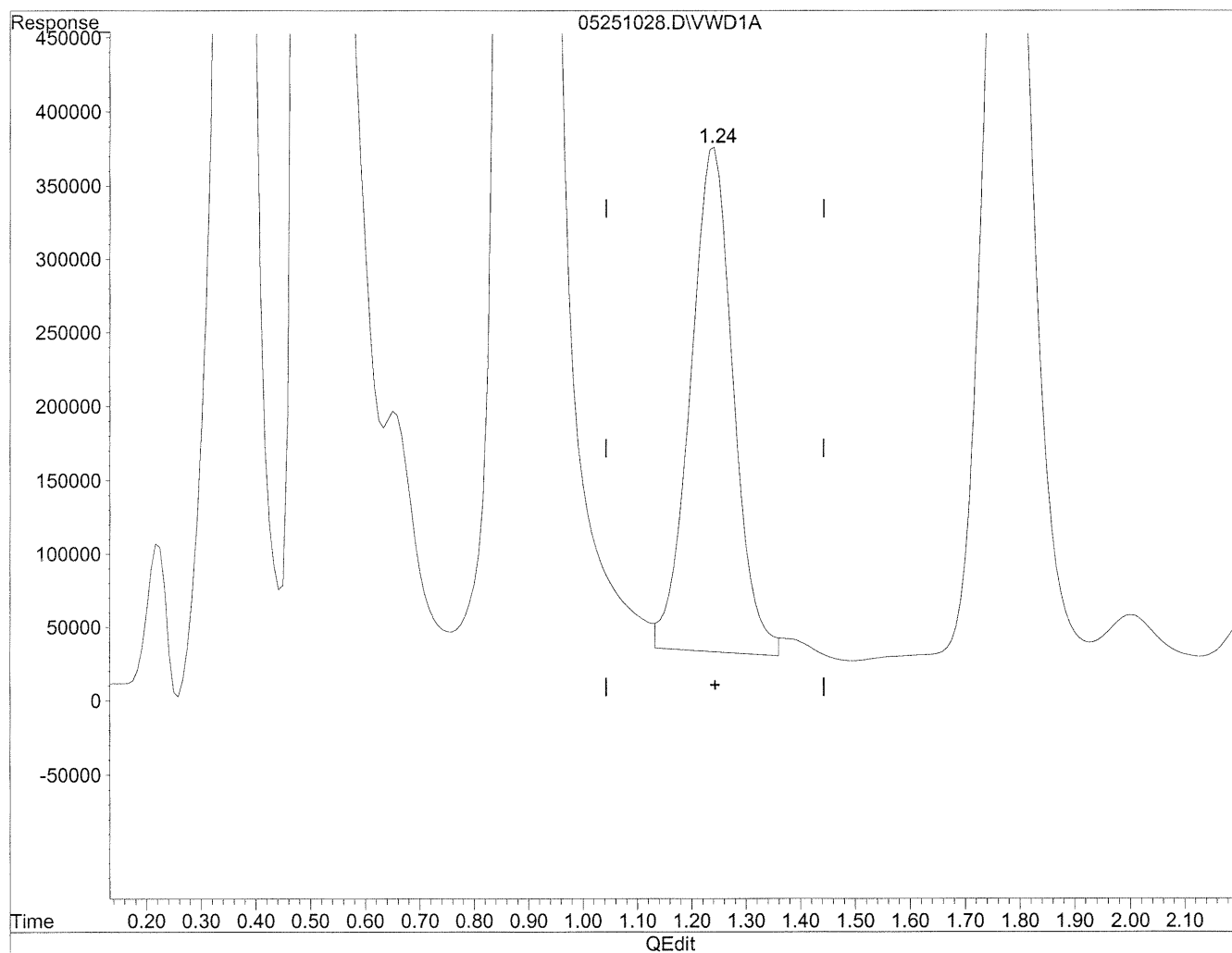
response 19176827

(+) = Expected Retention Time
05251028.D TO110510.M Fri May 28 11:02:08 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251028.D Vial: 119
Acq On : 25-May-2010, 16:11 Operator: MD
Sample : P1001793-017 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 2788.783ng/ml m

response 18783090

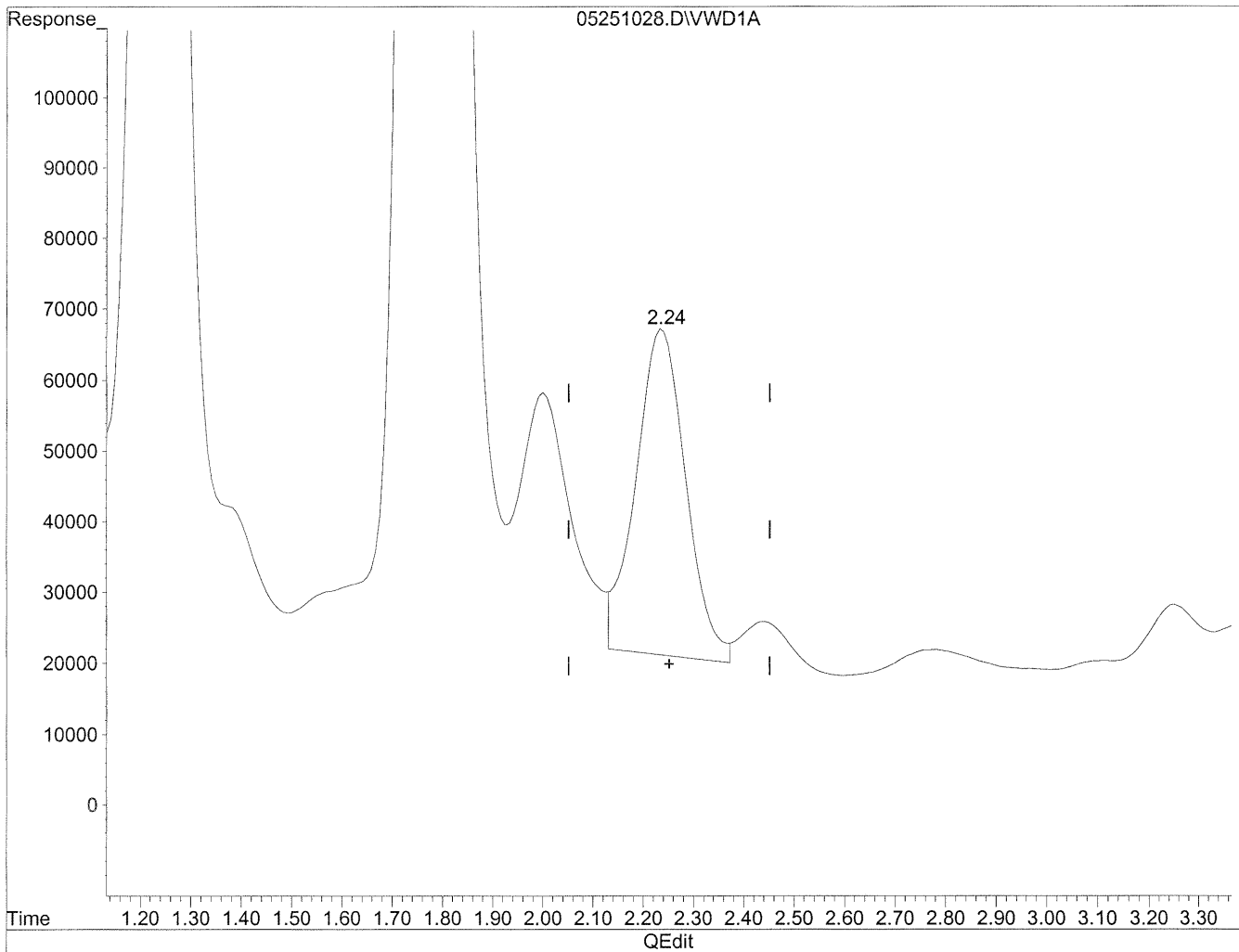
Sh
6/4/10

HL
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251028.D Vial: 119
Acq On : 25-May-2010, 16:11 Operator: MD
Sample : P1001793-017 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



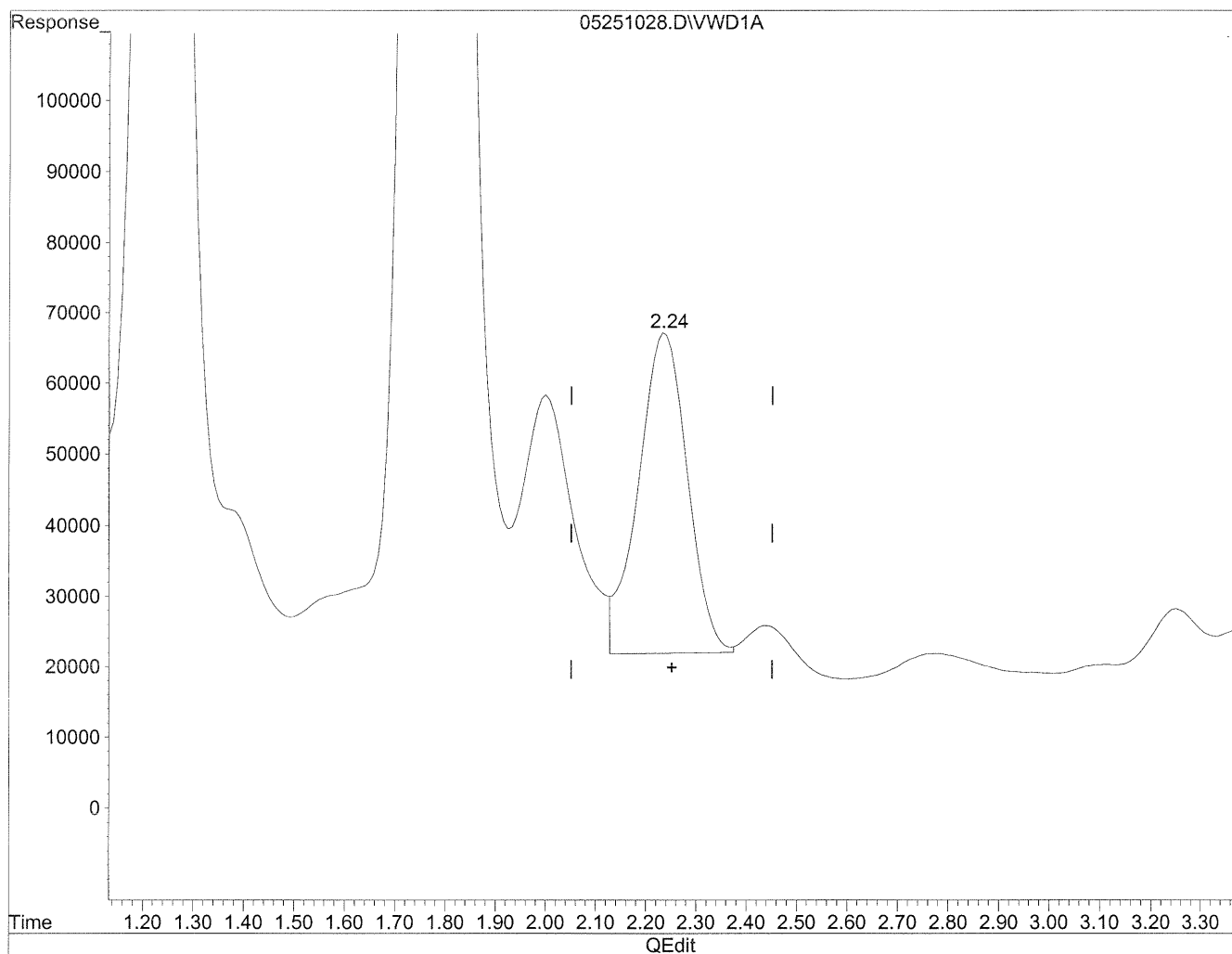
(3) Propionaldehyde
2.24min 658.916ng/ml
response 3203665

(+) = Expected Retention Time
05251028.D TO110510.M Fri May 28 11:02:19 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251028.D Vial: 119
Acq On : 25-May-2010, 16:11 Operator: MD
Sample : P1001793-017 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.24min 632.589ng/ml m

response 3075661

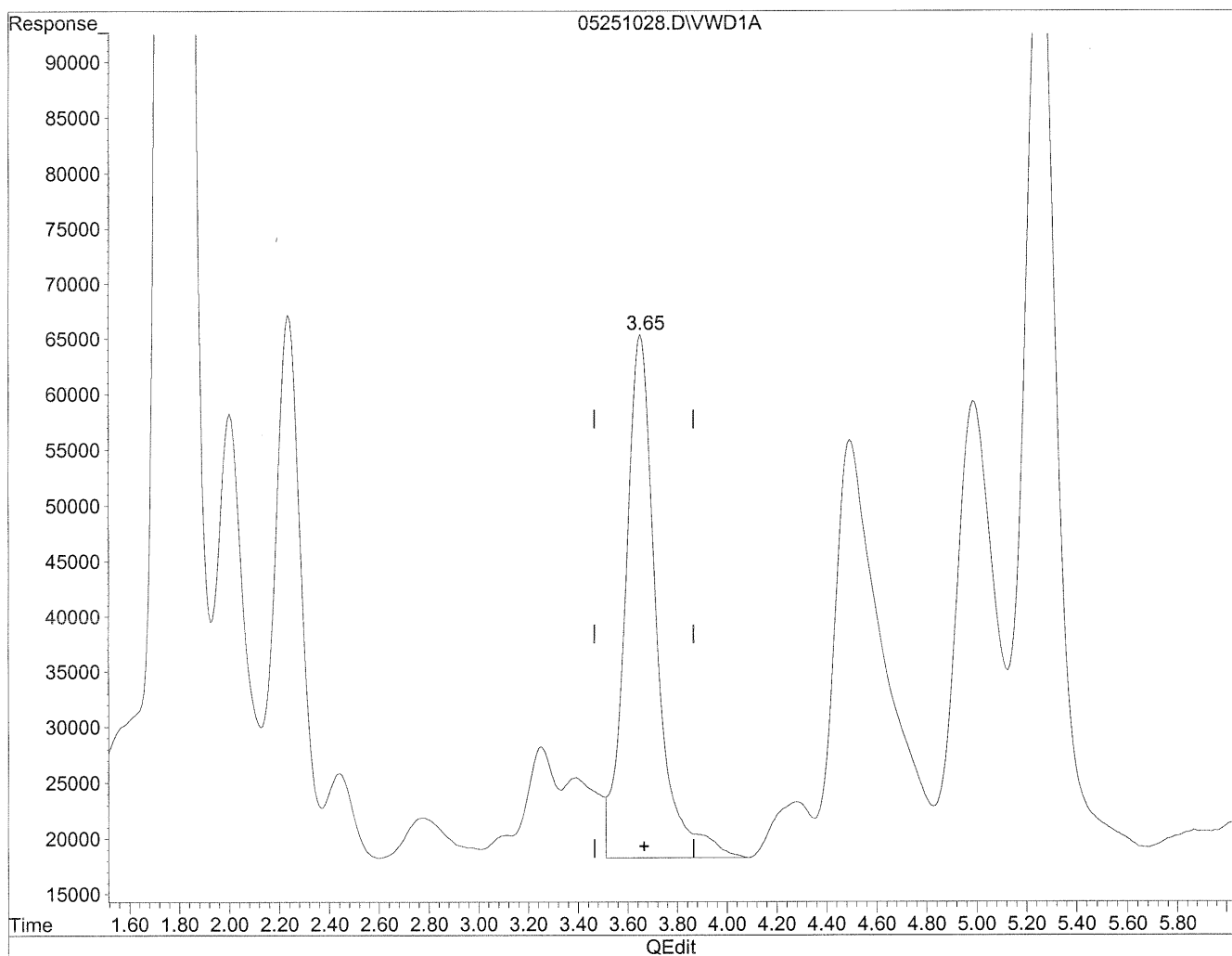
BC
6/4/10
HC
6/4/10

(+) = Expected Retention Time
05251028.D TO110510.M Fri May 28 11:02:27 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251028.D Vial: 119
Acq On : 25-May-2010, 16:11 Operator: MD
Sample : P1001793-017 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.65min 1010.123ng/ml

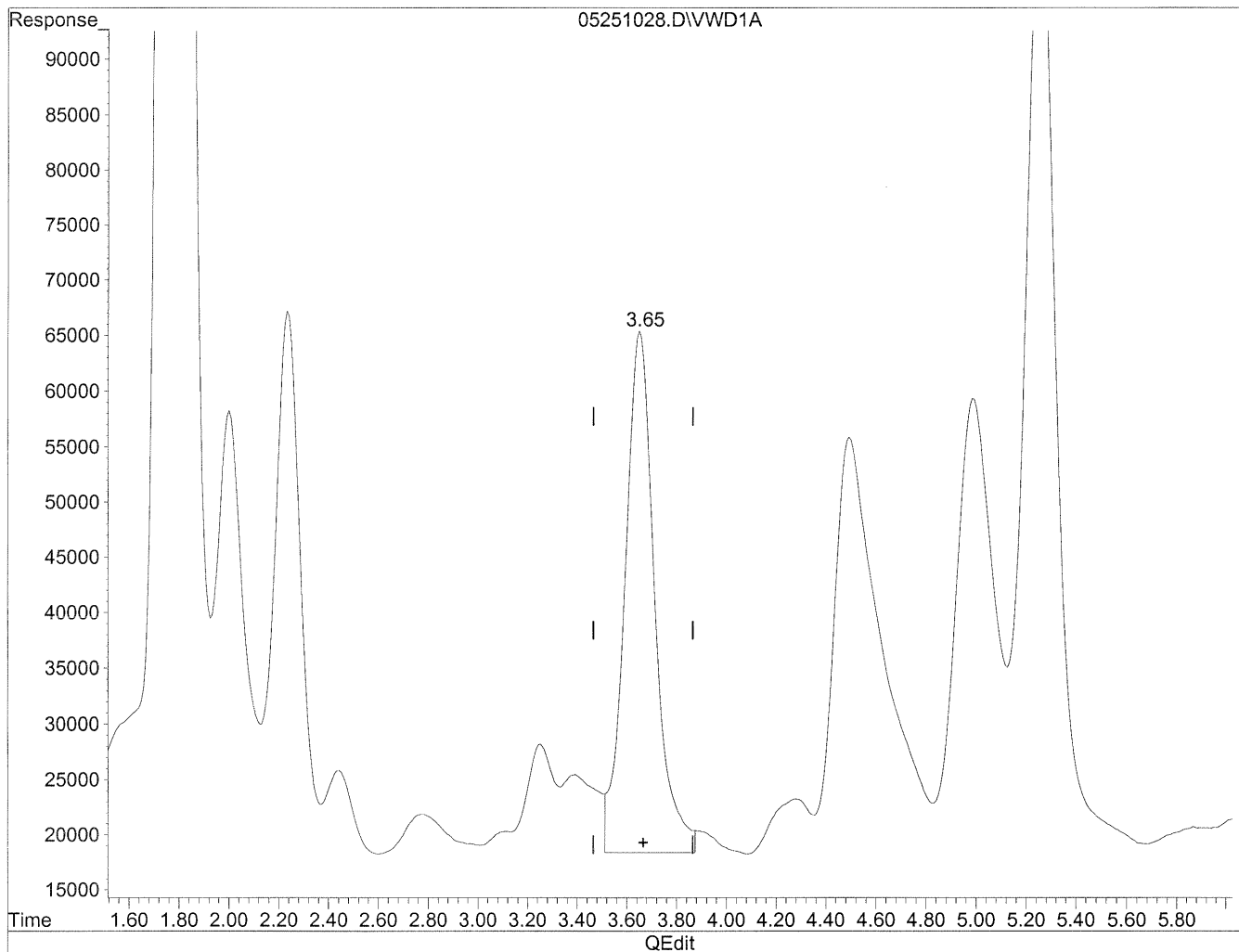
response 4070093

(+) = Expected Retention Time
05251028.D TO110510.M Fri May 28 11:02:36 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251028.D Vial: 119
Acq On : 25-May-2010, 16:11 Operator: MD
Sample : P1001793-017 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.65min 965.316ng/ml m

response 3889550

Sh
MD
6/4/10
HLC
6/4/10

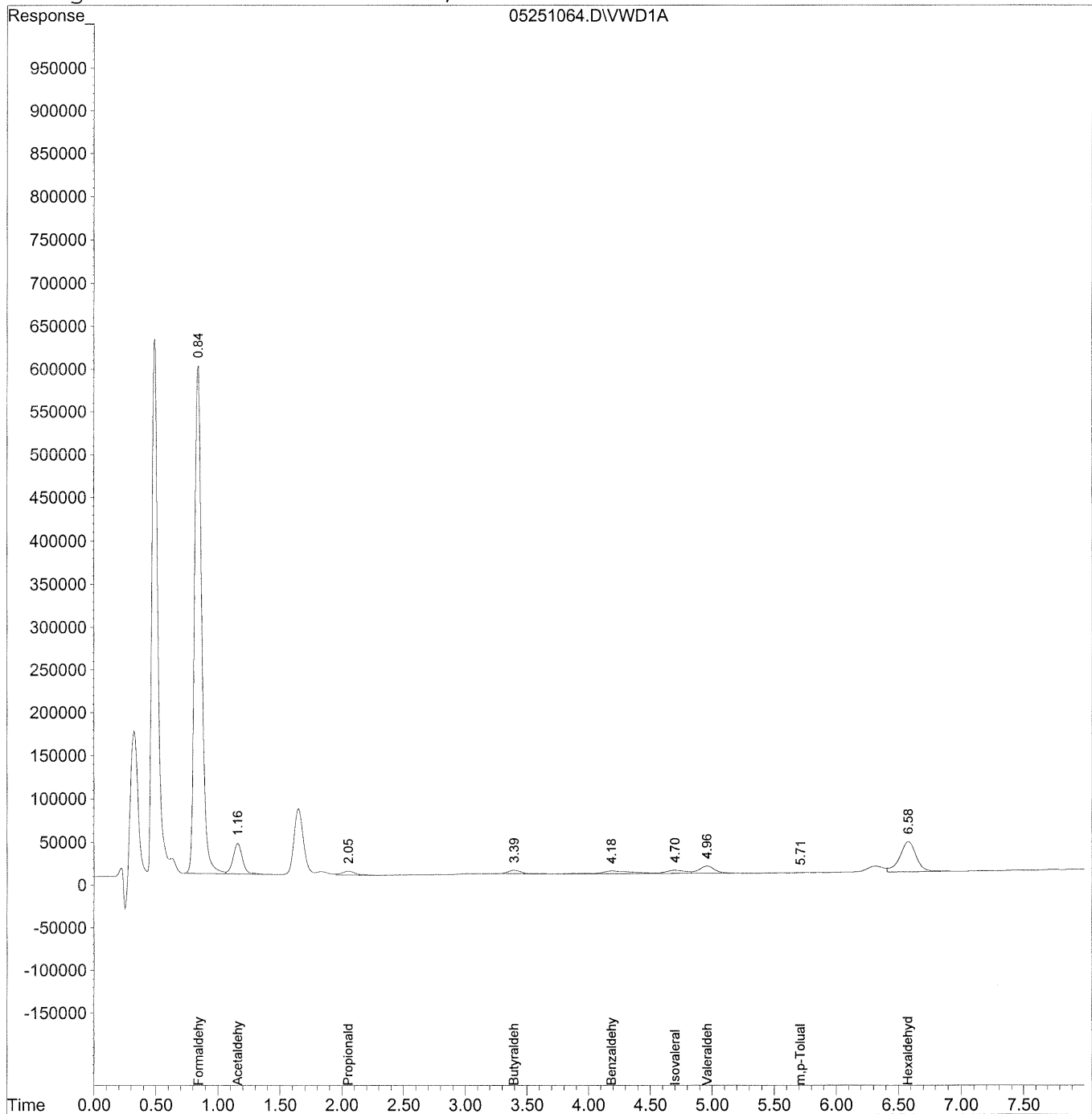
(+) = Expected Retention Time
05251028.D TO110510.M Fri May 28 11:02:41 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251064.D Vial: 145
Acq On : 25-May-2010, 22:26 Operator: MD
Sample : P1001793-017 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:59 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251064.D Vial: 145
Acq On : 25-May-2010, 22:26 Operator: MD
Sample : P1001793-017 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:59 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.84	23618602	2530.689 ng/ml
2) Acetaldehyde	1.16	1878773	278.947 ng/ml
3) Propionaldehyde	2.06	347706	71.515 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.40	303345	75.285 ng/ml
6) Benzaldehyde	4.19	559253	206.616 ng/ml
7) Isovaleraldehyde	4.70	384129	108.275 ng/ml
8) Valeraldehyde	4.96	706179	210.510 ng/ml
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	5.72	8402	3.586 ng/ml
11) Hexaldehyde	6.58	3253846	1131.626 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110302
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-018

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25 - 5/26/10
Desorption Volume: 2.0 ml
Sampling Time: 21450 Minutes

CAS #	Compound	Result	Result	MRL	Result	MRL	Data Qualifier
		µg/Sample	µg/m³	µg/m³	ppbV	ppbV	
50-00-0	Formaldehyde	52	25	0.094	20	0.077	
75-07-0	Acetaldehyde	7.0	3.9	0.11	2.2	0.062	
123-38-6	Propionaldehyde	1.6	1.9	0.24	0.80	0.10	
123-72-8	Butyraldehyde	2.2	9.4	0.85	3.2	0.29	
100-52-7	Benzaldehyde	4.0	2.0	0.10	0.47	0.023	
590-86-3	Isovaleraldehyde	2.5	1.9	0.15	0.54	0.043	
110-62-3	Valeraldehyde	4.8	8.3	0.35	2.4	0.098	
66-25-1	n-Hexaldehyde	23	59	0.52	14	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

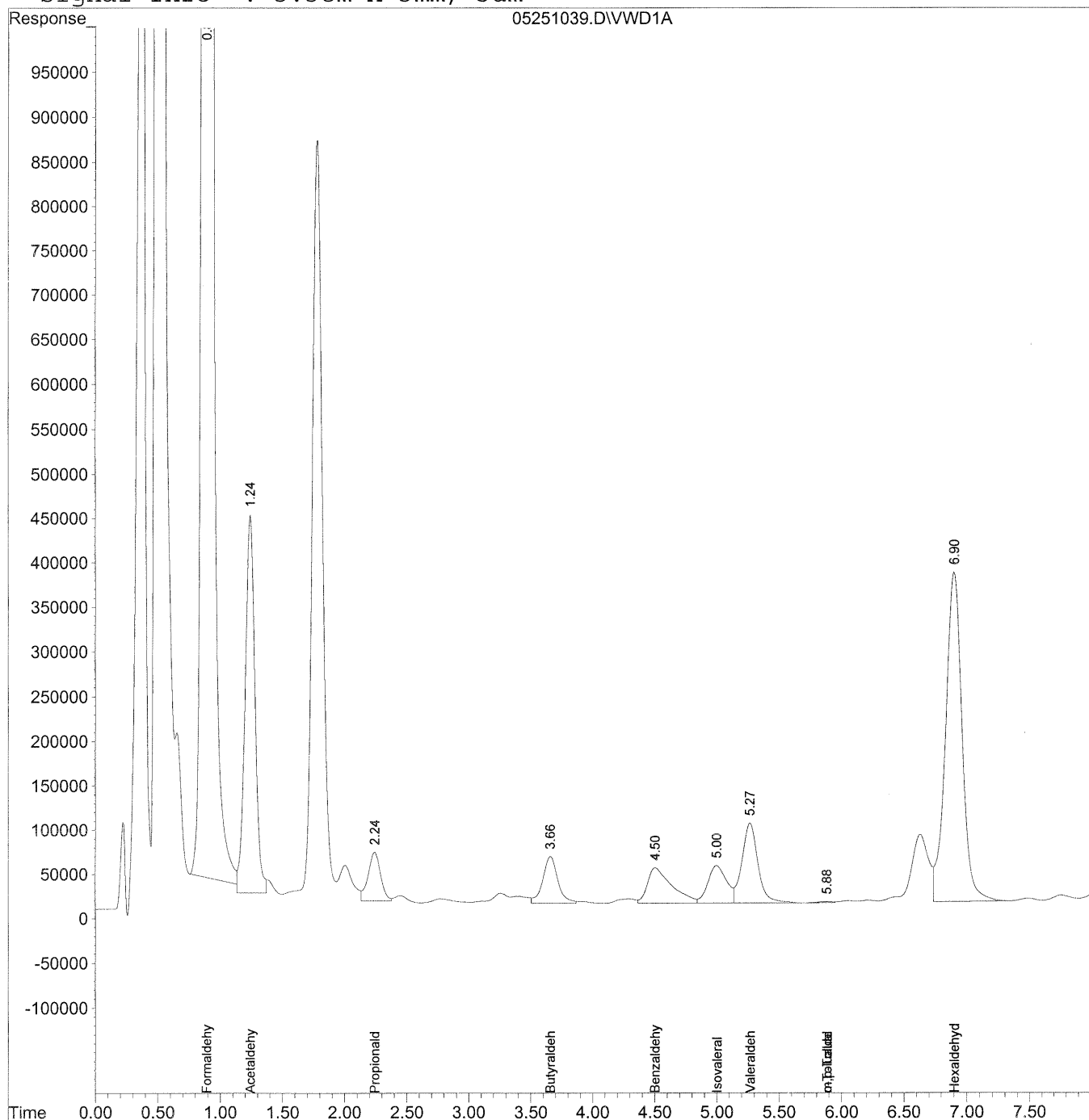
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251039.D Vial: 126
 Acq On : 25-May-2010, 18:05 Operator: MD
 Sample : P1001793-018 2ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 11:16 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 14:13:10 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251039.D Vial: 126
Acq On : 25-May-2010, 18:05 Operator: MD
Sample : P1001793-018 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:16 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

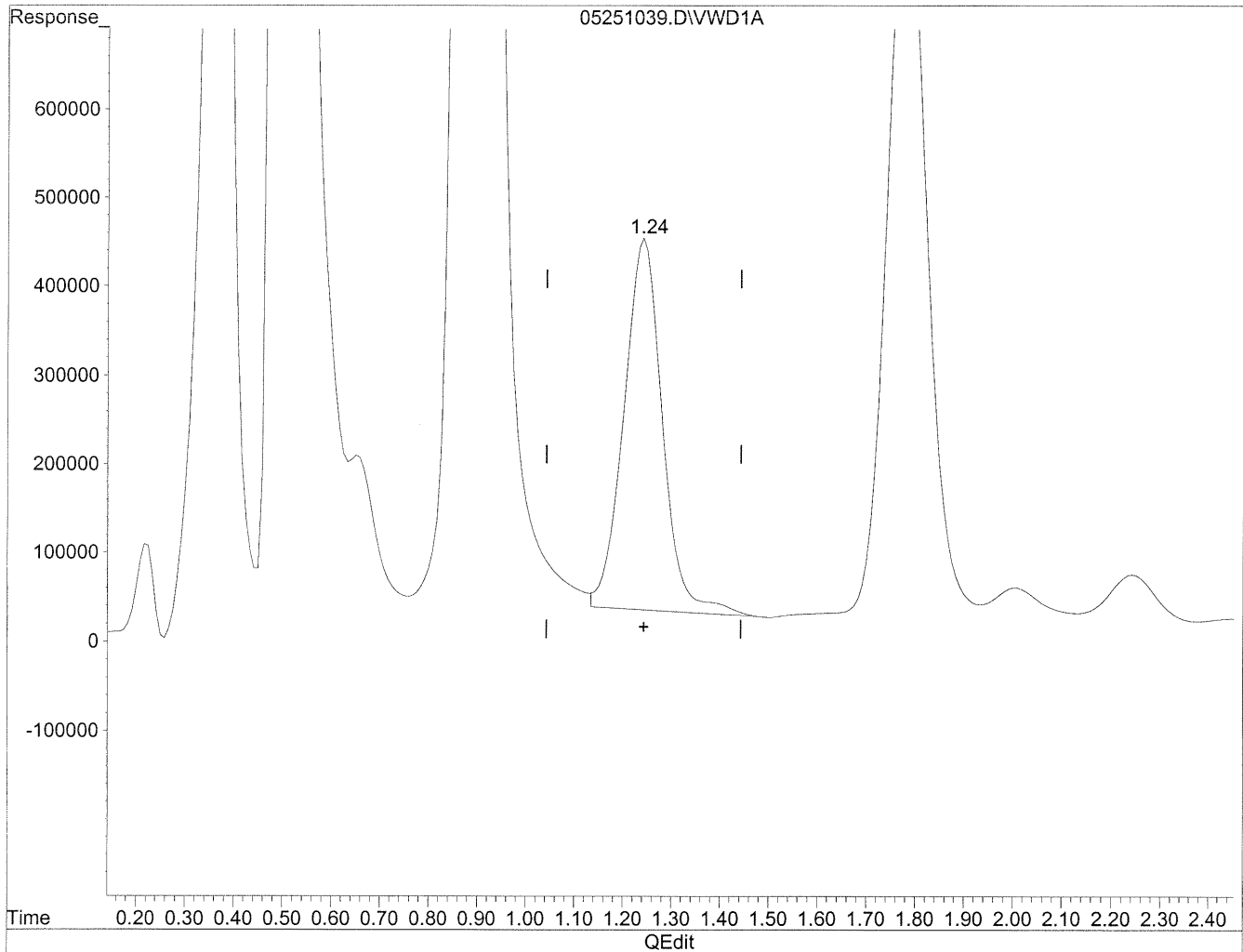
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	247138279	26480.403 ng/ml <i>act</i>
2) Acetaldehyde	1.24	23591332	3502.678 ng/mlm
3) Propionaldehyde	2.24	3881889	798.410 ng/mlm
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.66	4450466	1104.525 ng/mlm
6) Benzaldehyde	4.51	5450137	2013.555 ng/ml <i>-m flag</i>
7) Isovaleraldehyde	5.00	4437414	1250.784 ng/ml
8) Valeraldehyde	5.27	8103839	2415.729 ng/ml
9) o-Tolualdehyde	5.89 ^f	125512	61.660 ng/ml
10) m,p-Tolualdehyde	5.89	125512	53.578 ng/ml
11) Hexaldehyde	6.91	33420013	11622.844 ng/ml <i>dil</i>
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251039.D Vial: 126
Acq On : 25-May-2010, 18:05 Operator: MD
Sample : P1001793-018 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

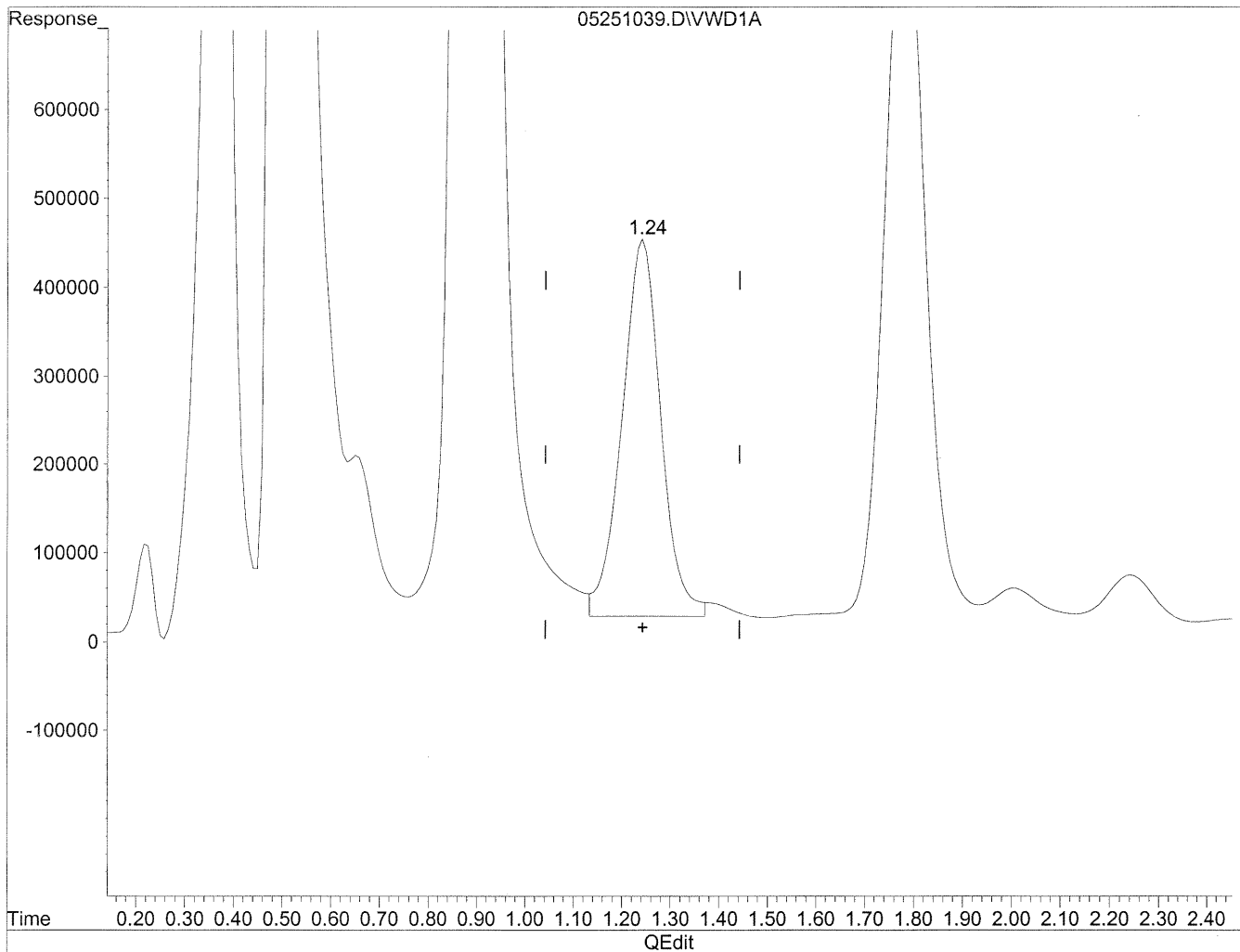
1.24min 3440.341ng/ml

response 23171480

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251039.D Vial: 126
Acq On : 25-May-2010, 18:05 Operator: MD
Sample : P1001793-018 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 3502.678ng/ml m

response 23591332

HC
6/4/10

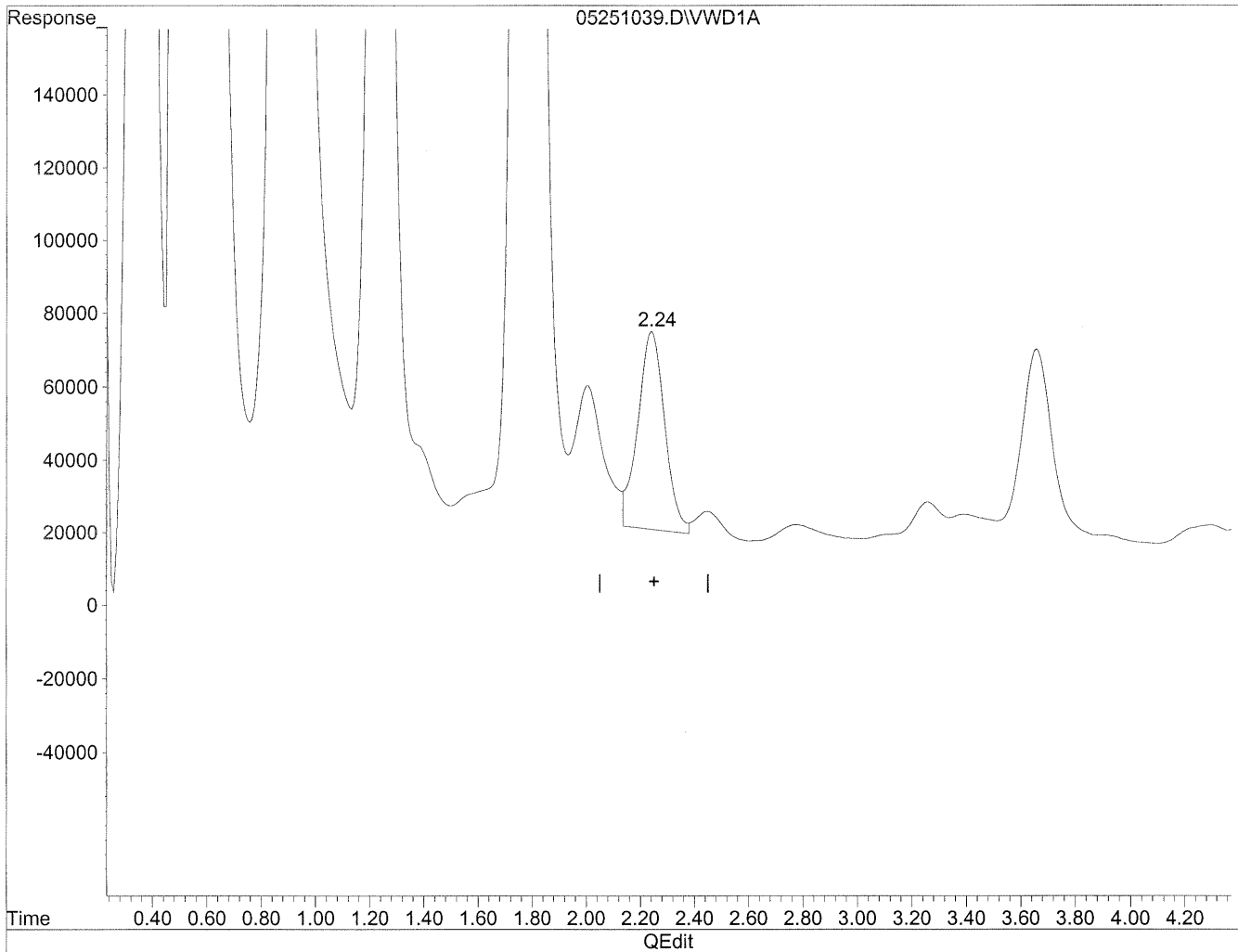
Sh
(MD)
6/4/10

(+) = Expected Retention Time
05251039.D TO110510.M Fri May 28 11:16:16 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251039.D Vial: 126
Acq On : 25-May-2010, 18:05 Operator: MD
Sample : P1001793-018 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



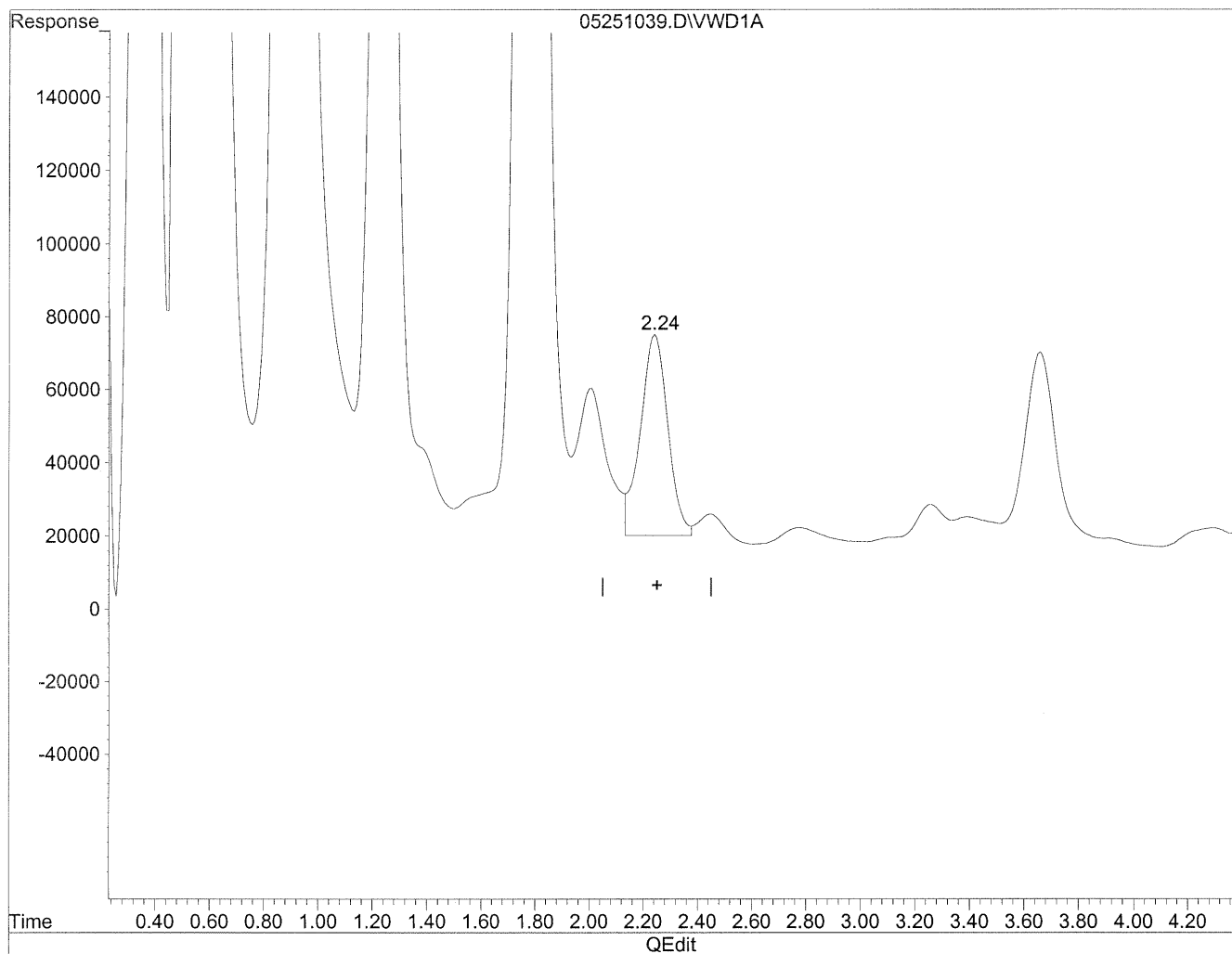
(3) Propionaldehyde
2.24min 776.469ng/ml
response 3775210

(+) = Expected Retention Time
05251039.D TO110510.M Fri May 28 11:16:27 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251039.D Vial: 126
Acq On : 25-May-2010, 18:05 Operator: MD
Sample : P1001793-018 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.24min 798.410ng/ml m

response 3881889

HL
6/4/10

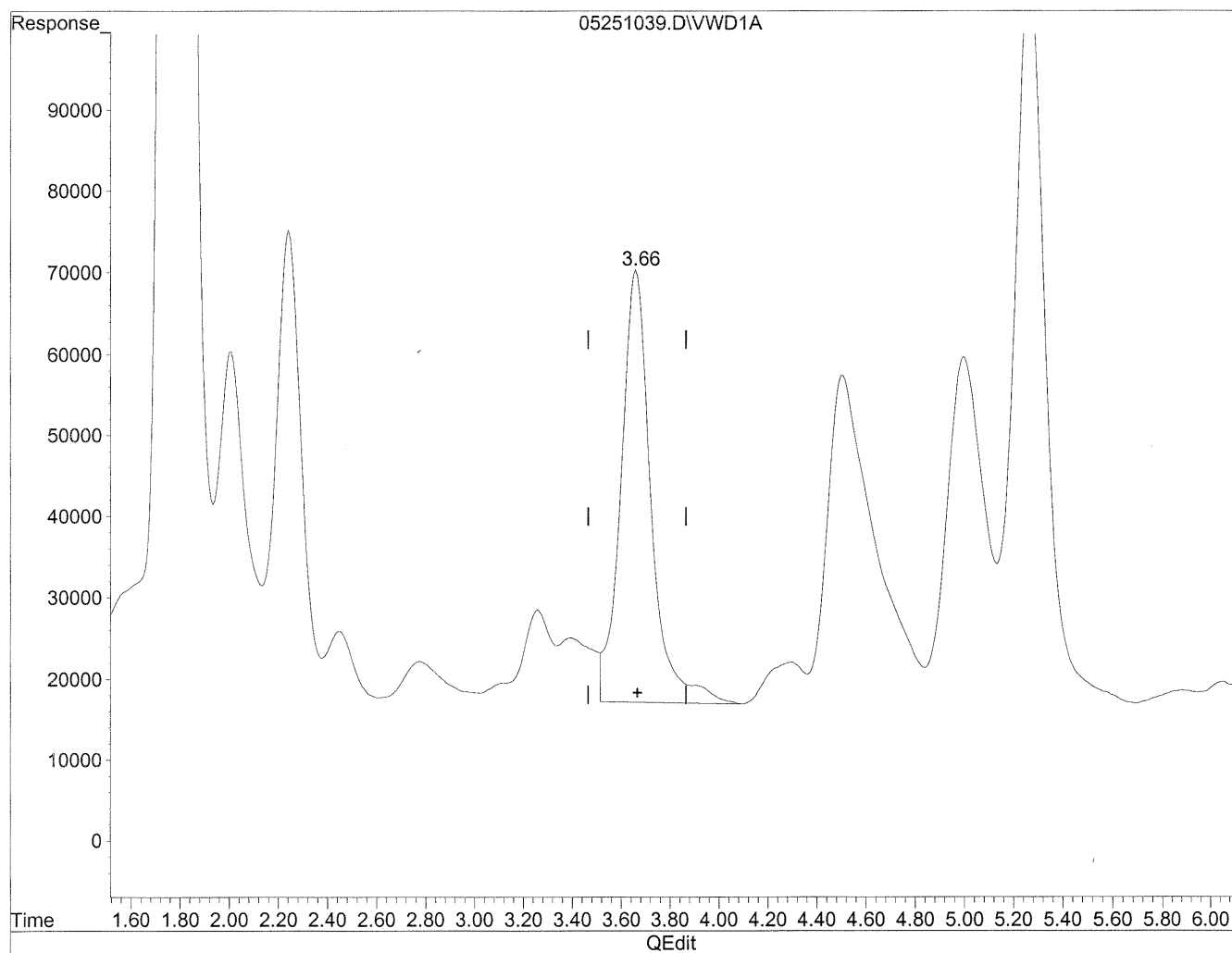
BK
NO
6/4/10

(+) = Expected Retention Time
05251039.D TO110510.M Fri May 28 11:16:32 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251039.D Vial: 126
Acq On : 25-May-2010, 18:05 Operator: MD
Sample : P1001793-018 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.66min 1137.347ng/ml

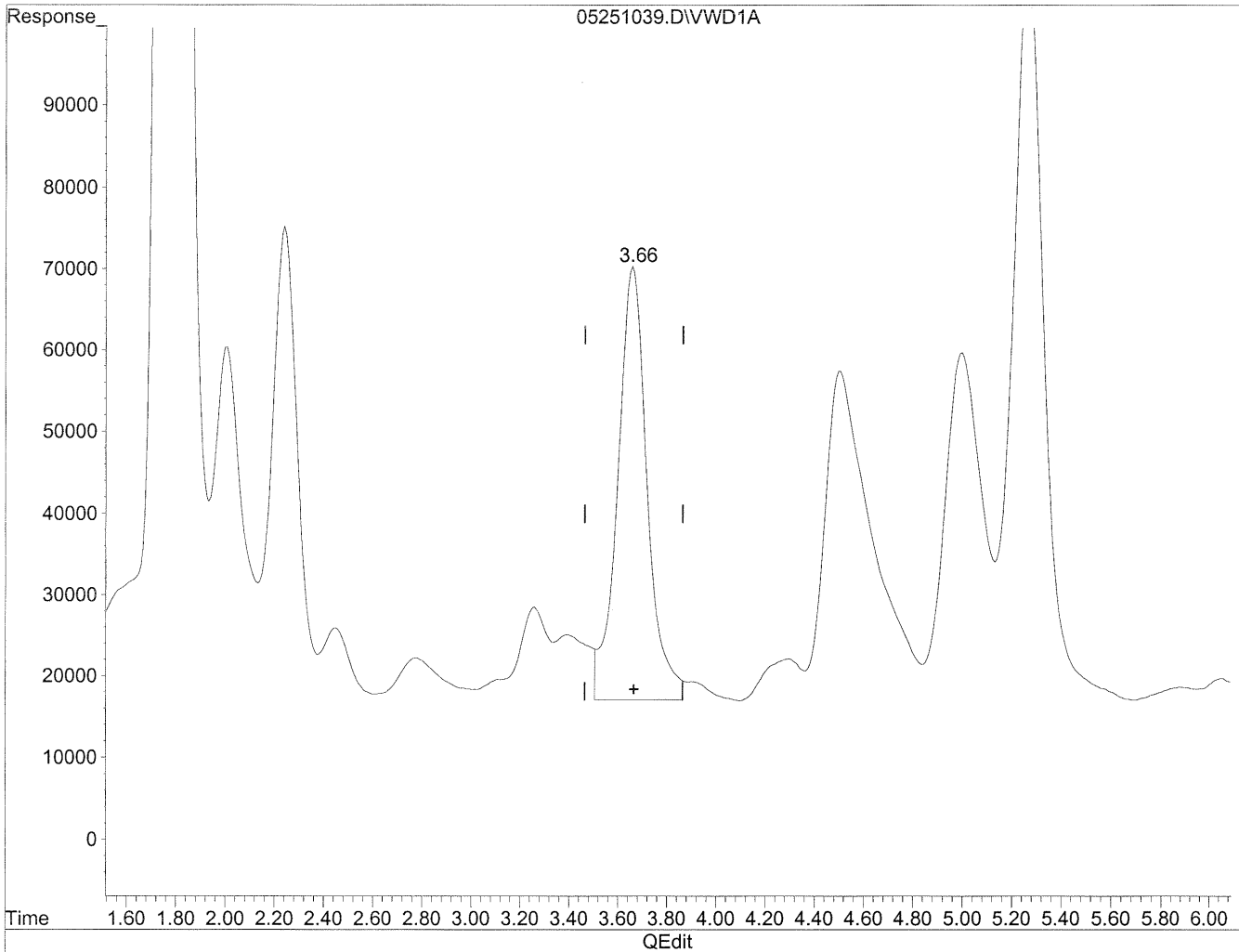
response 4582715

(+) = Expected Retention Time
05251039.D TO110510.M Fri May 28 11:16:42 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251039.D Vial: 126
Acq On : 25-May-2010, 18:05 Operator: MD
Sample : P1001793-018 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 7:59 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.66min 1104.525ng/ml m

response 4450466

He
6/4/10
Sh
(m)
6/4/10

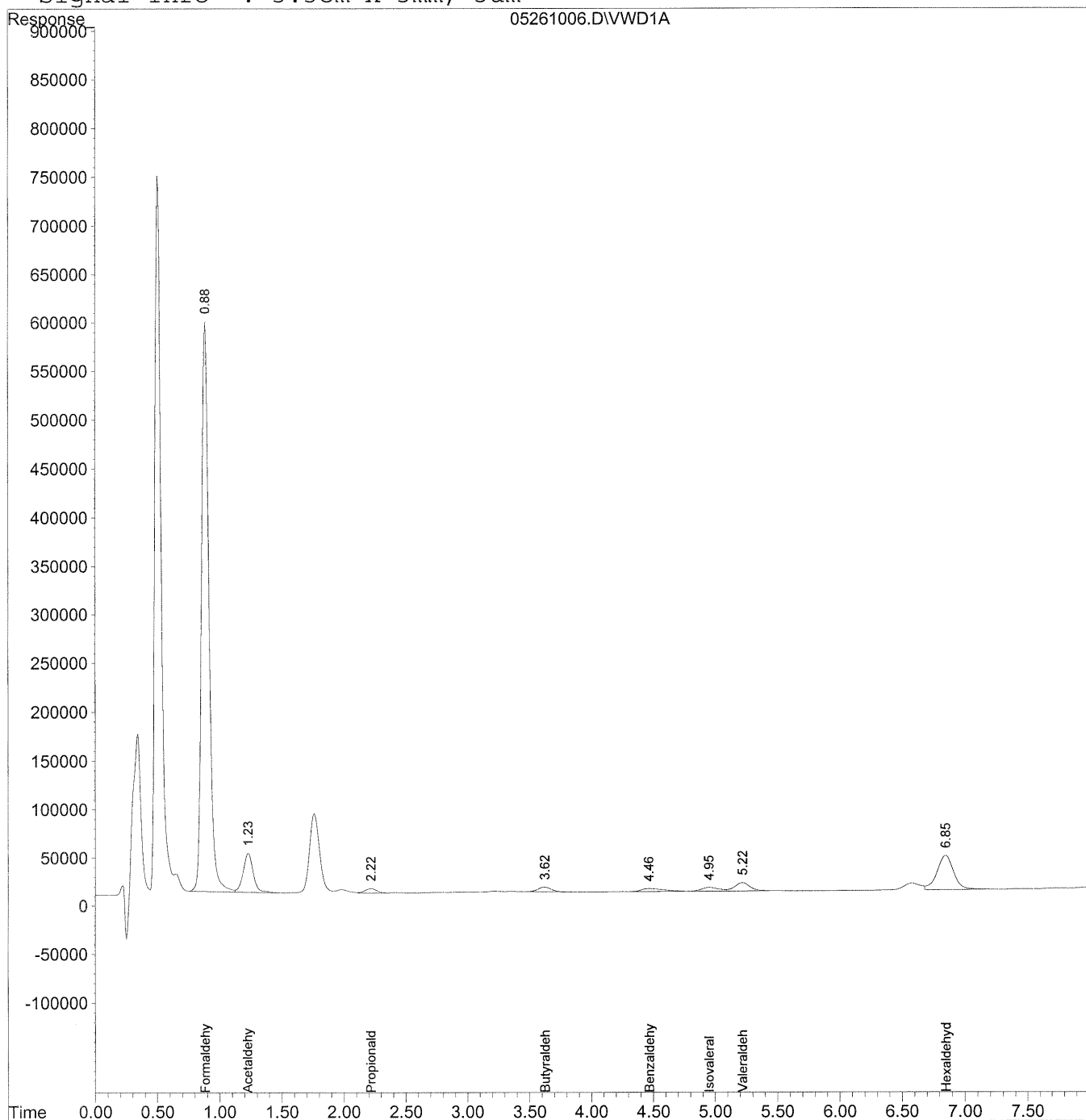
(+) = Expected Retention Time
05251039.D TO110510.M Fri May 28 11:16:48 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261006.D Vial: 103
Acq On : 26-May-2010, 12:16 Operator: MD
Sample : P1001793-018 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:54 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261006.D Vial: 103
Acq On : 26-May-2010, 12:16 Operator: MD
Sample : P1001793-018 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:54 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	24478527	2622.828 ng/ml
2) Acetaldehyde	1.23	2297390	341.101 ng/ml
3) Propionaldehyde	2.22	296272	60.936 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.63	349577	86.759 ng/ml
6) Benzaldehyde	4.47	406340	150.122 ng/ml
7) Isovaleraldehyde	4.95	389082	109.671 ng/ml
8) Valeraldehyde	5.22	764576	227.918 ng/ml
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11) Hexaldehyde	6.85	3262578	1134.662 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110303
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-019

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25 - 5/26/10
Desorption Volume: 2.0 ml
Sampling Time: 21450 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	49	23	0.094	19	0.077	
75-07-0	Acetaldehyde	5.4	3.0	0.11	1.7	0.062	
123-38-6	Propionaldehyde	1.3	1.5	0.24	0.63	0.10	
123-72-8	Butyraldehyde	2.0	8.5	0.85	2.9	0.29	
100-52-7	Benzaldehyde	4.2	2.1	0.10	0.49	0.023	
590-86-3	Isovaleraldehyde	2.6	2.0	0.15	0.56	0.043	
110-62-3	Valeraldehyde	5.6	9.6	0.35	2.7	0.098	
66-25-1	n-Hexaldehyde	25	66	0.52	16	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

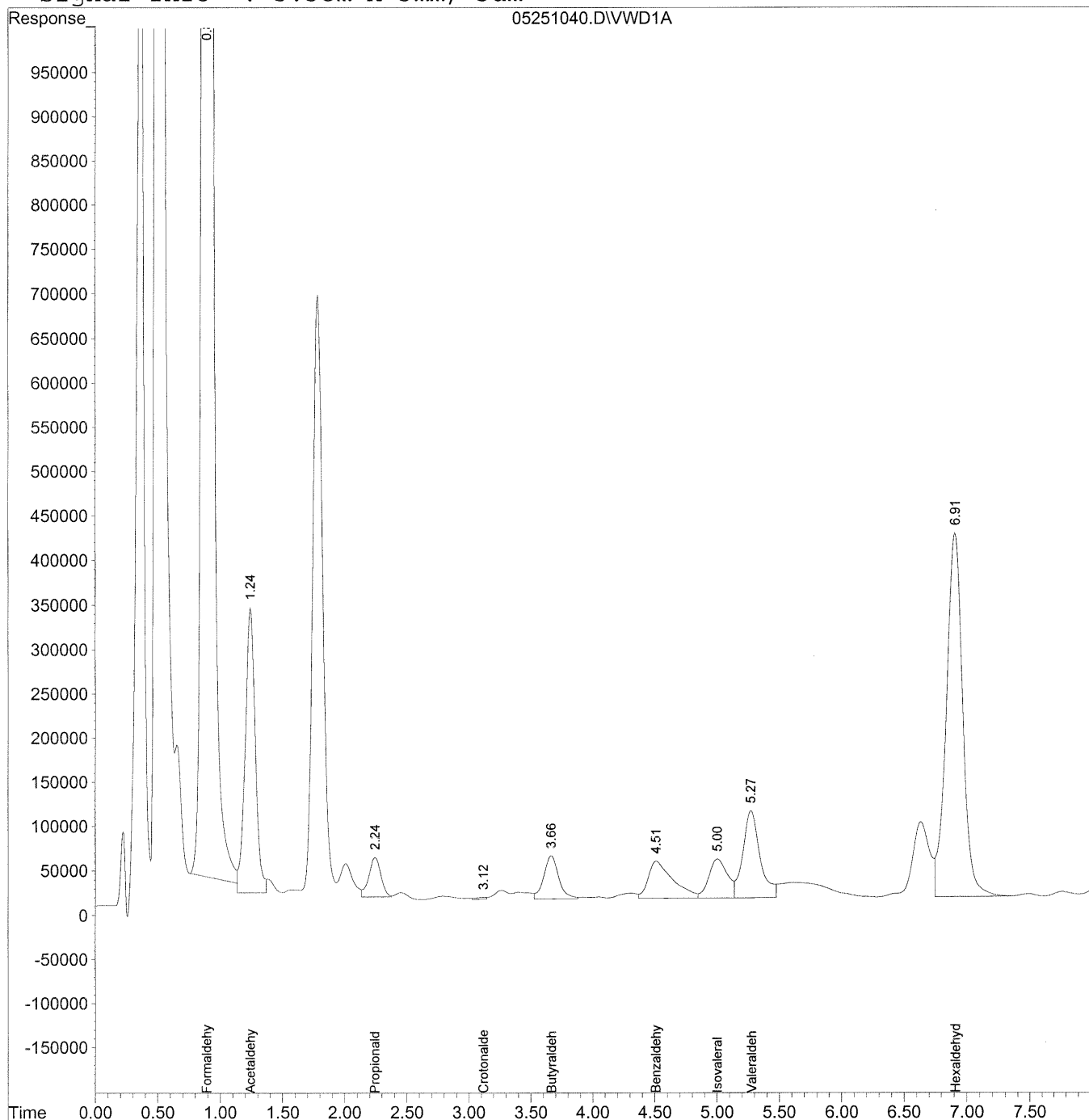
Verified By: Re Date: 6/1/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251040.D Vial: 127
Acq On : 25-May-2010, 18:15 Operator: MD
Sample : P1001793-019 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:18 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251040.D Vial: 127
Acq On : 25-May-2010, 18:15 Operator: MD
Sample : P1001793-019 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:18 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

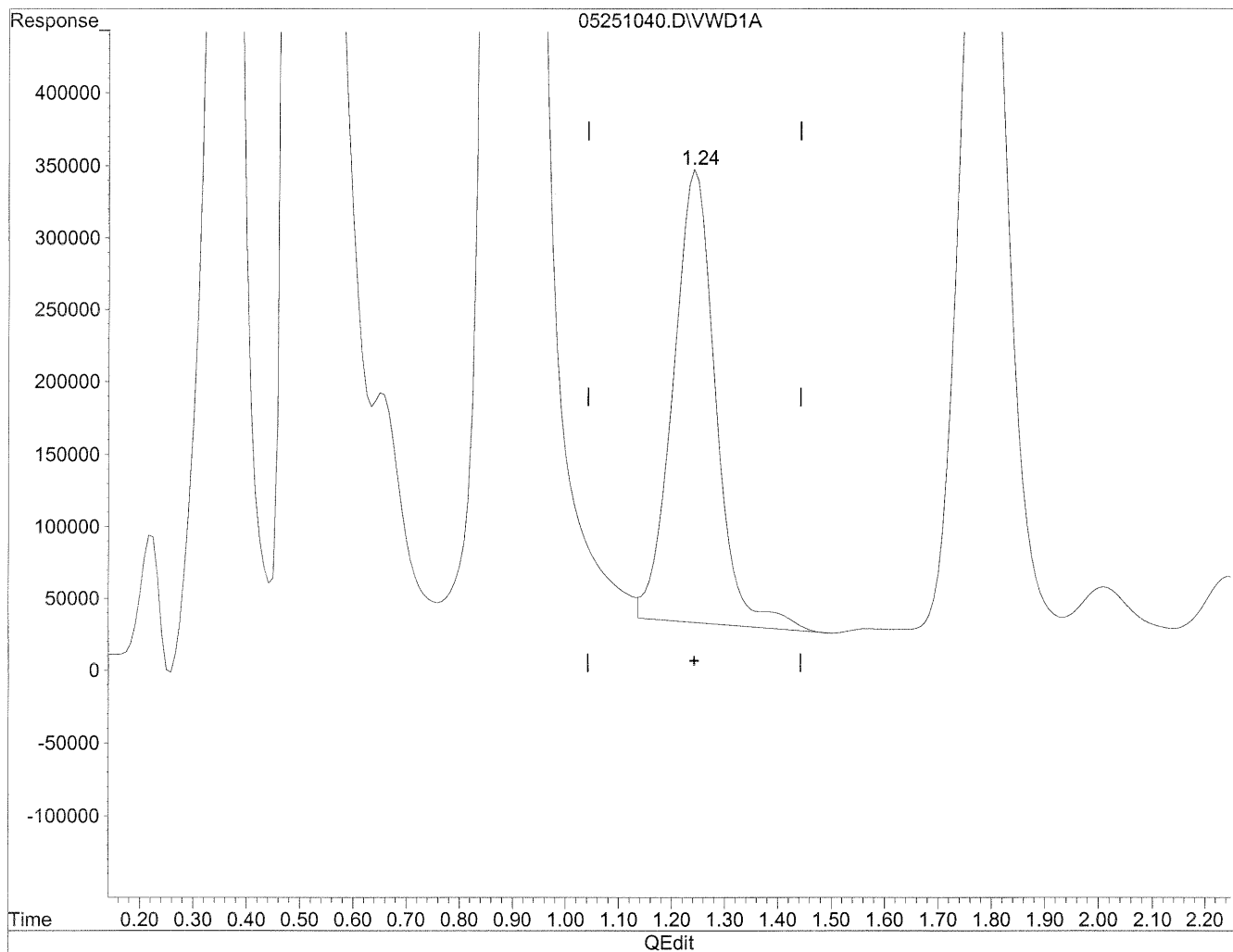
	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.89	230926959	24743.391 ng/ml <i>del</i>
2)	Acetaldehyde	1.24	18175997	2698.646 ng/mlm
3)	Propionaldehyde	2.24	3059189	629.201 ng/mlm
4)	Crotonaldehyde	3.12	120298	29.514 ng/ml
5)	Butyraldehyde	3.67	4032675	1000.837 ng/ml
6)	Benzaldehyde	4.51	5688556	2101.639 ng/ml <i>* mfg</i>
7)	Isovaleraldehyde	5.01	4561052	1285.634 ng/ml
8)	Valeraldehyde	5.28	9353107	2788.132 ng/ml
9)	o-Tolualdehyde	0.00	0	N.D. ng/mld
10)	m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11)	Hexaldehyde	6.91	36794991	12796.597 ng/ml <i>del</i>
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251040.D Vial: 127
Acq On : 25-May-2010, 18:15 Operator: MD
Sample : P1001793-019 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.25min 2610.333ng/ml

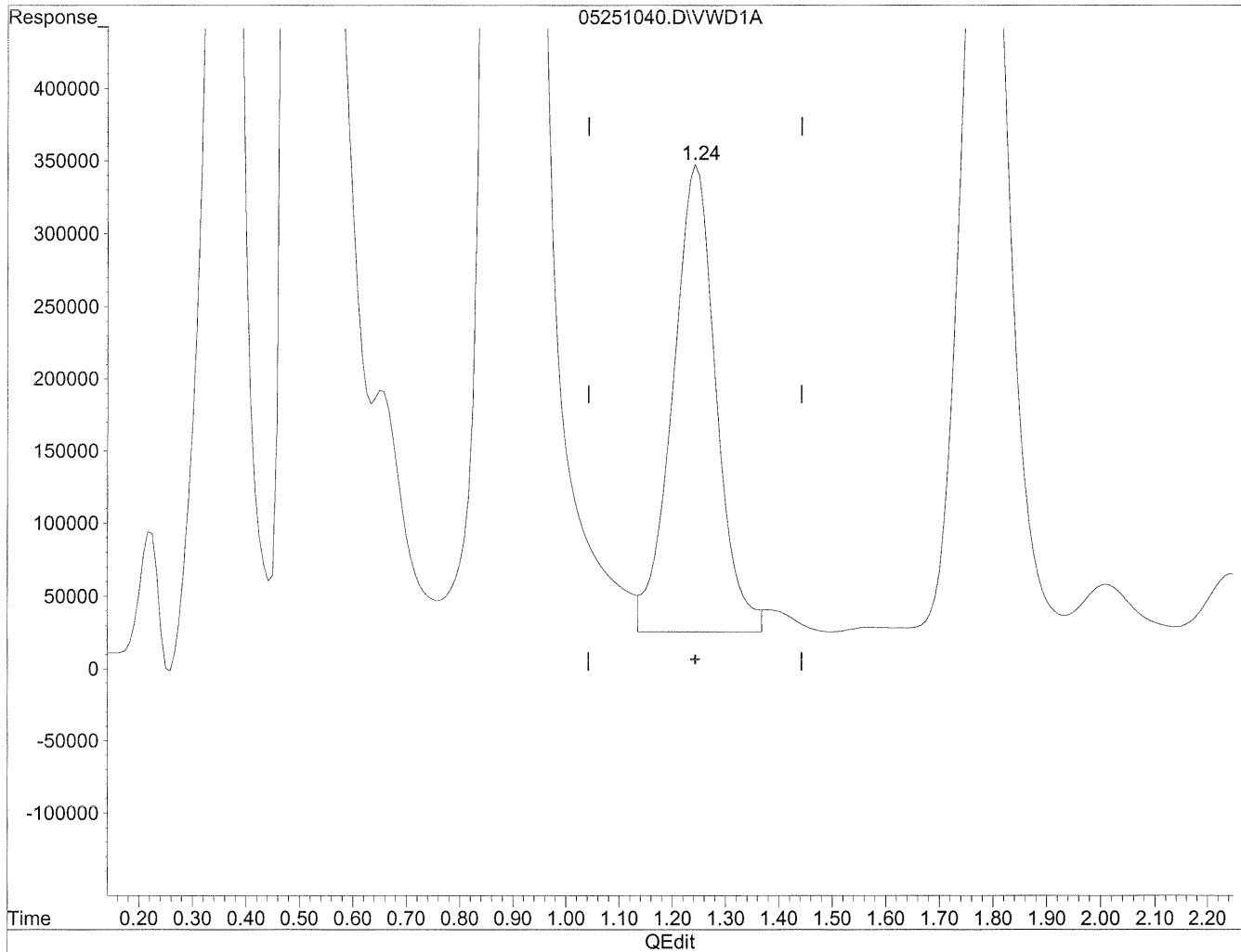
response 17581185

(+) = Expected Retention Time
05251040.D TO110510.M Fri May 28 11:17:23 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251040.D Vial: 127
Acq On : 25-May-2010, 18:15 Operator: MD
Sample : P1001793-019 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.24min 2698.646ng/ml m

response 18175997

SLC
6/4/10

Sh
MD
6/4/10

(+) = Expected Retention Time

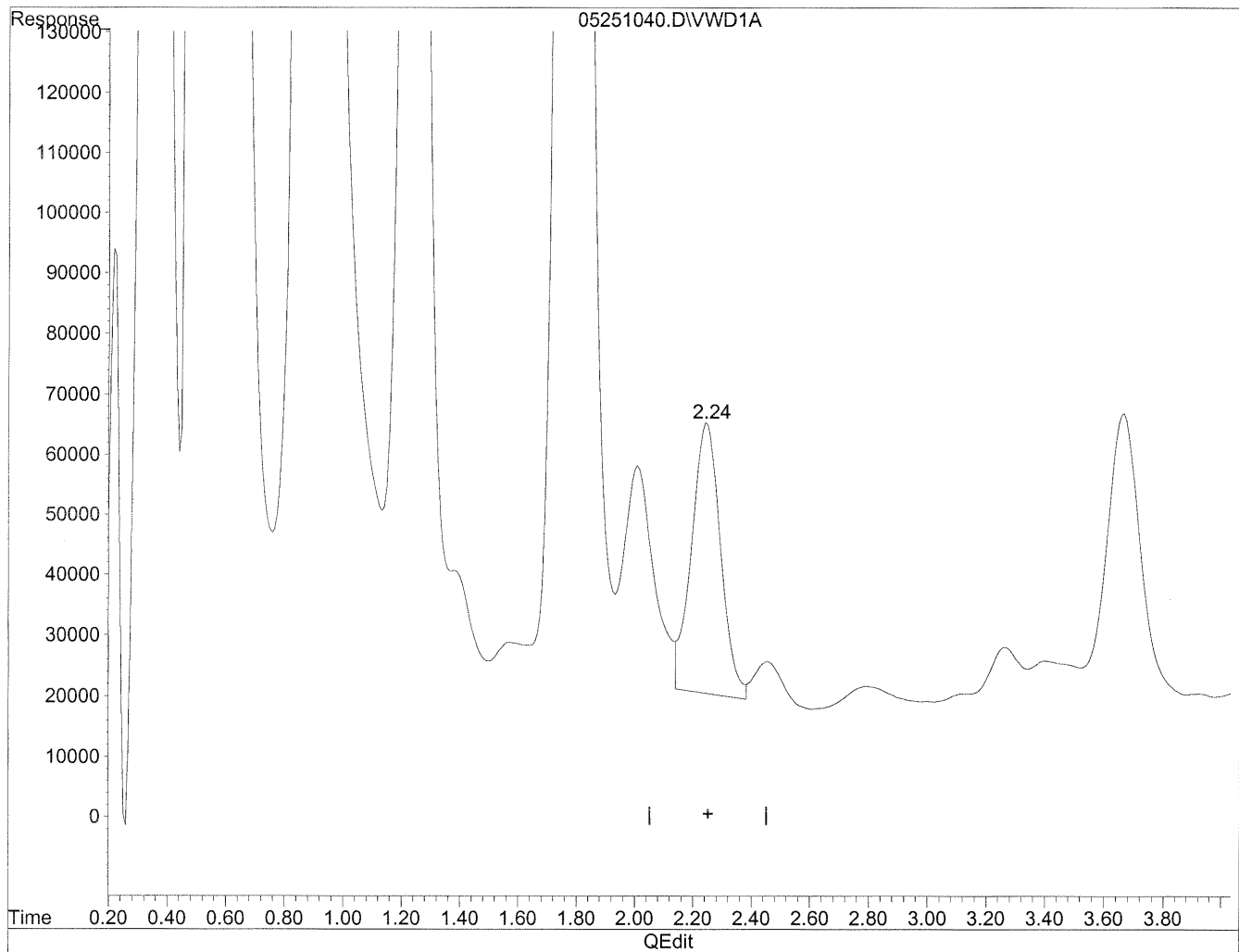
05251040.D TO110510.M

Fri May 28 11:17:34 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251040.D Vial: 127
Acq On : 25-May-2010, 18:15 Operator: MD
Sample : P1001793-019 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



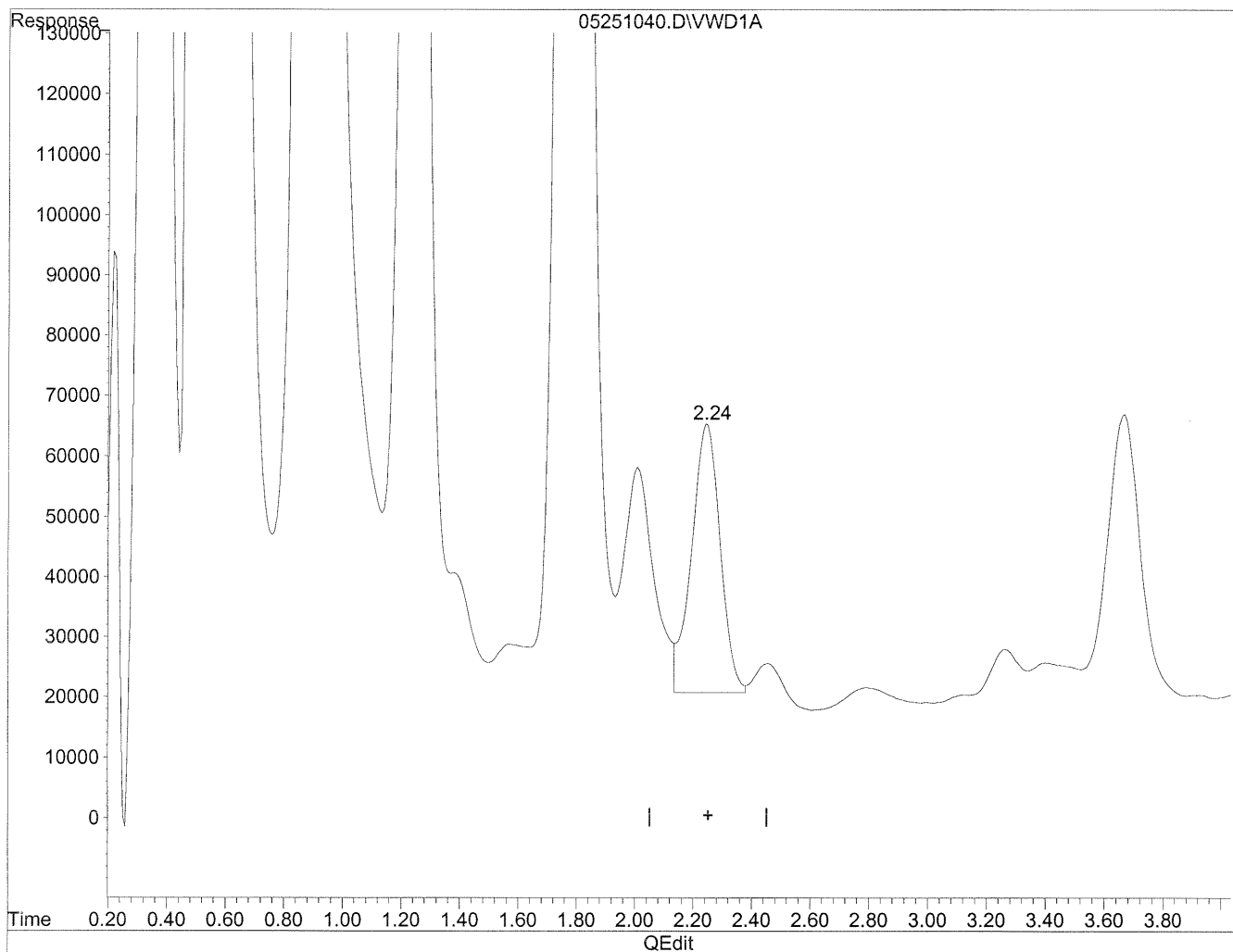
(3) Propionaldehyde
2.25min 640.455ng/ml
response 3113908

(+) = Expected Retention Time
05251040.D TO110510.M Fri May 28 11:17:45 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251040.D Vial: 127
Acq On : 25-May-2010, 18:15 Operator: MD
Sample : P1001793-019 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.24min 629.201ng/ml m

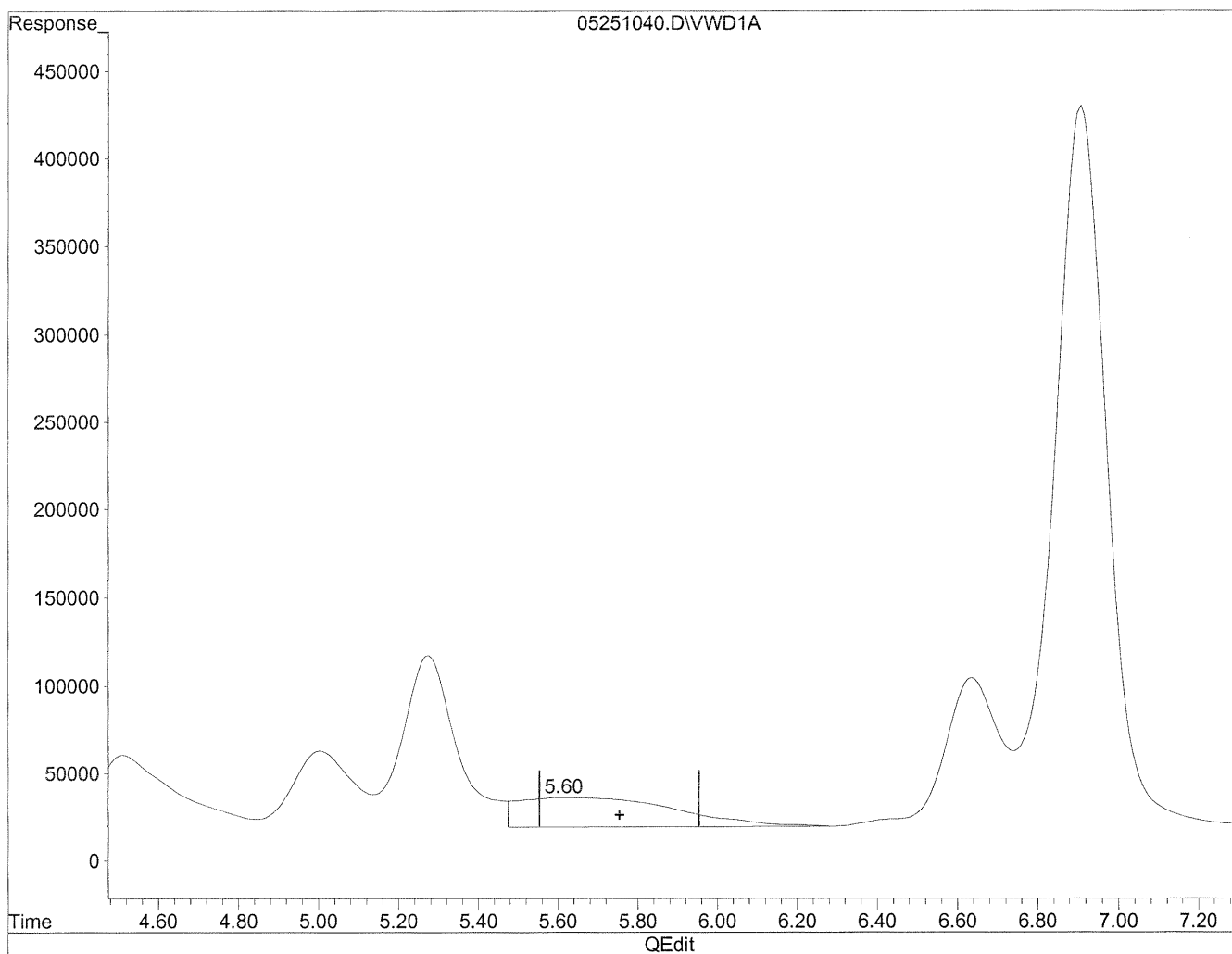
response 3059189

HL
6/4/10
PSC
NO
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251040.D Vial: 127
Acq On : 25-May-2010, 18:15 Operator: MD
Sample : P1001793-019 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

5.62min 2277.752ng/ml

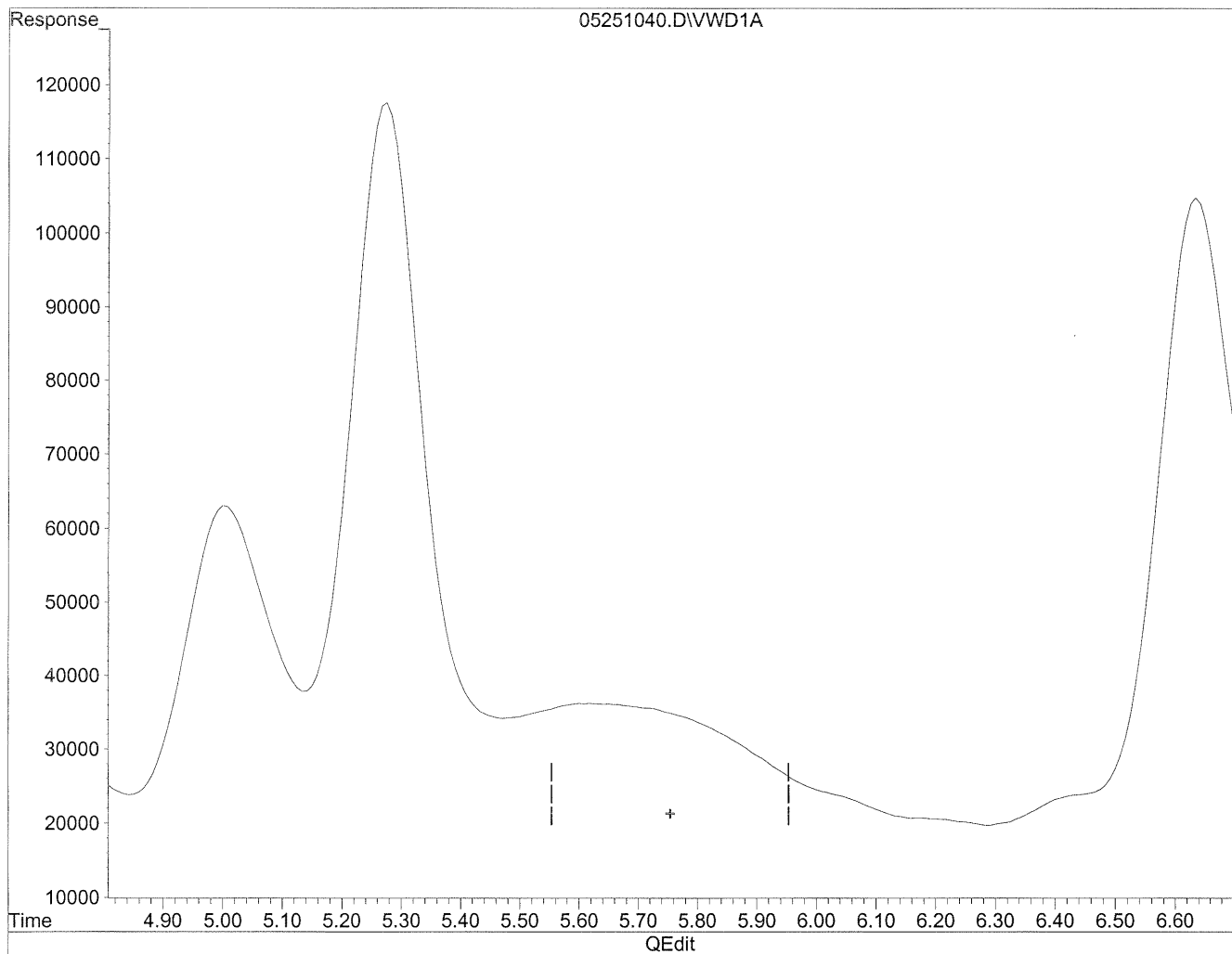
response 4636448

(+) = Expected Retention Time
05251040.D TO110510.M Fri May 28 11:18:09 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251040.D Vial: 127
Acq On : 25-May-2010, 18:15 Operator: MD
Sample : P1001793-019 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde
0.00min 0.000ng/ml d
response 0

He
6/4/10

not
real
mm
6/4/10

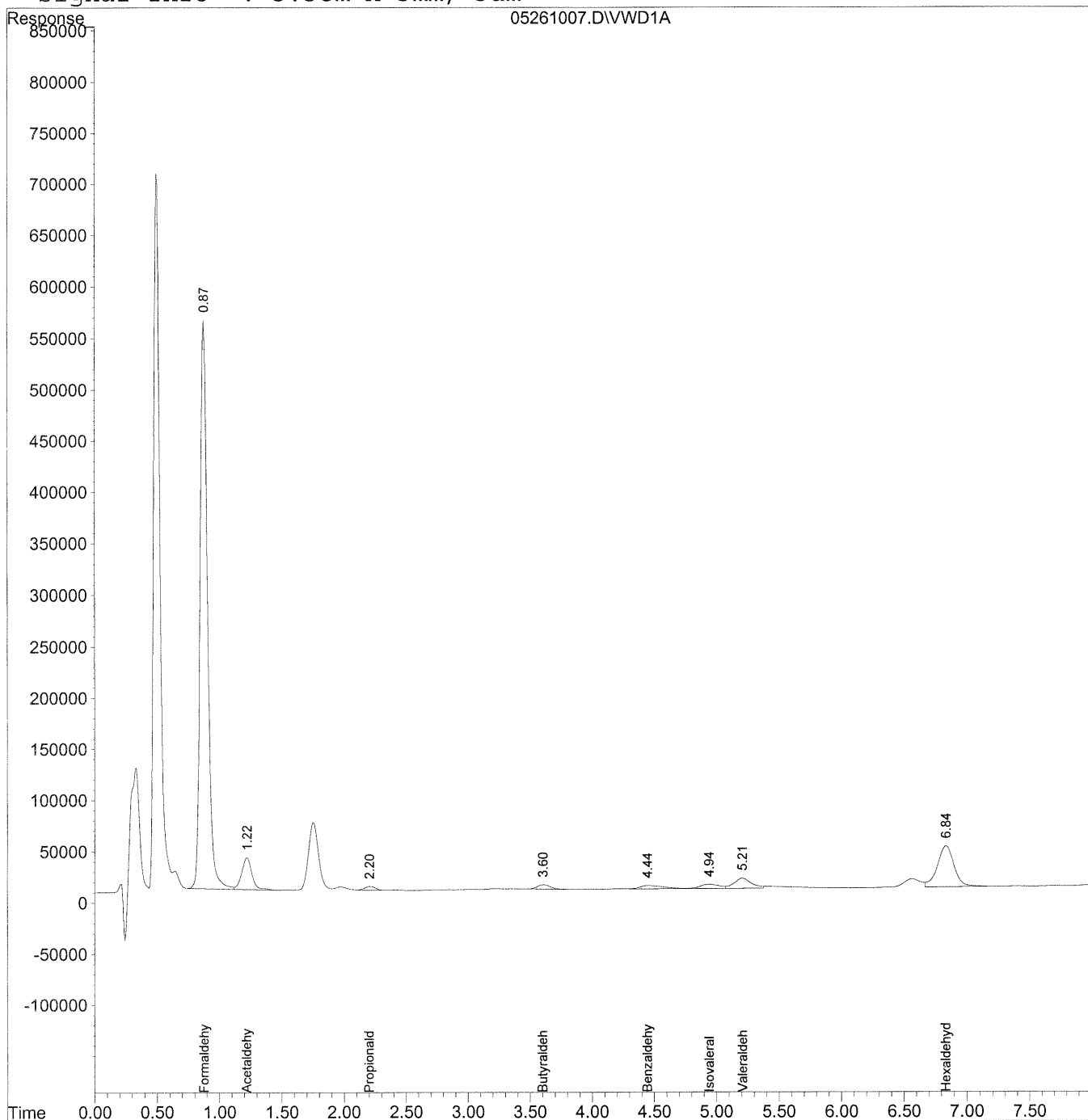
(+) = Expected Retention Time
05251040.D TO110510.M Fri May 28 11:18:12 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261007.D Vial: 104
Acq On : 26-May-2010, 12:27 Operator: MD
Sample : P1001793-019 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:55 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261007.D Vial: 104
Acq On : 26-May-2010, 12:27 Operator: MD
Sample : P1001793-019 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:55 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	23047535	2469.500 ng/ml
2) Acetaldehyde	1.22	1774844	263.517 ng/ml
3) Propionaldehyde	2.21	232682	47.857 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.61	307665	76.357 ng/ml
6) Benzaldehyde	4.45	445078	164.434 ng/ml
7) Isovaleraldehyde	4.95	429602	121.093 ng/ml
8) Valeraldehyde	5.21	959053	285.891 ng/ml
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11) Hexaldehyde	6.84	3657170	1271.894 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110304
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-020

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: NA Minutes

CAS #	Compound	Result $\mu\text{g}/\text{Sample}$	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	0.27	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

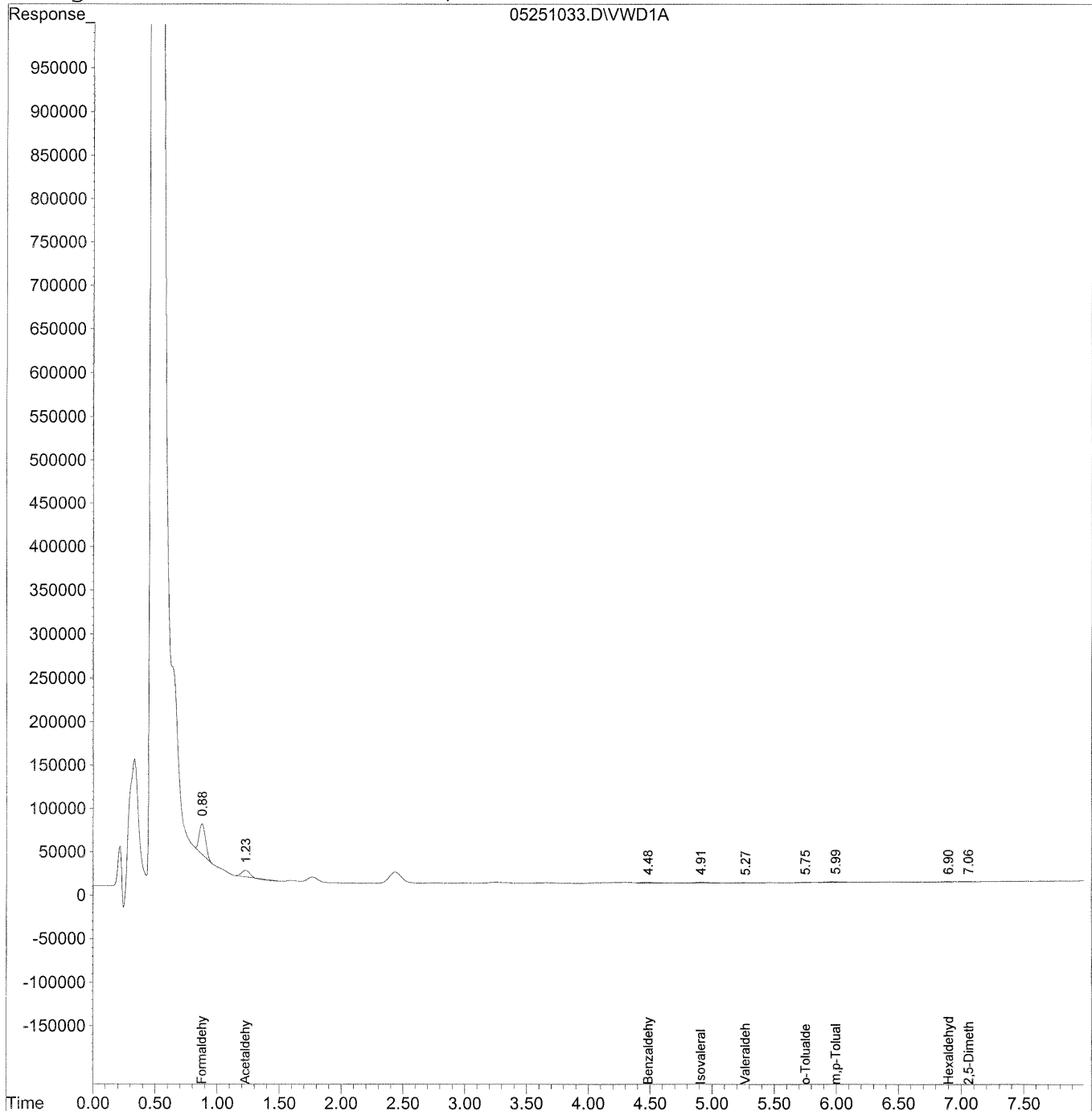
Verified By: Res Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251033.D Vial: 120
Acq On : 25-May-2010, 17:01 Operator: MD
Sample : P1001793-020 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:03 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251033.D Vial: 120
Acq On : 25-May-2010, 17:01 Operator: MD
Sample : P1001793-020 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:03 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

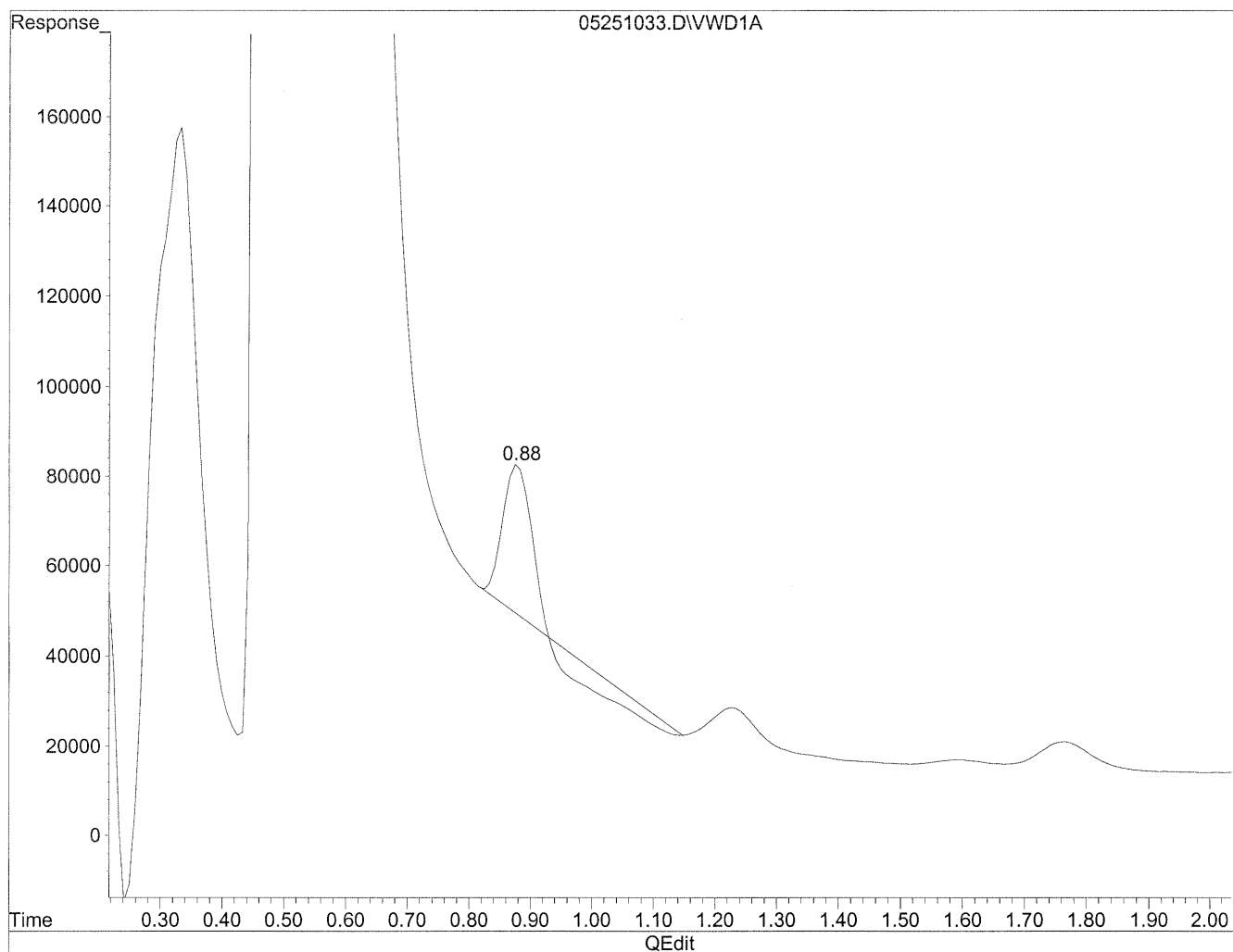
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.88	1251602	134.107 ng/mlm
2)	Acetaldehyde	1.23	266194	39.523 ng/ml
3)	Propionaldehyde	0.00	0	N.D. ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	0.00	0	N.D. ng/ml
6)	Benzaldehyde	4.49	83525	30.858 ng/ml
7)	Isovaleraldehyde	4.91f	62466	17.608 ng/ml
8)	Valeraldehyde	5.27	23711	7.068 ng/ml
9)	o-Tolualdehyde	5.75	20065	9.857 ng/ml
10)	m,p-Tolualdehyde	6.00	92010	39.277 ng/ml
11)	Hexaldehyde	6.90	23983	8.341 ng/ml
12)	2,5-Dimethylbenzaldehyde	7.06	17962	9.336 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251033.D Vial: 120
Acq On : 25-May-2010, 17:01 Operator: MD
Sample : P1001793-020 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 17:35 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



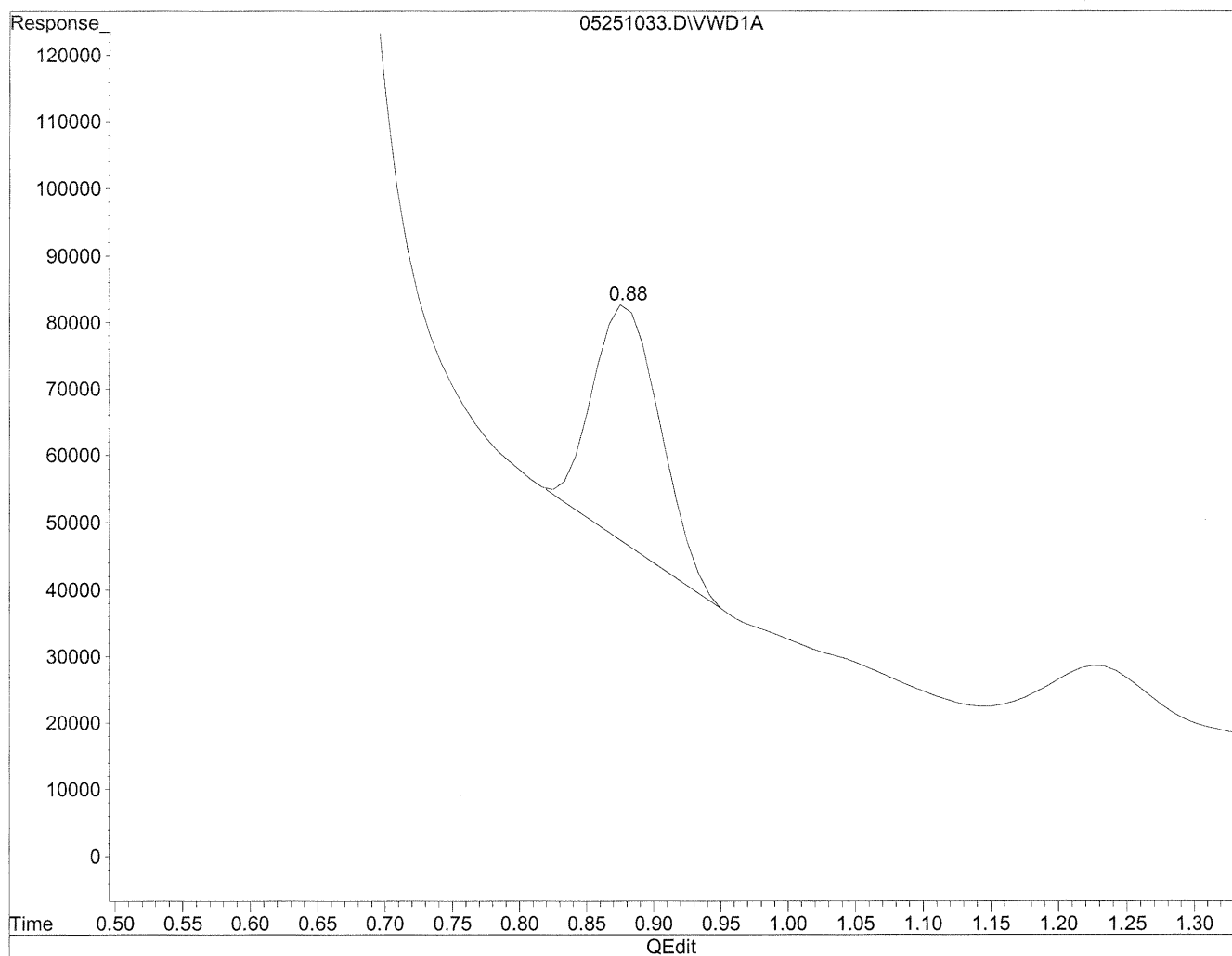
(1) Formaldehyde
0.88min 76.530ng/ml
response 714246

(+) = Expected Retention Time
05251033.D TO110510.M Fri May 28 11:03:44 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251033.D Vial: 120
Acq On : 25-May-2010, 17:01 Operator: MD
Sample : P1001793-020 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 17:35 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 134.107ng/ml m

response 1251602

12
6/4/10
HC
6/4/10

(+) = Expected Retention Time
05251033.D TO110510.M Fri May 28 11:04:12 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110453
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-021

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25 - 5/26/10
Desorption Volume: 2.0 ml
Sampling Time: 20478 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	79	39	0.099	32	0.080	
75-07-0	Acetaldehyde	31	18	0.12	9.9	0.065	
123-38-6	Propionaldehyde	4.9	6.2	0.25	2.6	0.11	
123-72-8	Butyraldehyde	5.0	22	0.89	7.6	0.30	
100-52-7	Benzaldehyde	3.4	1.8	0.11	0.41	0.024	
590-86-3	Isovaleraldehyde	3.1	2.4	0.16	0.70	0.045	
110-62-3	Valeraldehyde	9.2	17	0.36	4.7	0.10	
66-25-1	n-Hexaldehyde	49	130	0.54	32	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

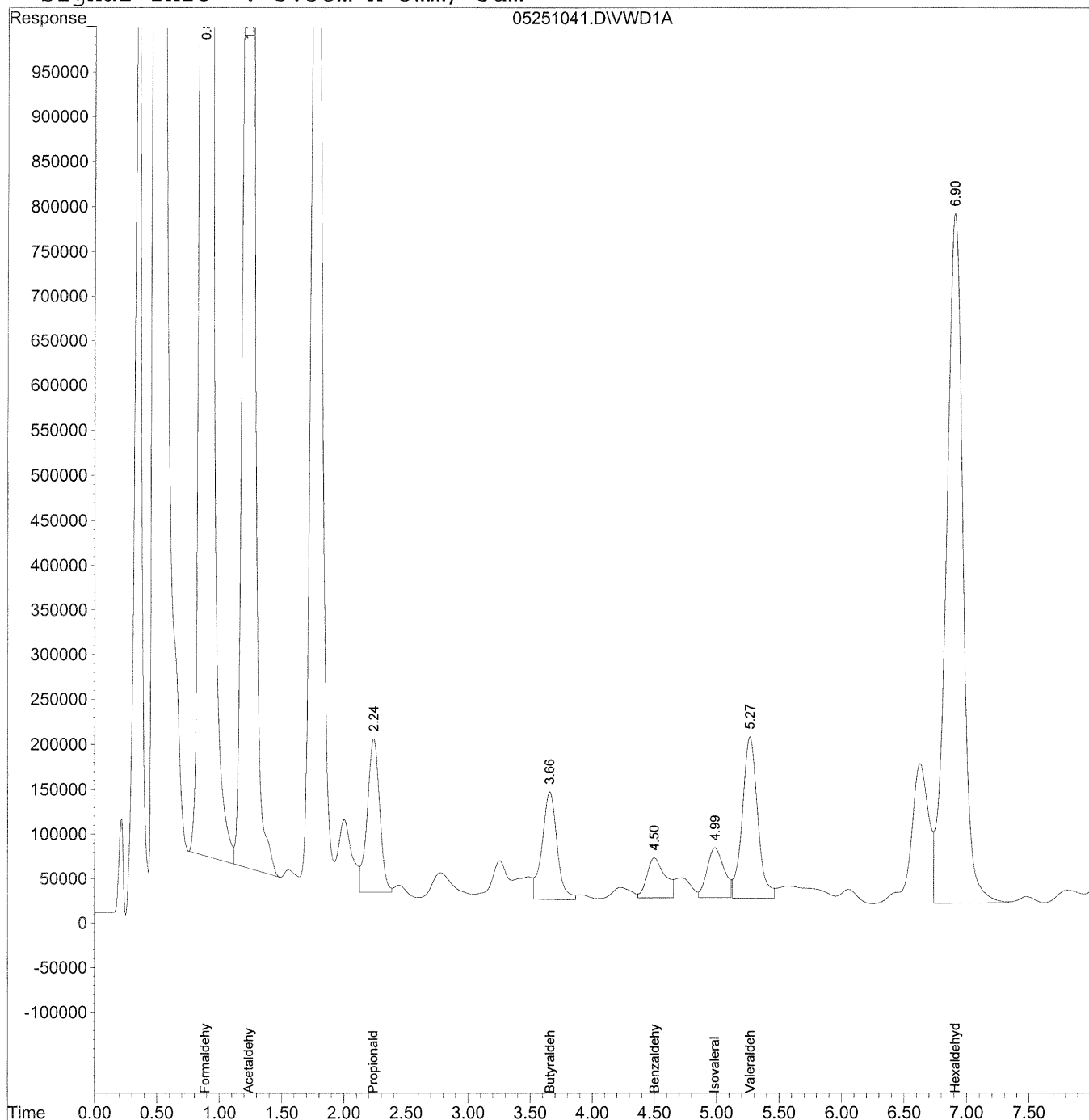
Verified By: Res Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:21 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:21 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

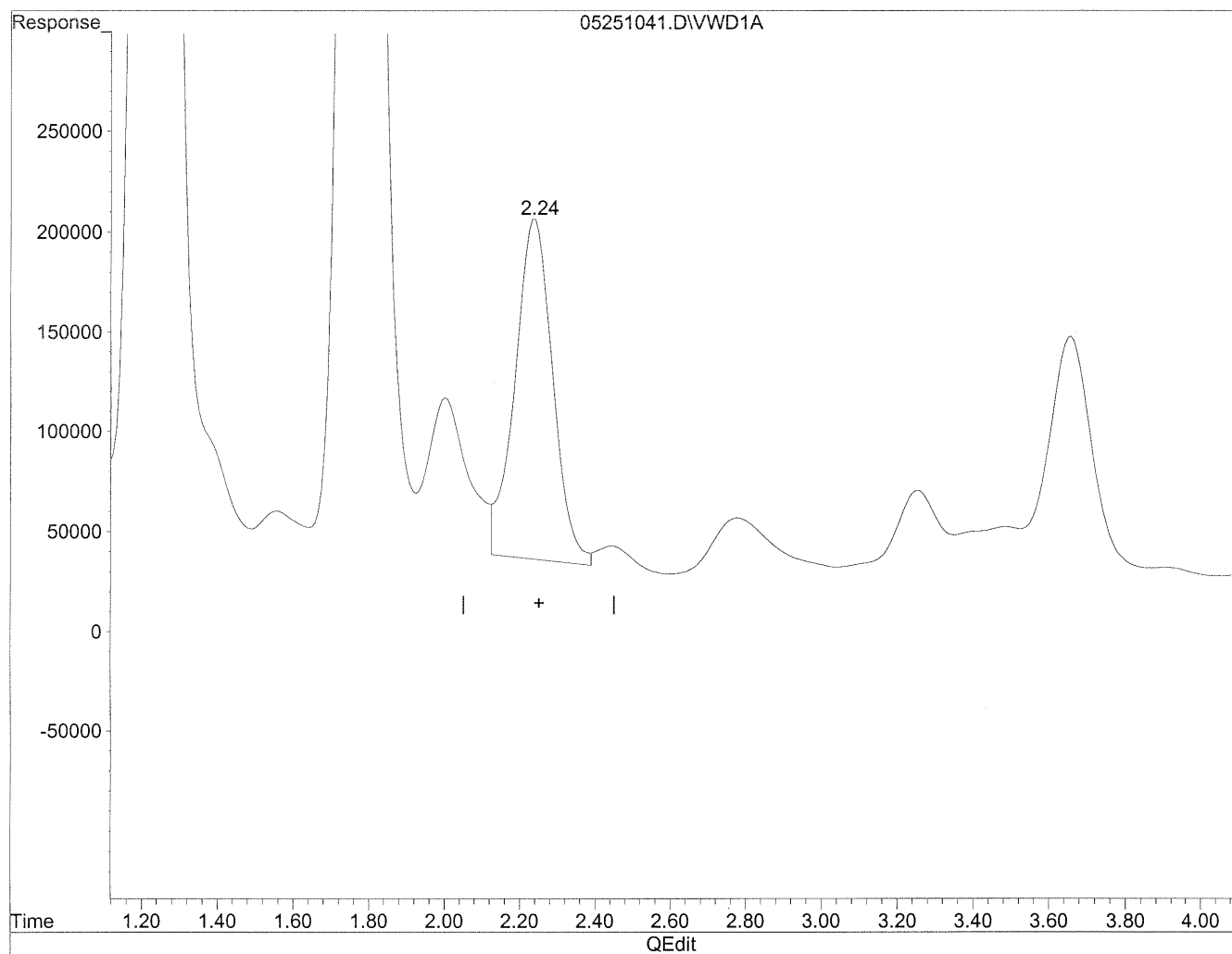
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	366684358	39289.541 ng/ml <i>dil</i>
2) Acetaldehyde	1.24	104400394	15500.649 ng/ml <i>dil</i>
3) Propionaldehyde	2.24	11979670	2463.927 ng/mlm
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.66	10156414	2520.637 ng/ml
6) Benzaldehyde	4.50	4563449	1685.968 ng/mlm
7) Isovaleraldehyde	4.99	5423048	1528.607 ng/mlm
8) Valeraldehyde	5.27	15436498	4601.571 ng/mlm
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11) Hexaldehyde	6.91	69393621	24133.779 ng/ml <i>dil</i>
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.24min 2441.157ng/ml

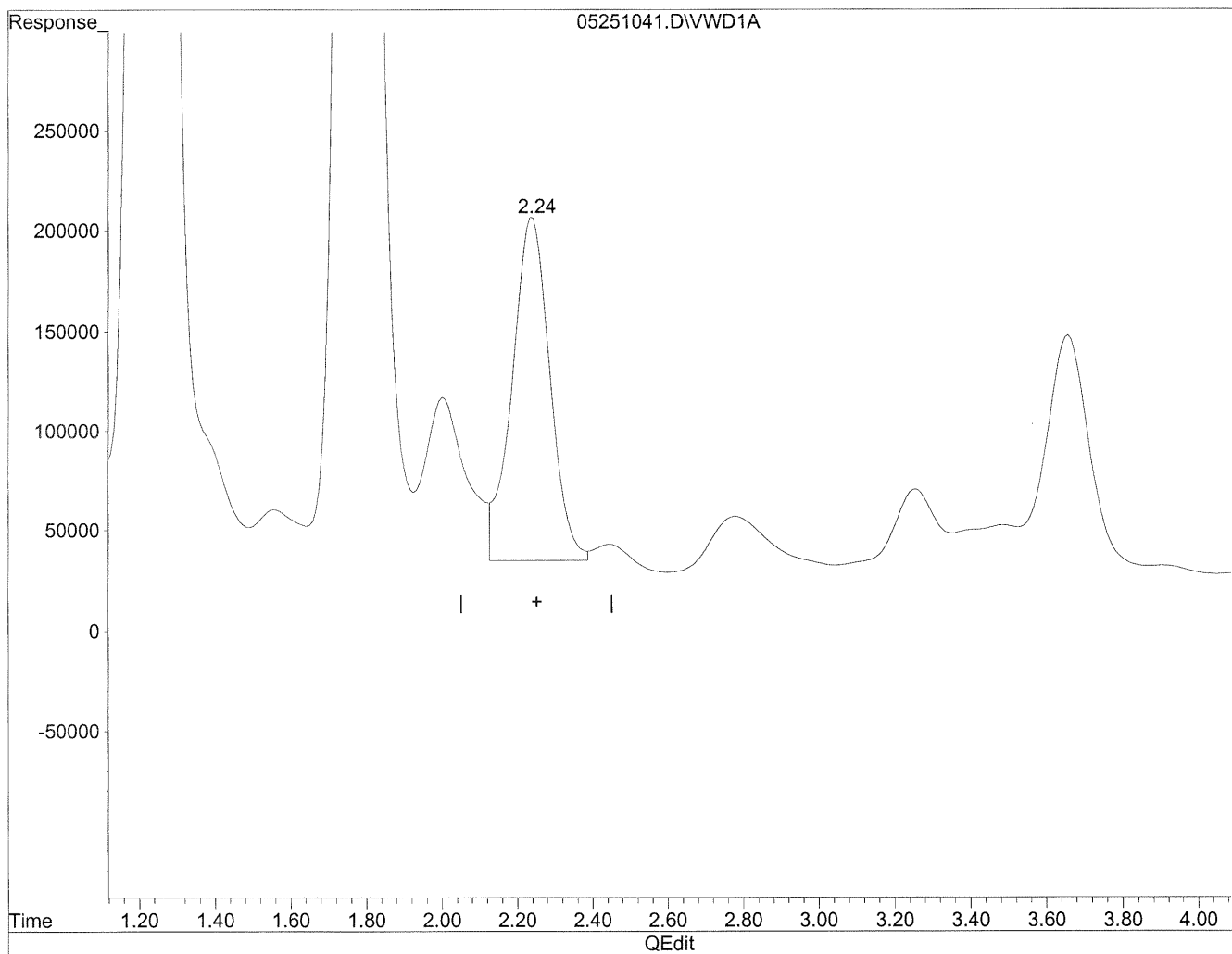
response 11868961

(+) = Expected Retention Time
05251041.D TO110510.M Fri May 28 11:18:48 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.24min 2463.927ng/ml m

response 11979670

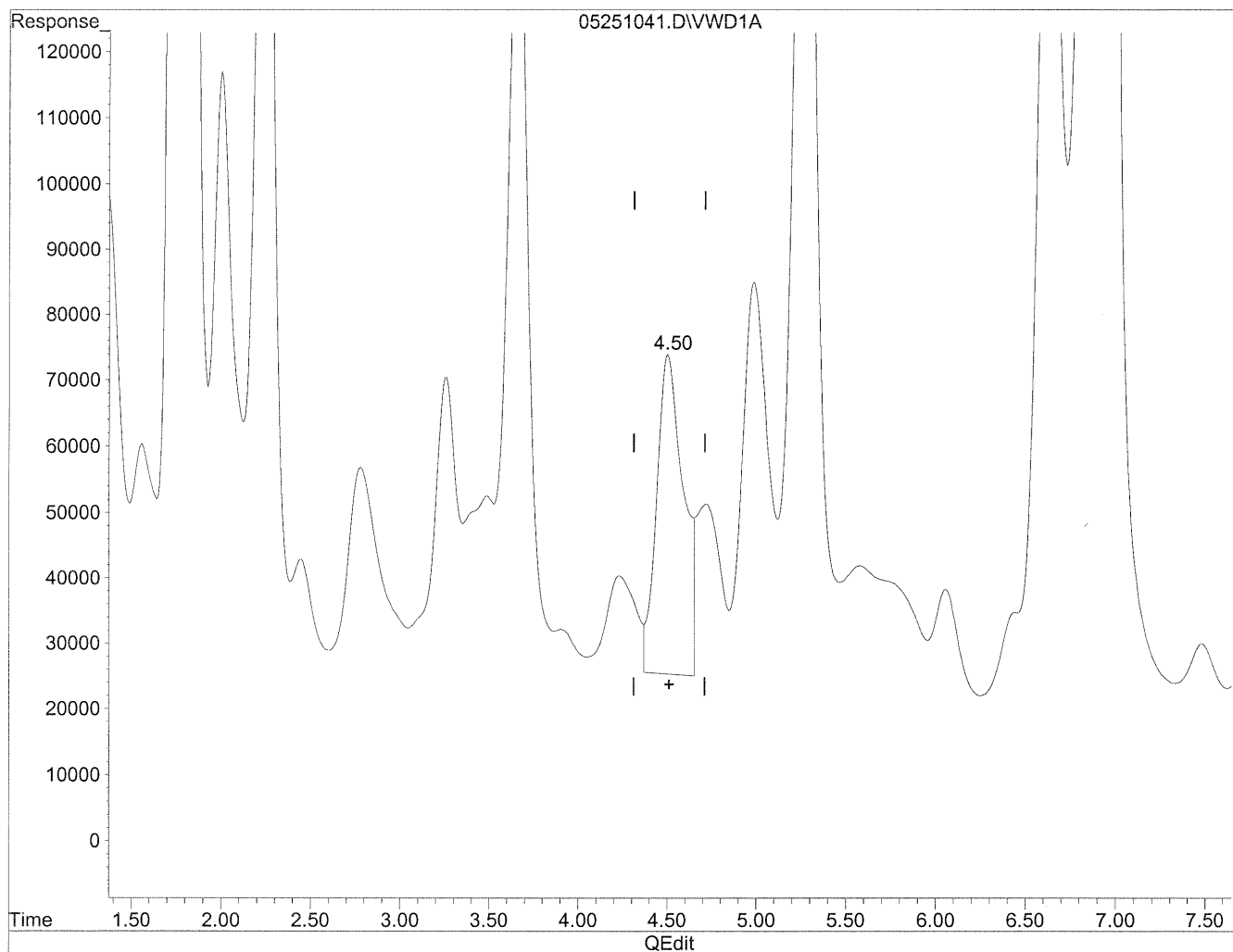
4/6
6/4/10
PC
6/4/10

(+) = Expected Retention Time
05251041.D TO110510.M Fri May 28 11:18:59 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.50min 1862.675ng/ml

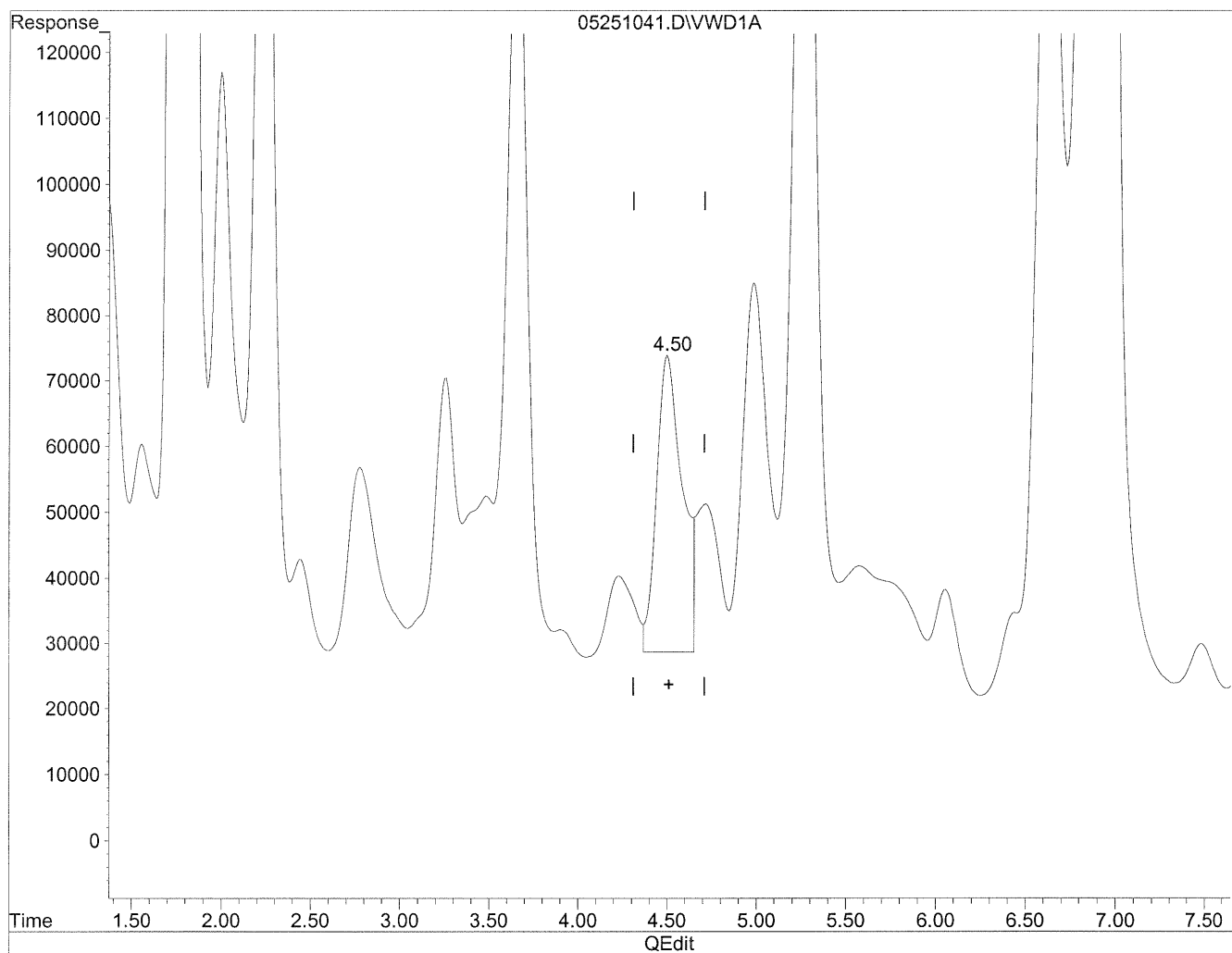
response 5041745

(+) = Expected Retention Time
05251041.D TO110510.M Fri May 28 11:19:19 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.50min 1685.968ng/ml m

response 4563449

HL
6/4/10

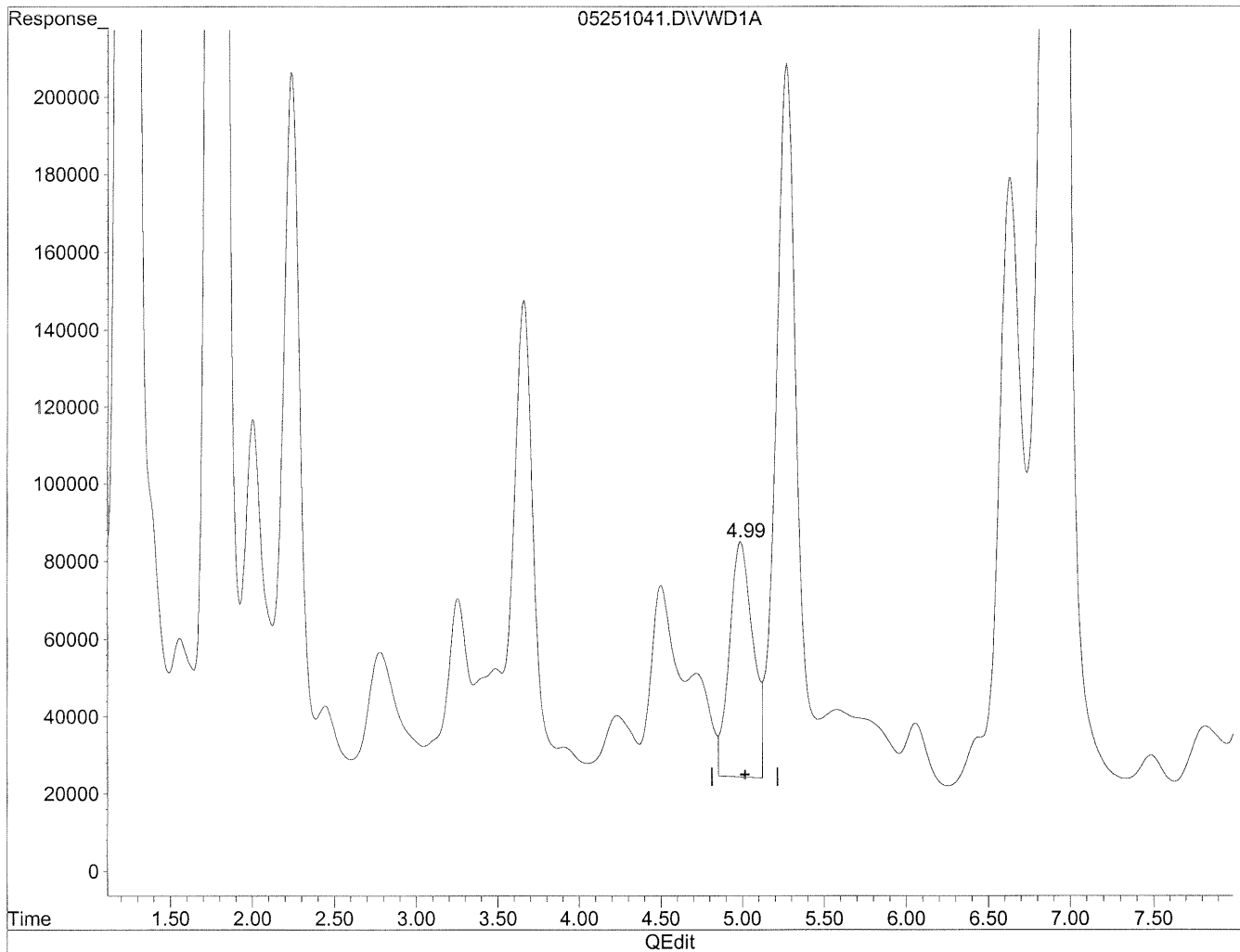
MD
6/4/10

(+) = Expected Retention Time
05251041.D TO110510.M Fri May 28 11:19:42 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.99min 1707.848ng/ml

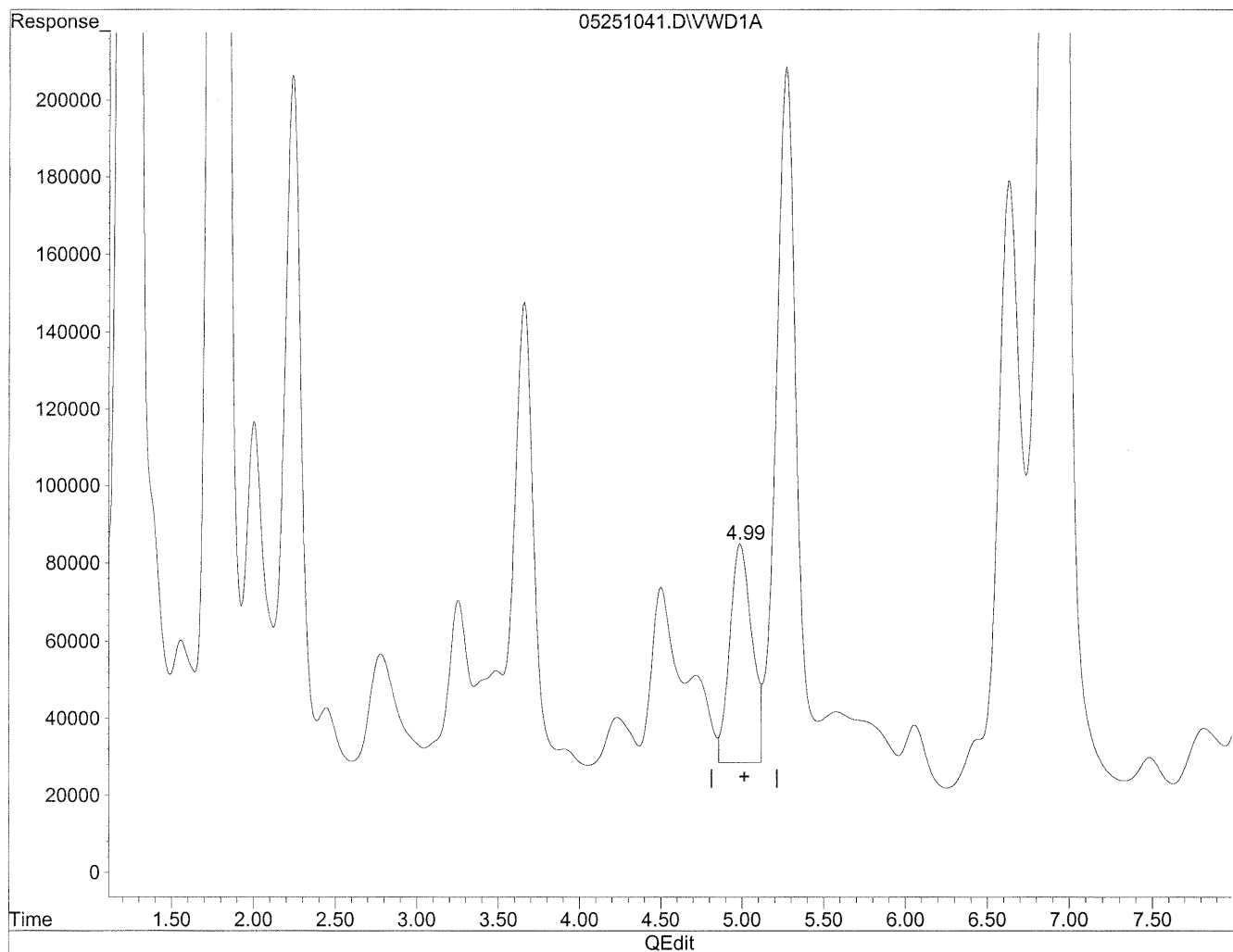
response 6058943

(+) = Expected Retention Time
05251041.D TO110510.M Fri May 28 11:19:55 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.99min 1528.607ng/ml m

response 5423048

HC
6/4/10

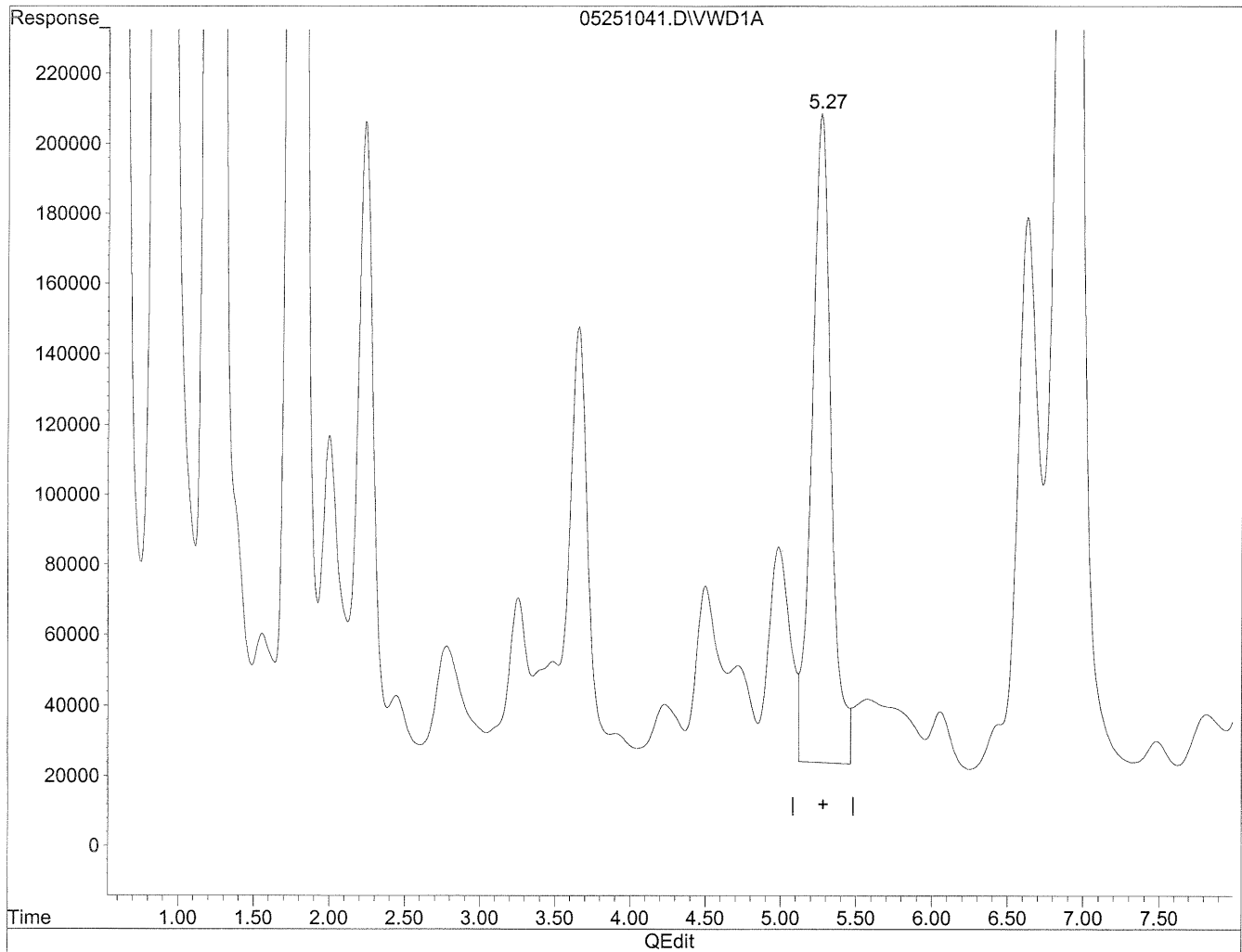
MD
6/4/10

(+) = Expected Retention Time
05251041.D TO110510.M Fri May 28 11:20:11 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.27min 4894.134ng/ml

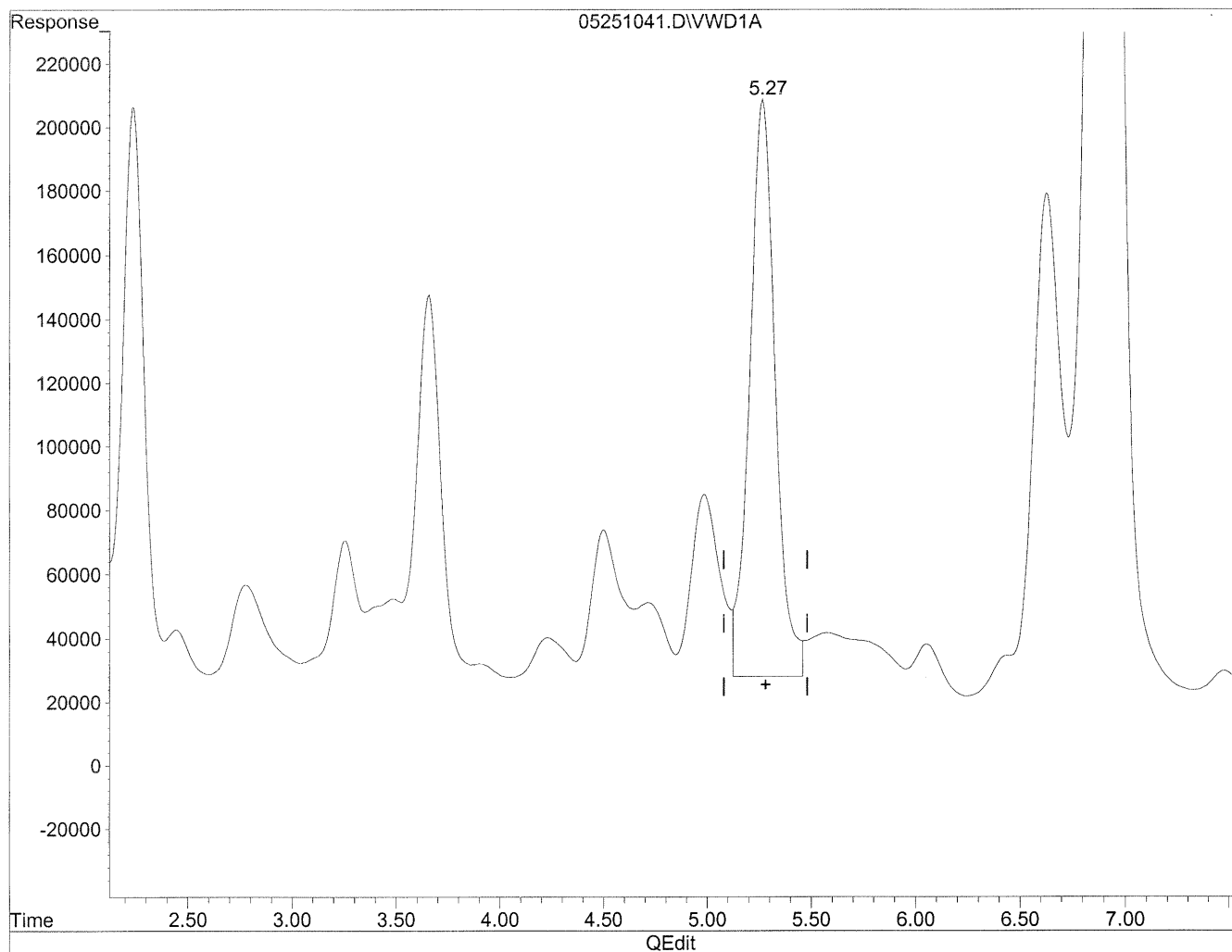
response 16417934

(+) = Expected Retention Time
05251041.D TO110510.M Fri May 28 11:20:23 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.27min 4601.571ng/ml m

response 15436498

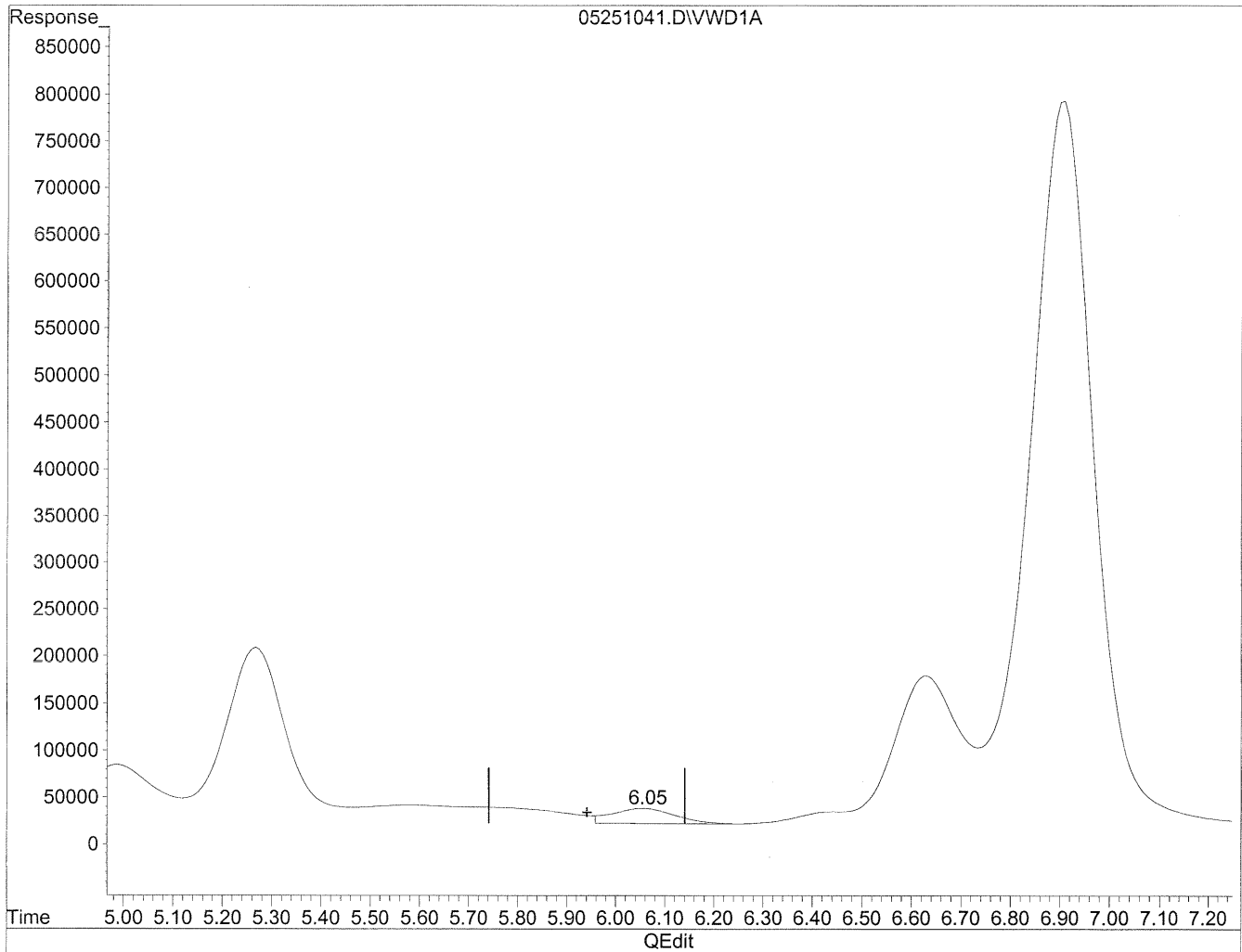
HC
6/4/10
BC
MD
6/4/10

(+) = Expected Retention Time
05251041.D TO110510.M Fri May 28 11:21:20 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

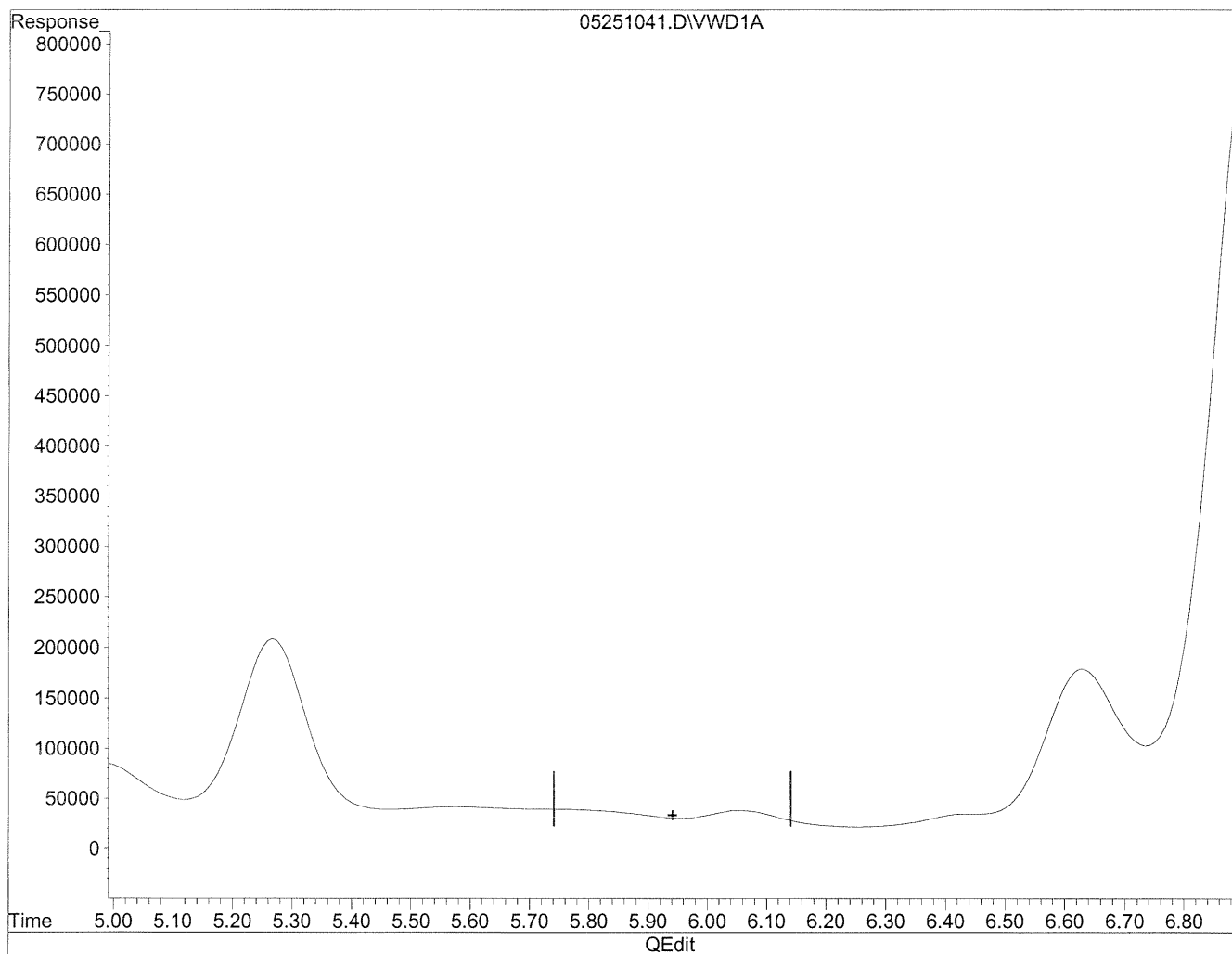
6.06min 610.135ng/ml

response 1429308

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251041.D Vial: 128
Acq On : 25-May-2010, 18:26 Operator: MD
Sample : P1001793-021 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:00 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

0.00min 0.000ng/ml d

response 0

HC
6/4/10

not
real
(WVD) *6/4/10*

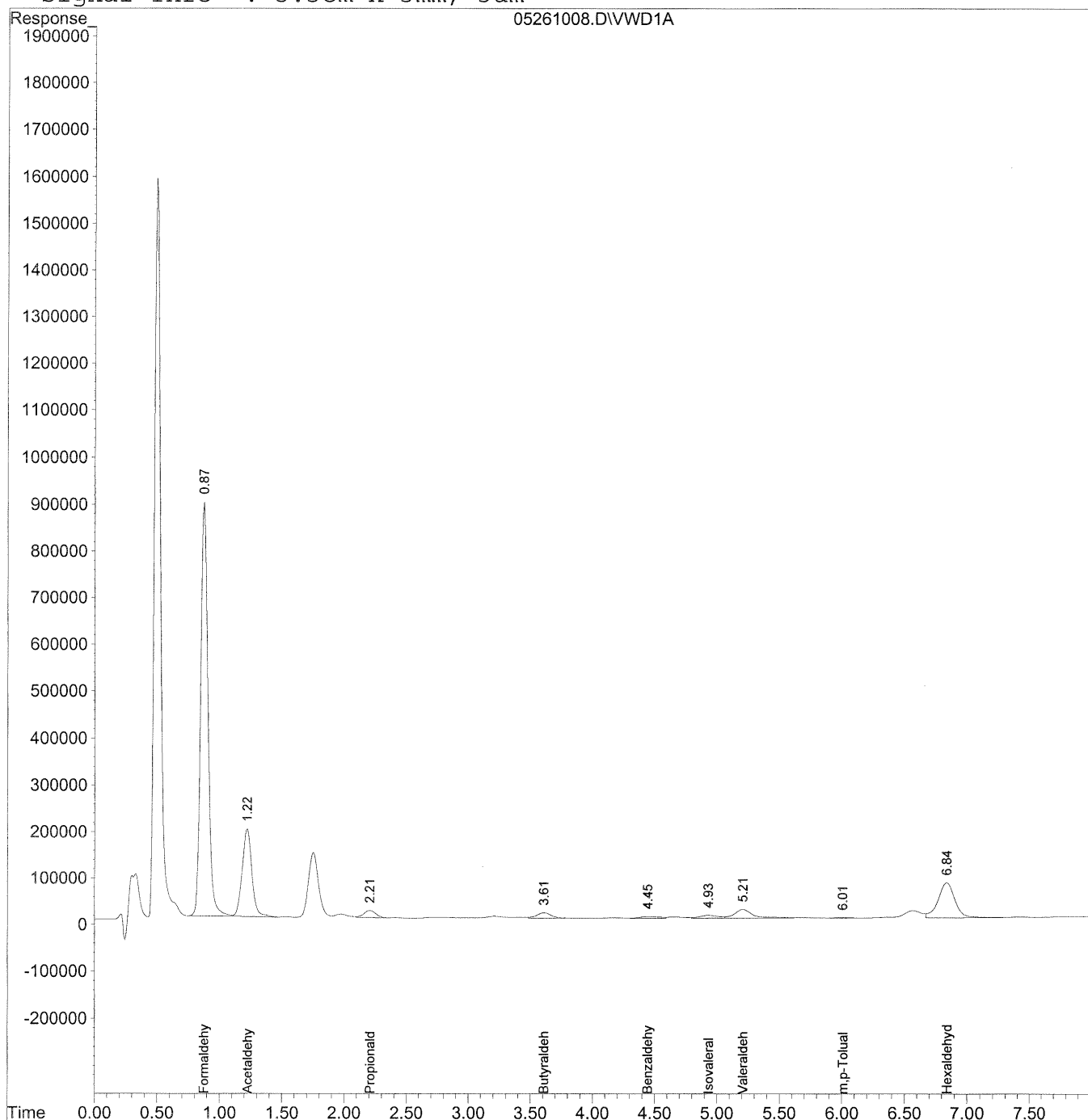
(+) = Expected Retention Time
05251041.D TO110510.M Fri May 28 11:20:43 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261008.D Vial: 105
Acq On : 26-May-2010, 12:37 Operator: MD
Sample : P1001793-021 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:55 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261008.D Vial: 105
Acq On : 26-May-2010, 12:37 Operator: MD
Sample : P1001793-021 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:55 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	36785582	3941.506 ng/ml
2) Acetaldehyde	1.22	10338110	1534.931 ng/ml
3) Propionaldehyde	2.21	1014685	208.696 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.61	1024651	254.300 ng/ml
6) Benzaldehyde	4.45	422906	156.243 ng/ml
7) Isovaleraldehyde	4.93	642993	181.242 ng/ml
8) Valeraldehyde	5.21	1981067	590.550 ng/ml
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	6.01f	111095	47.423 ng/ml
11) Hexaldehyde	6.84	6997133	2433.469 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated

Client Sample ID: 110454

Client Project ID: 17131

CAS Project ID: P1001793

CAS Sample ID: P1001793-022

Test Code: EPA TO-11A

Instrument ID: HP1050/UV_Vis 360/LC2

Analyst: Madeleine Dangazyan

Sampling Media: Radiello Tube

Test Notes: BC

Date Collected: 5/21/10

Date Received: 5/22/10

Date Analyzed: 5/25 - 5/26/10

Desorption Volume: 2.0 ml

Sampling Time: 20478 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	71	35	0.099	28	0.080	
75-07-0	Acetaldehyde	21	12	0.12	6.8	0.065	
123-38-6	Propionaldehyde	3.9	4.9	0.25	2.1	0.11	
123-72-8	Butyraldehyde	4.1	18	0.89	6.2	0.30	
100-52-7	Benzaldehyde	3.1	1.6	0.11	0.38	0.024	
590-86-3	Isovaleraldehyde	2.8	2.2	0.16	0.63	0.045	
110-62-3	Valeraldehyde	9.9	18	0.36	5.1	0.10	
66-25-1	n-Hexaldehyde	47	130	0.54	31	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

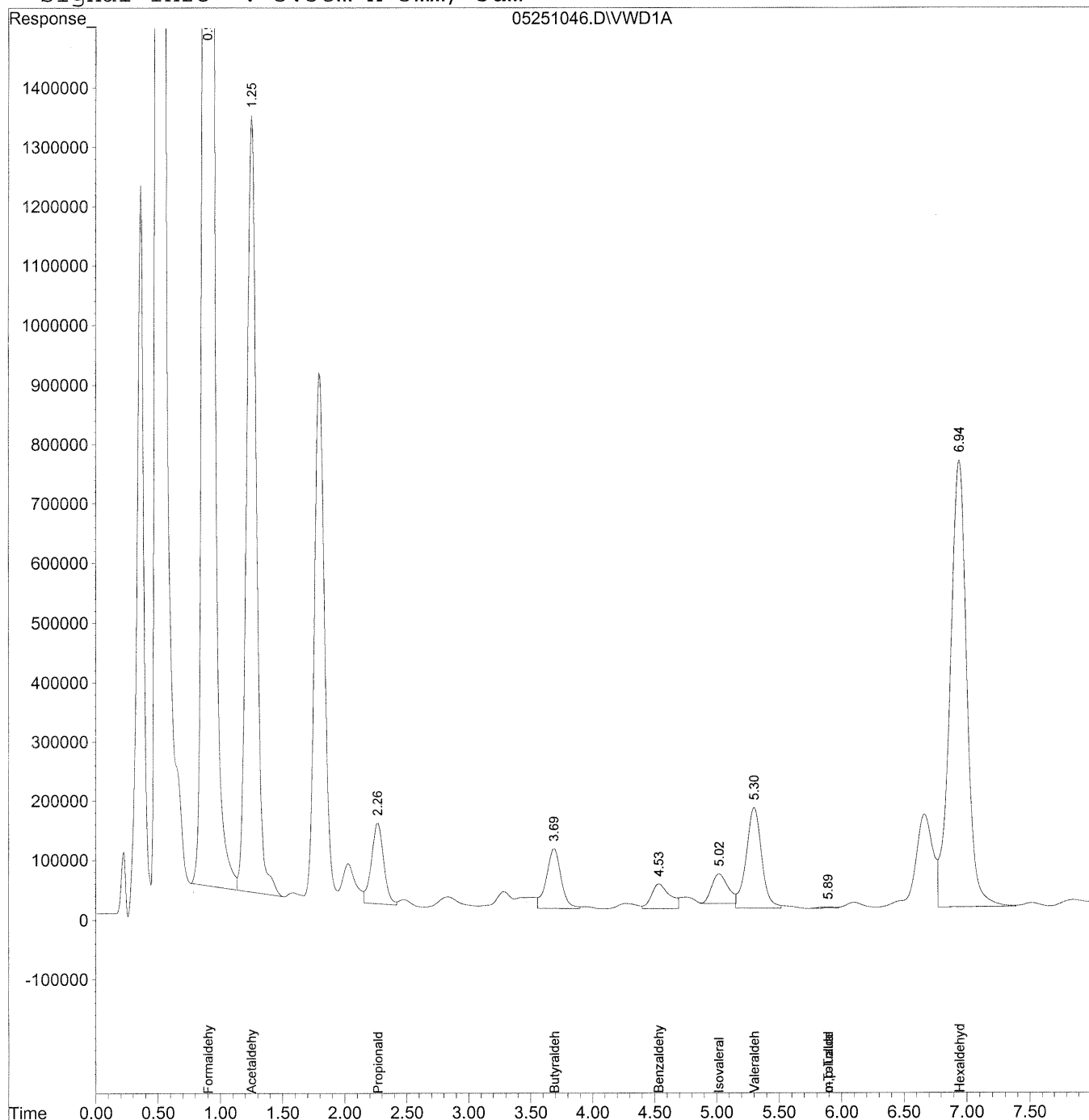
Verified By: RG Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251046.D Vial: 129
 Acq On : 25-May-2010, 19:17 Operator: MD
 Sample : P1001793-022 2ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 14:45 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 14:13:10 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251046.D Vial: 129
Acq On : 25-May-2010, 19:17 Operator: MD
Sample : P1001793-022 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:45 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc Units

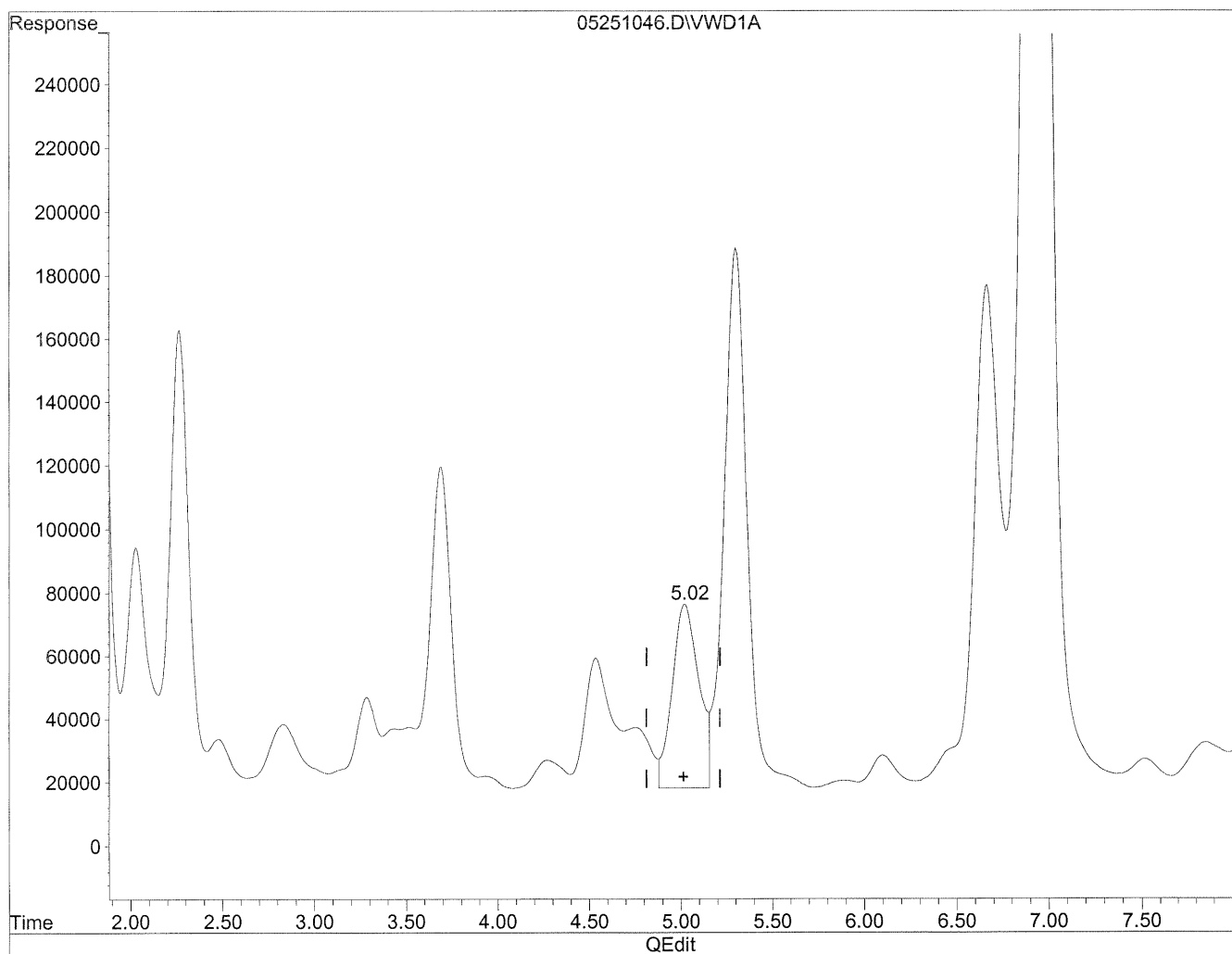
Target Compounds				
1)	Formaldehyde	0.90	332321793	35607.657 ng/ml <i>dil</i>
2)	Acetaldehyde	1.26	72041895	10696.282 ng/ml <i>dil</i>
3)	Propionaldehyde	2.27	9478435	1949.484 ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.69	8279079	2054.717 ng/ml
6)	Benzaldehyde	4.54	4185285	1546.255 ng/ml
7)	Isovaleraldehyde	5.02	4509580	1271.126 ng/mlm *
8)	Valeraldehyde	5.30	14631796	4361.692 ng/mlm *
9)	o-Tolualdehyde	5.89f	181846	89.336 ng/ml
10)	m,p-Tolualdehyde	5.89	181846	77.626 ng/ml
11)	Hexaldehyde	6.94	67839971	23593.449 ng/ml <i>dil</i>
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

* Report results from
dilution

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251046.D Vial: 129
Acq On : 25-May-2010, 19:17 Operator: MD
Sample : P1001793-022 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:01 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.02min 1658.788ng/ml

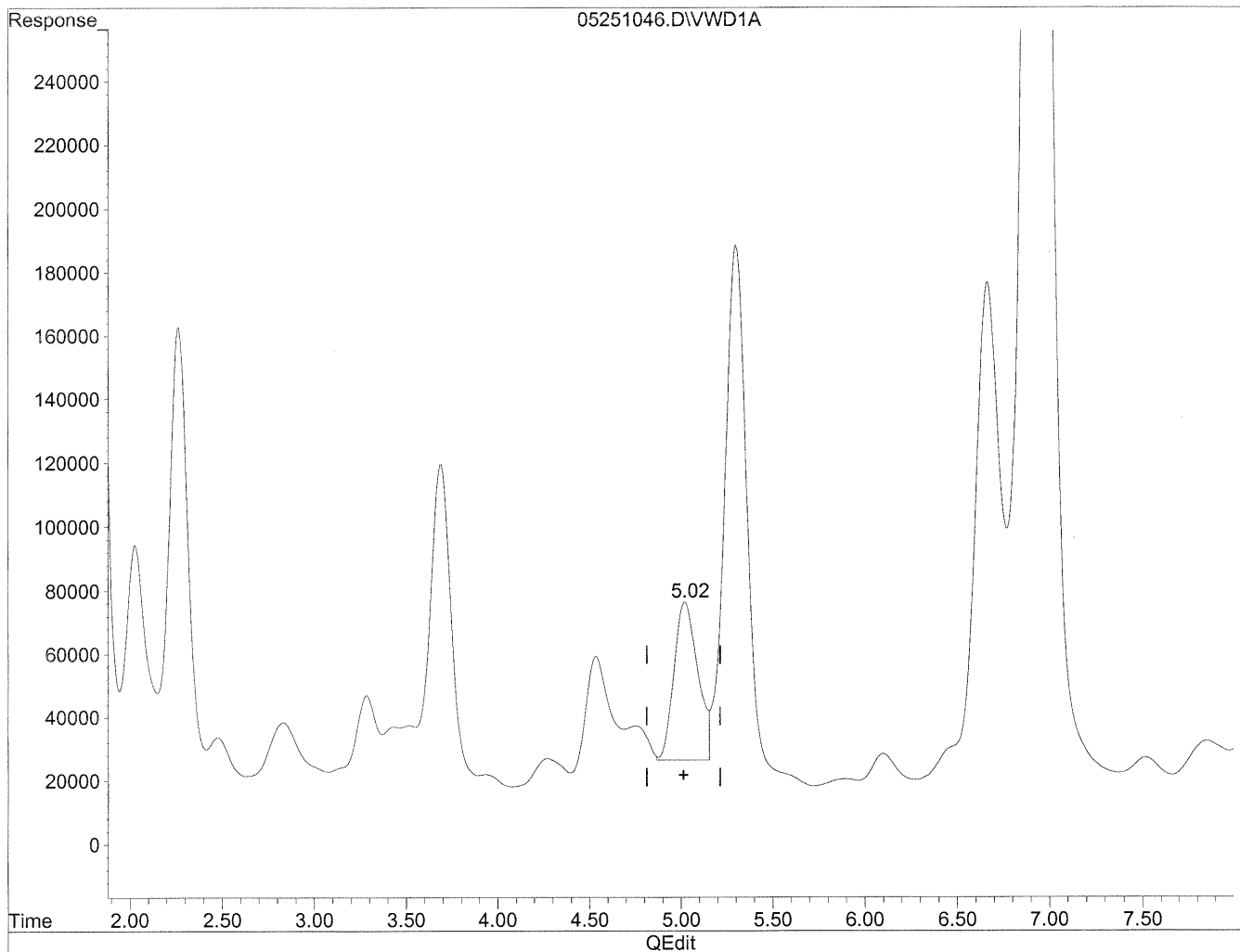
response 5884892

(+) = Expected Retention Time
05251046.D TO110510.M Fri May 28 14:44:50 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251046.D Vial: 129
Acq On : 25-May-2010, 19:17 Operator: MD
Sample : P1001793-022 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:01 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.02min 1271.126ng/ml m

response 4509580

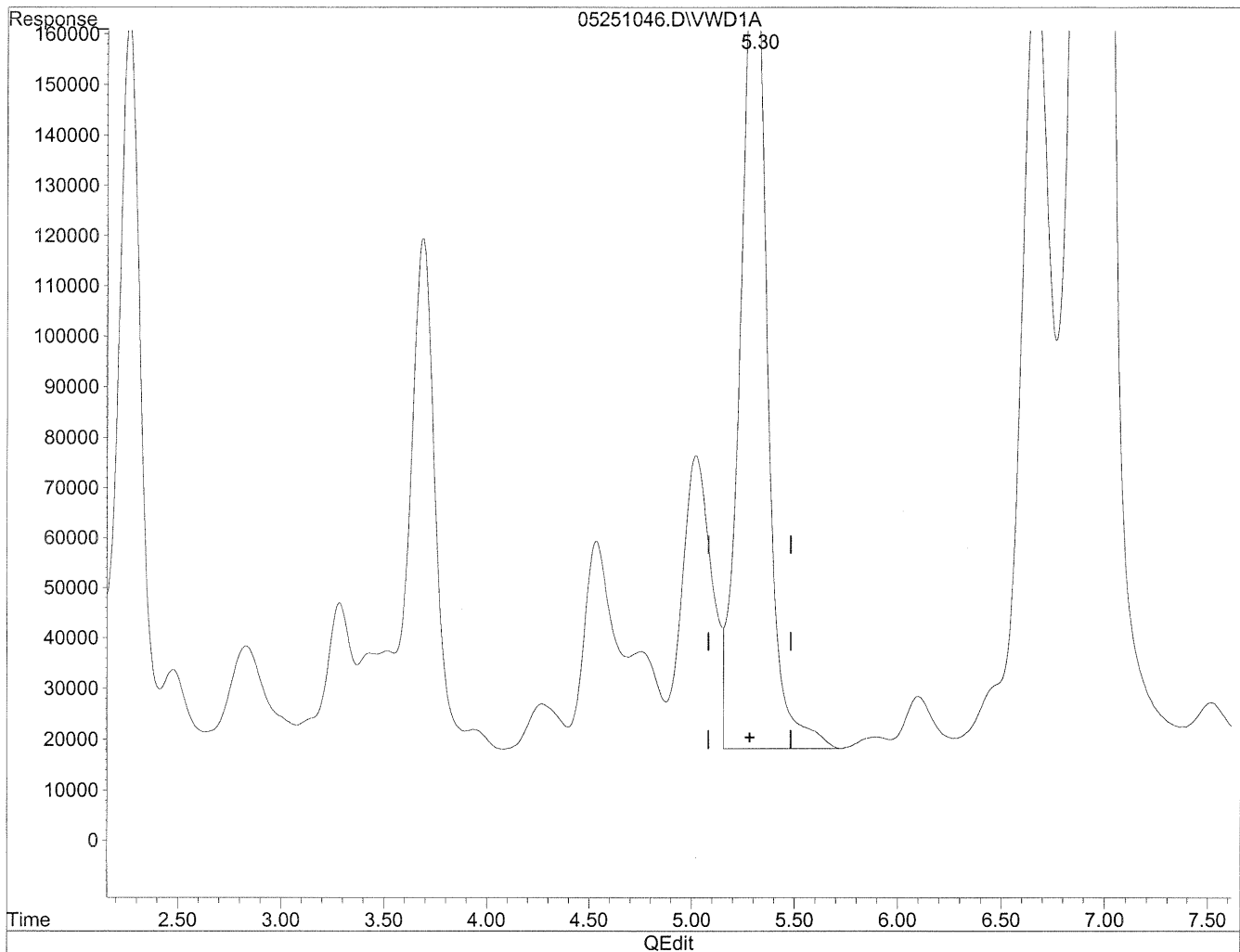
Pre
MD
6/4/10
H/C
6/4/10

(+) = Expected Retention Time
05251046.D TO110510.M Fri May 28 14:45:23 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251046.D Vial: 129
Acq On : 25-May-2010, 19:17 Operator: MD
Sample : P1001793-022 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:01 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.30min 4481.613ng/ml

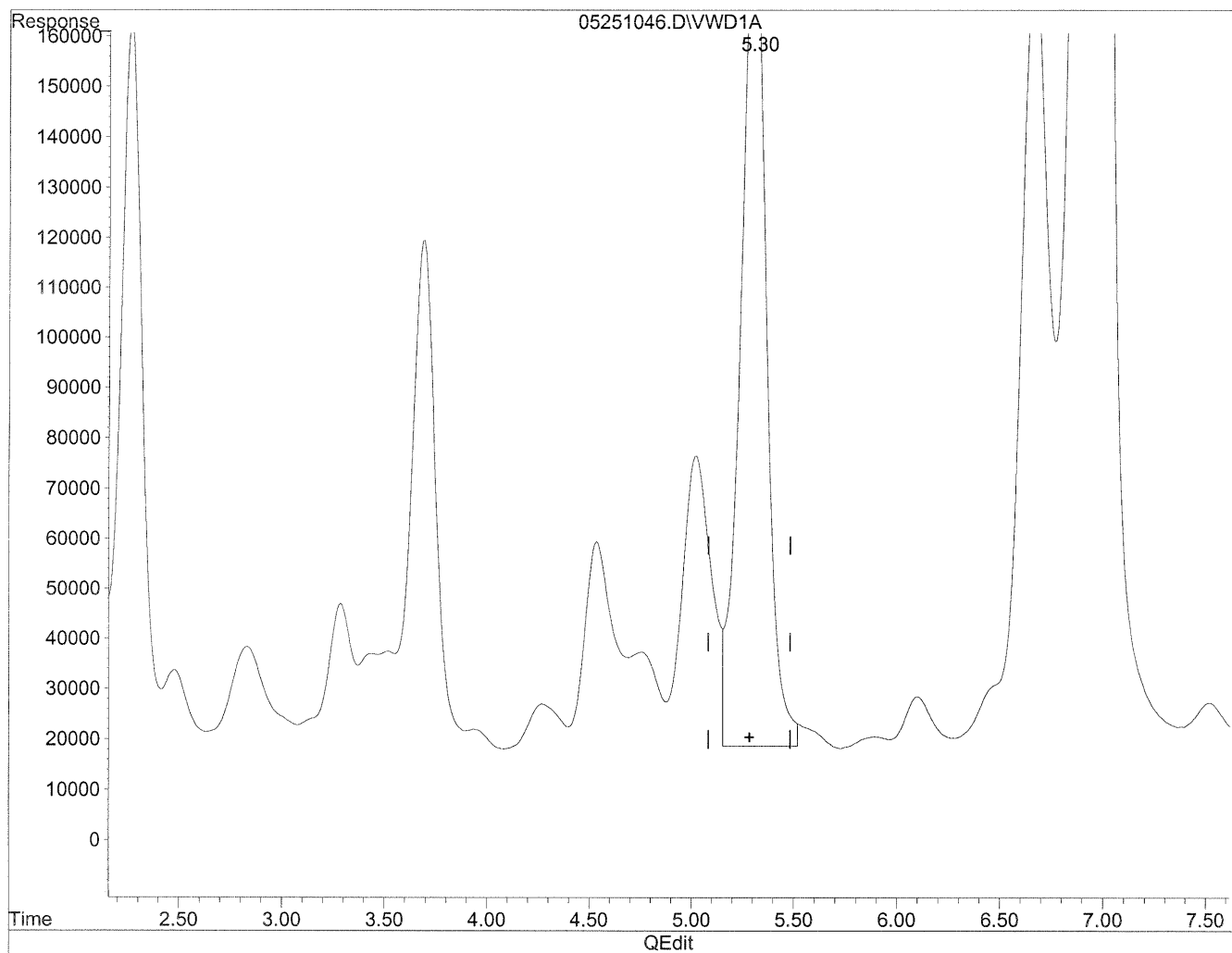
response 15034086

(+) = Expected Retention Time
05251046.D TO110510.M Fri May 28 14:45:31 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251046.D Vial: 129
Acq On : 25-May-2010, 19:17 Operator: MD
Sample : P1001793-022 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:01 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.30min 4361.692ng/ml m

response 14631796

Sh
(m)
6/4/10

HC
6/4/10

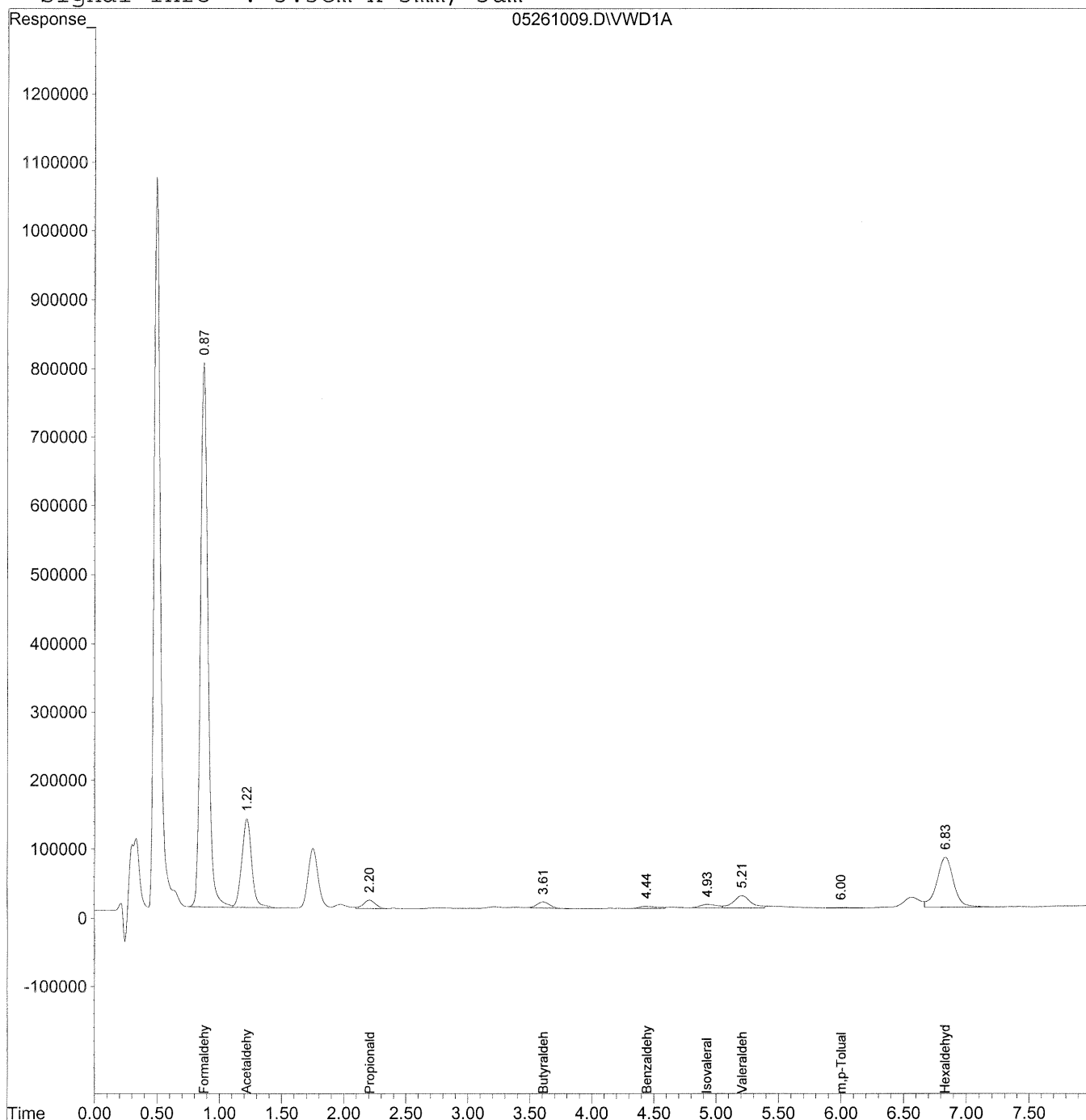
(+) = Expected Retention Time
05251046.D TO110510.M Fri May 28 14:45:40 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261009.D Vial: 106
 Acq On : 26-May-2010, 12:48 Operator: MD
 Sample : P1001793-022 2ml 10x dil Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 14:32 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 26 11:46:33 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261009.D Vial: 106
Acq On : 26-May-2010, 12:48 Operator: MD
Sample : P1001793-022 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:32 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

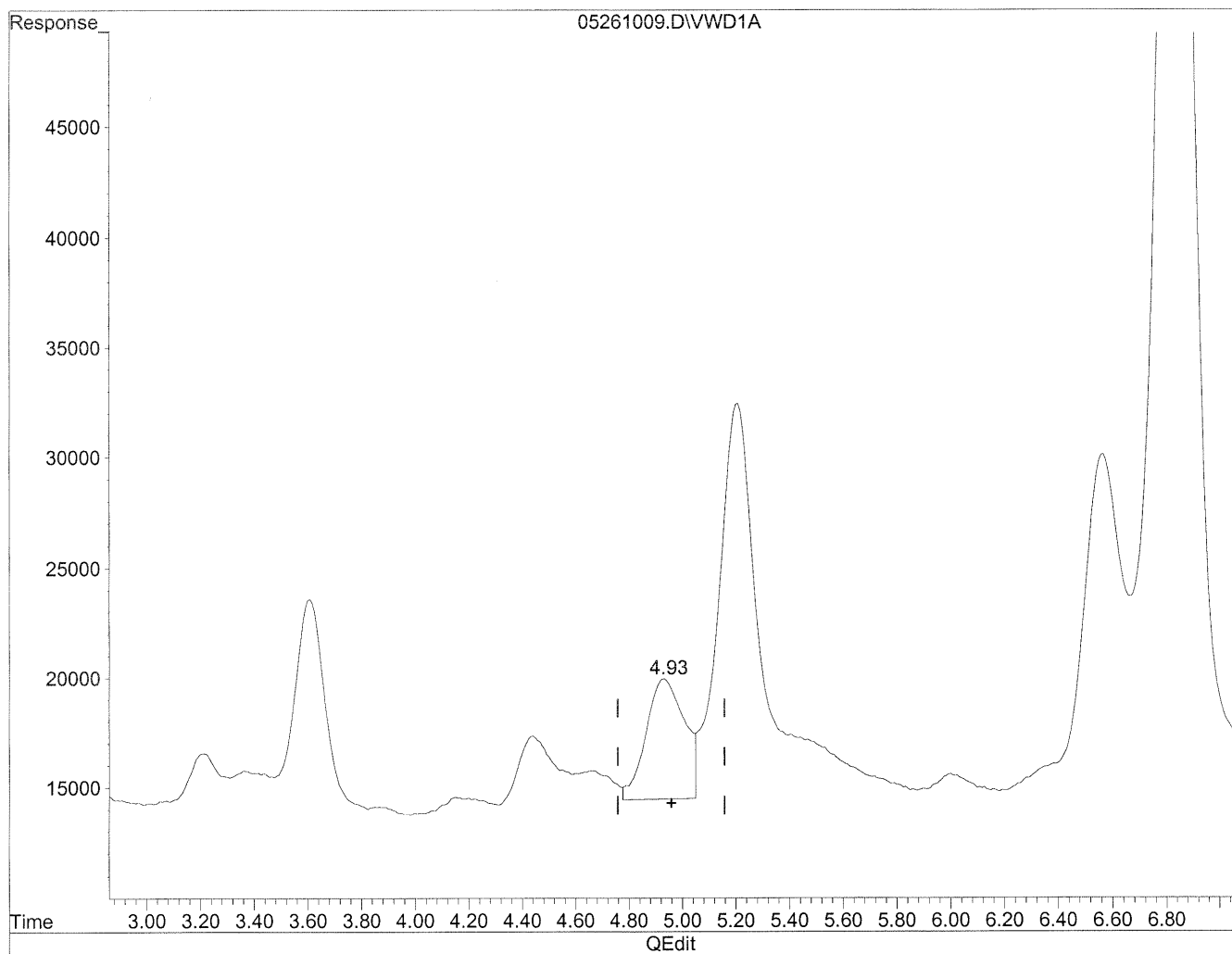
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	32956799	3531.259 ng/ml
2) Acetaldehyde	1.22	7061587	1048.456 ng/ml
3) Propionaldehyde	2.21	843420	173.471 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.61	612605	152.037 ng/ml
6) Benzaldehyde	4.44	278650	102.947 ng/ml
7) Isovaleraldehyde	4.93	495075	139.548 ng/mlm
8) Valeraldehyde	5.21	1665356	496.437 ng/mlm
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	6.00f	67810	28.946 ng/ml
11) Hexaldehyde	6.84	6706933	2332.544 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261009.D Vial: 106
Acq On : 26-May-2010, 12:48 Operator: MD
Sample : P1001793-022 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

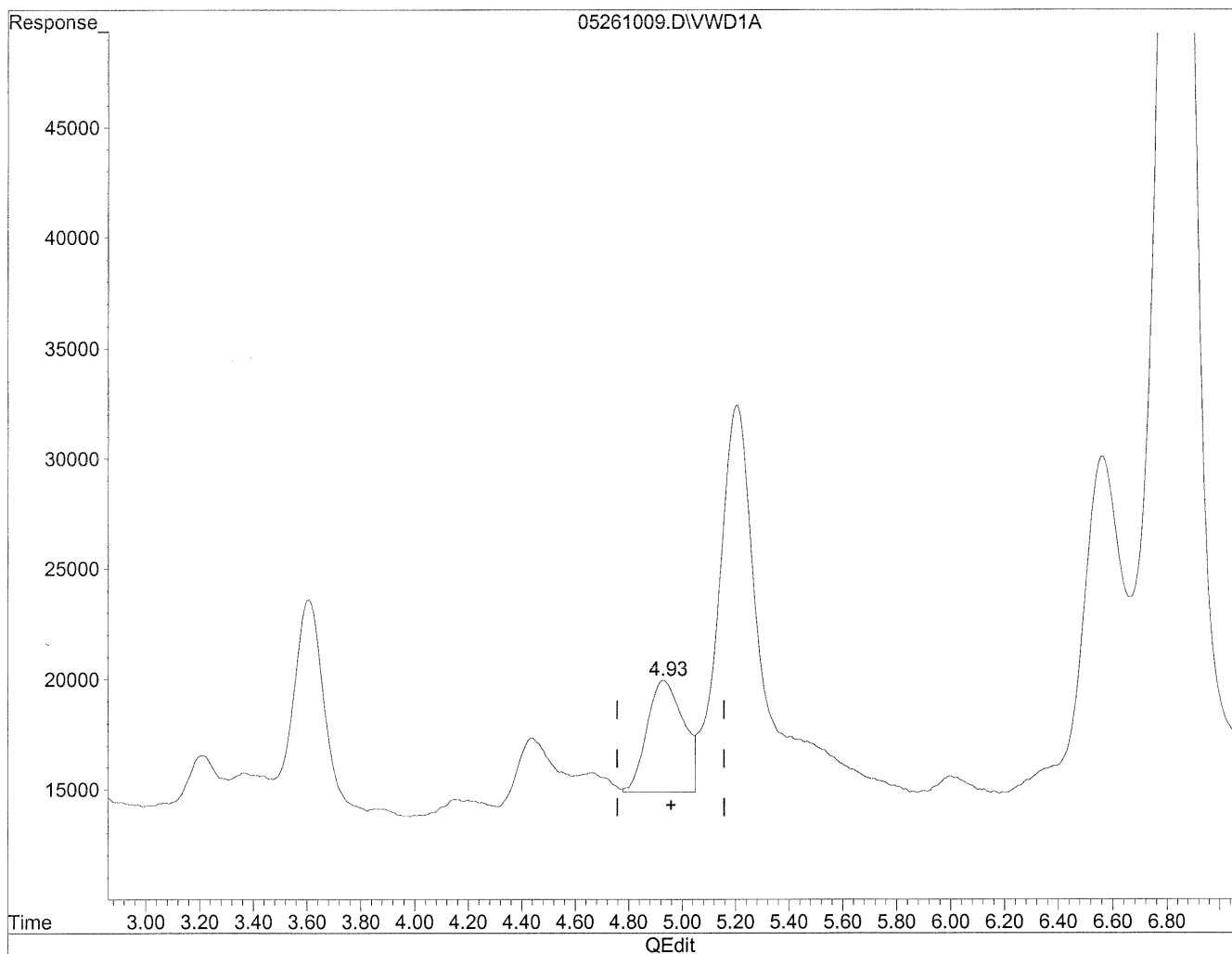
4.93min 153.922ng/ml

response 546069

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261009.D Vial: 106
Acq On : 26-May-2010, 12:48 Operator: MD
Sample : P1001793-022 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.93min 139.548ng/ml m

response 495075

BC
MD
6/4/10

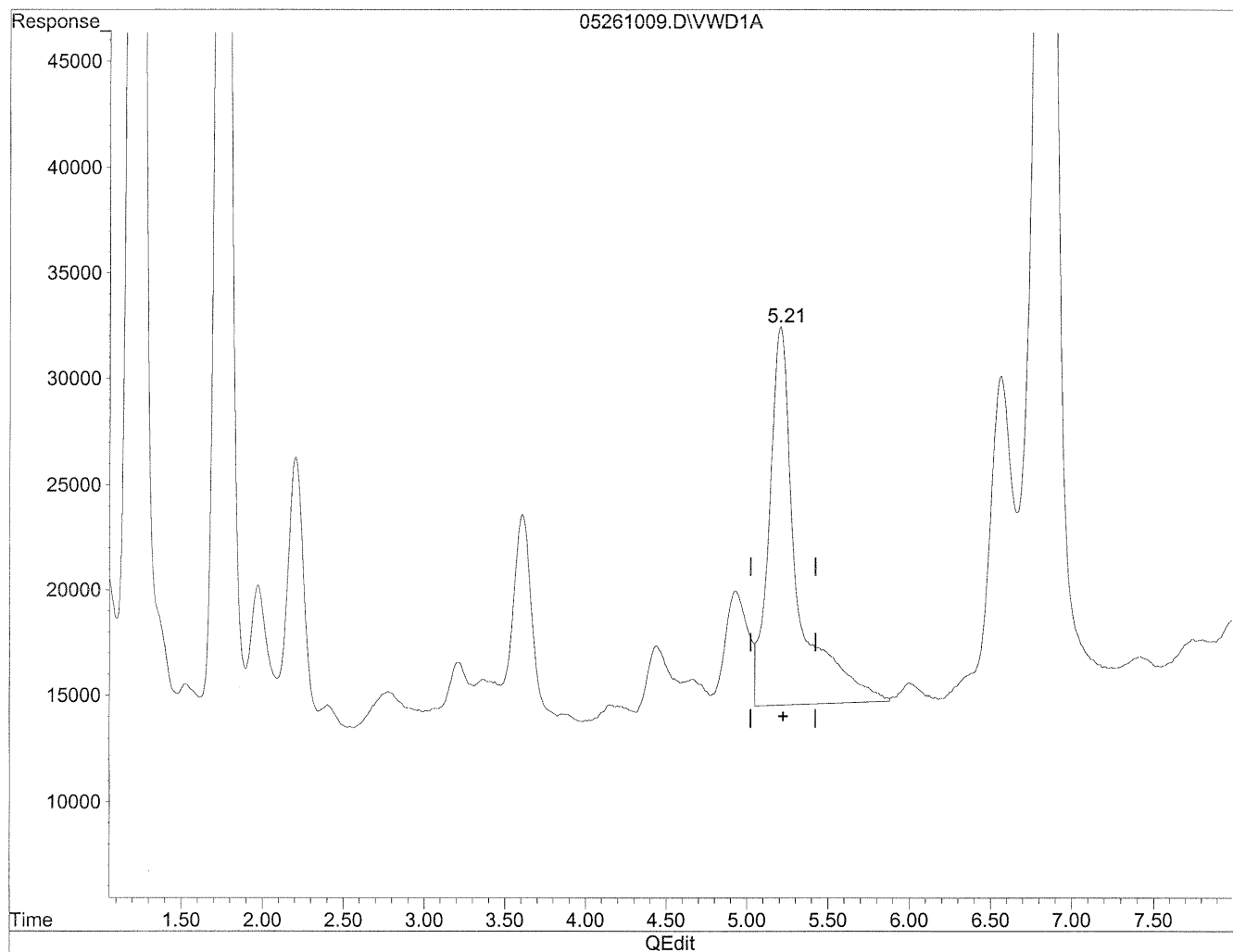
HC
6/4/10

(+) = Expected Retention Time
05261009.D TO110510.M Fri May 28 14:31:46 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261009.D Vial: 106
Acq On : 26-May-2010, 12:48 Operator: MD
Sample : P1001793-022 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.21min 640.031ng/ml

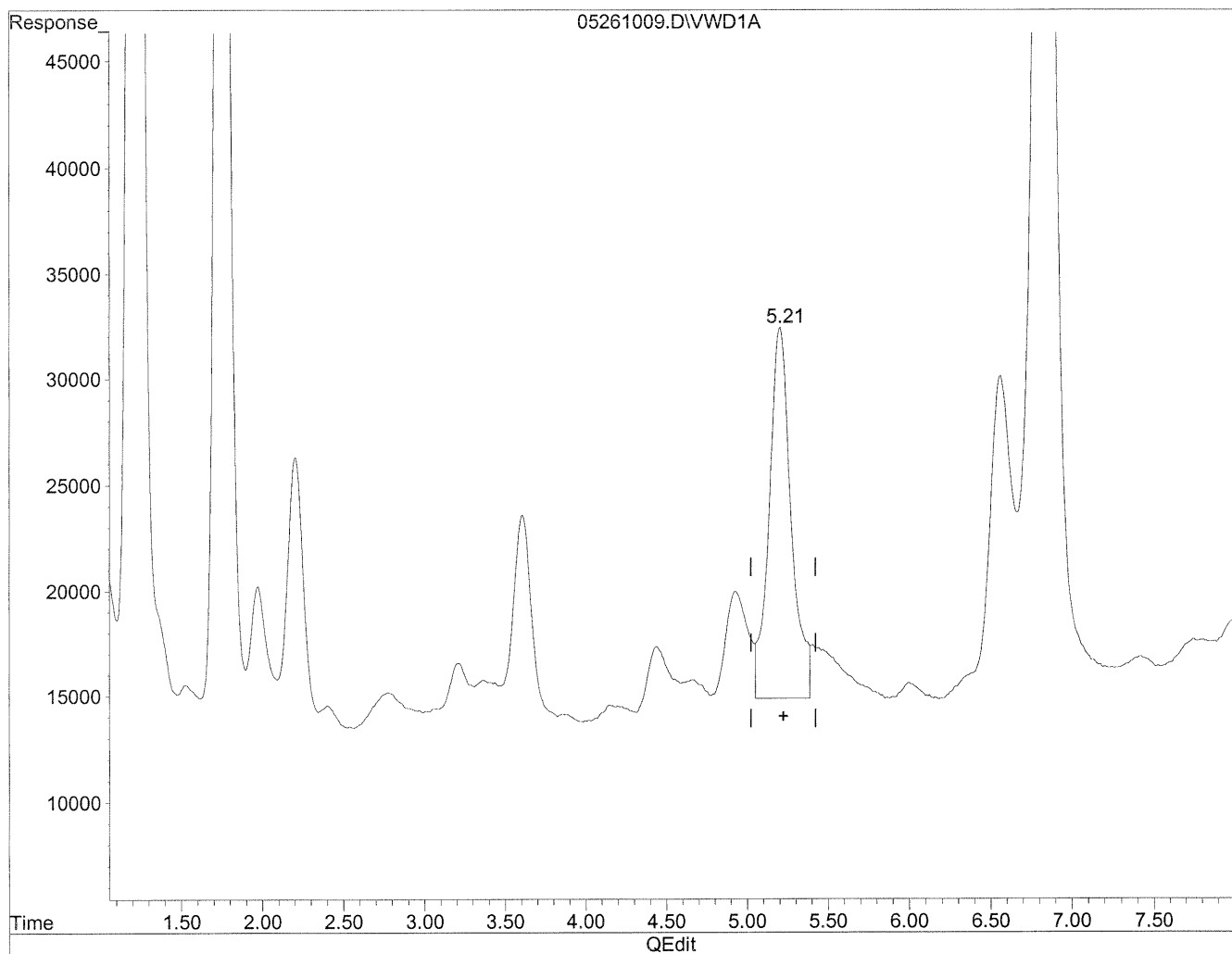
response 2147057

(+) = Expected Retention Time
05261009.D TO110510.M Fri May 28 14:31:57 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261009.D Vial: 106
Acq On : 26-May-2010, 12:48 Operator: MD
Sample : P1001793-022 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.21min 496.437ng/ml m

response 1665356

Sh
MD
6/4/10
H/C
6/4/10

(+) = Expected Retention Time
05261009.D TO110510.M Fri May 28 14:32:08 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110455
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-023

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25 - 5/26/10
Desorption Volume: 2.0 ml
Sampling Time: 20478 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	87	43	0.099	35	0.080	
75-07-0	Acetaldehyde	30	17	0.12	9.7	0.065	
123-38-6	Propionaldehyde	5.0	6.2	0.25	2.6	0.11	
123-72-8	Butyraldehyde	5.3	23	0.89	8.0	0.30	
100-52-7	Benzaldehyde	4.5	2.4	0.11	0.55	0.024	
590-86-3	Isovaleraldehyde	3.0	2.4	0.16	0.69	0.045	
110-62-3	Valeraldehyde	11	19	0.36	5.5	0.10	
66-25-1	n-Hexaldehyde	50	140	0.54	33	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

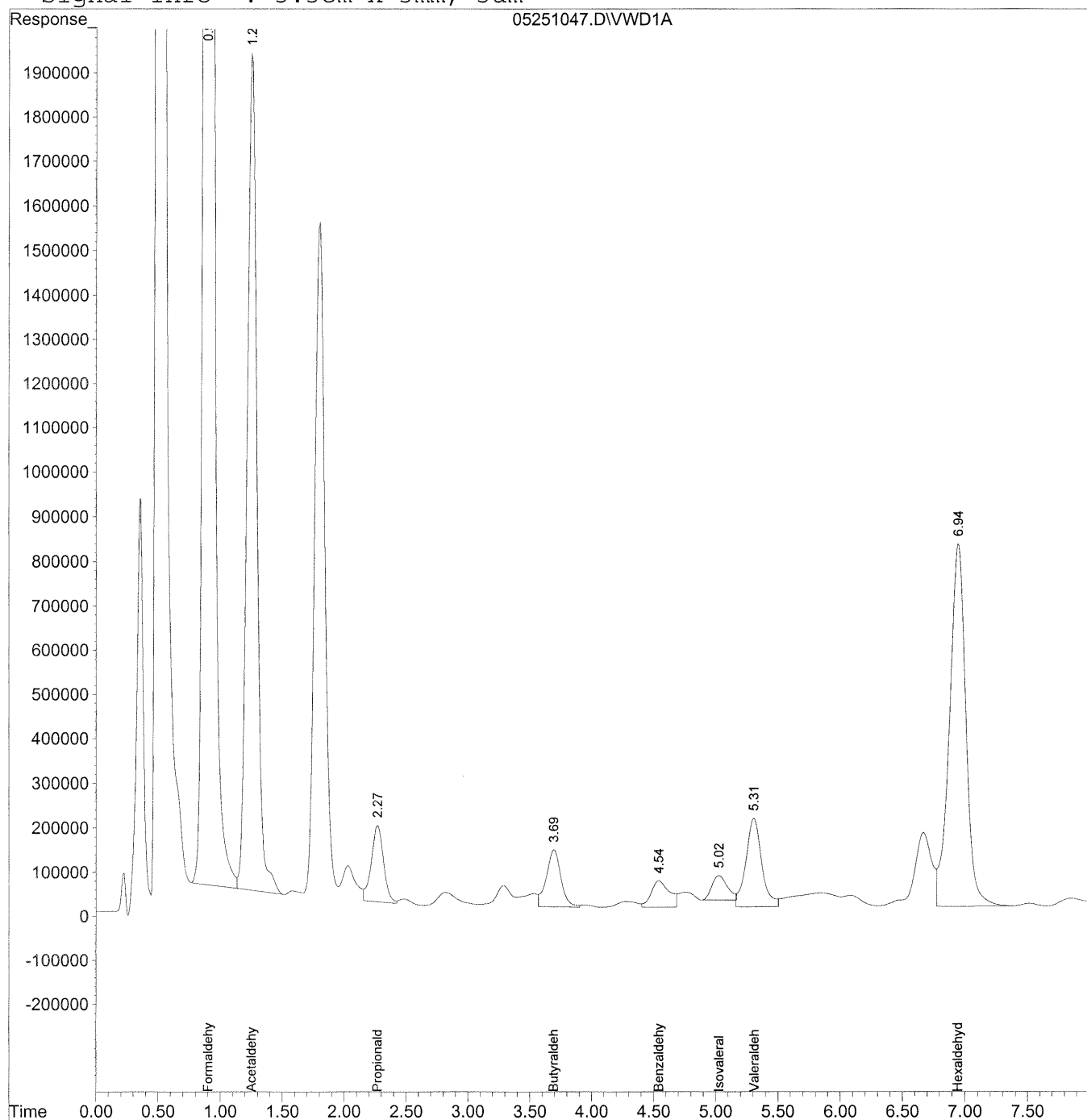
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251047.D Vial: 130
Acq On : 25-May-2010, 19:27 Operator: MD
Sample : P1001793-023 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:46 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251047.D Vial: 130
Acq On : 25-May-2010, 19:27 Operator: MD
Sample : P1001793-023 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:46 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

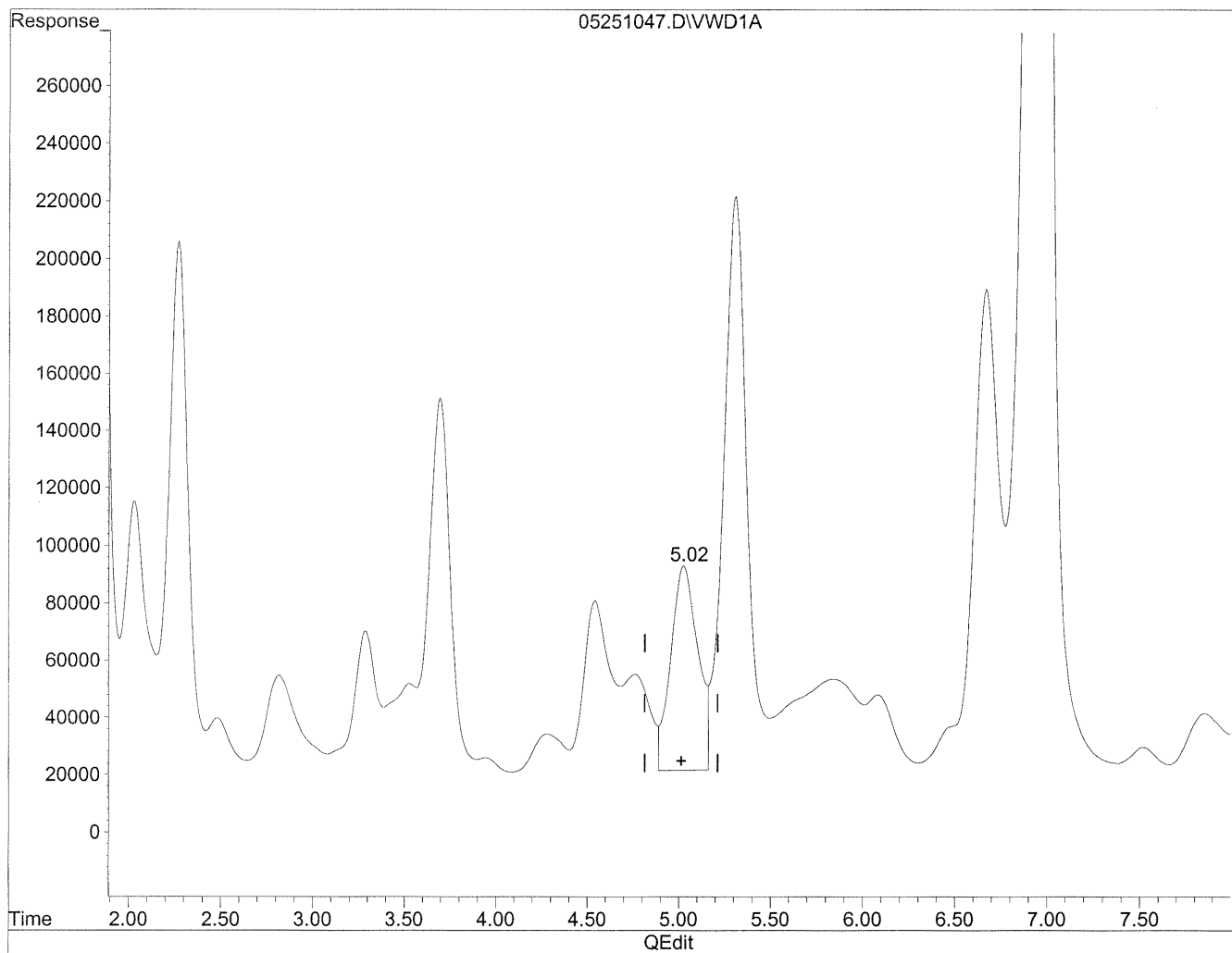
Target Compounds			
1) Formaldehyde	0.90	412673508	44217.192 ng/ml <i>dil</i>
2) Acetaldehyde	1.26	104066619	15451.092 ng/ml <i>dil</i>
3) Propionaldehyde	2.27	12059596	2480.366 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.70	10663989	2646.608 ng/ml
6) Benzaldehyde	4.54	6059080	2238.530 ng/ml
7) Isovaleraldehyde	5.02	4949331	1395.079 ng/mlm *
8) Valeraldehyde	5.31	17861470	5324.448 ng/ml *
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11) Hexaldehyde	6.95	73430191	25537.621 ng/ml <i>dil</i>
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

* Report results from
dilution.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251047.D Vial: 130
Acq On : 25-May-2010, 19:27 Operator: MD
Sample : P1001793-023 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:25 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.03min 2075.819ng/ml

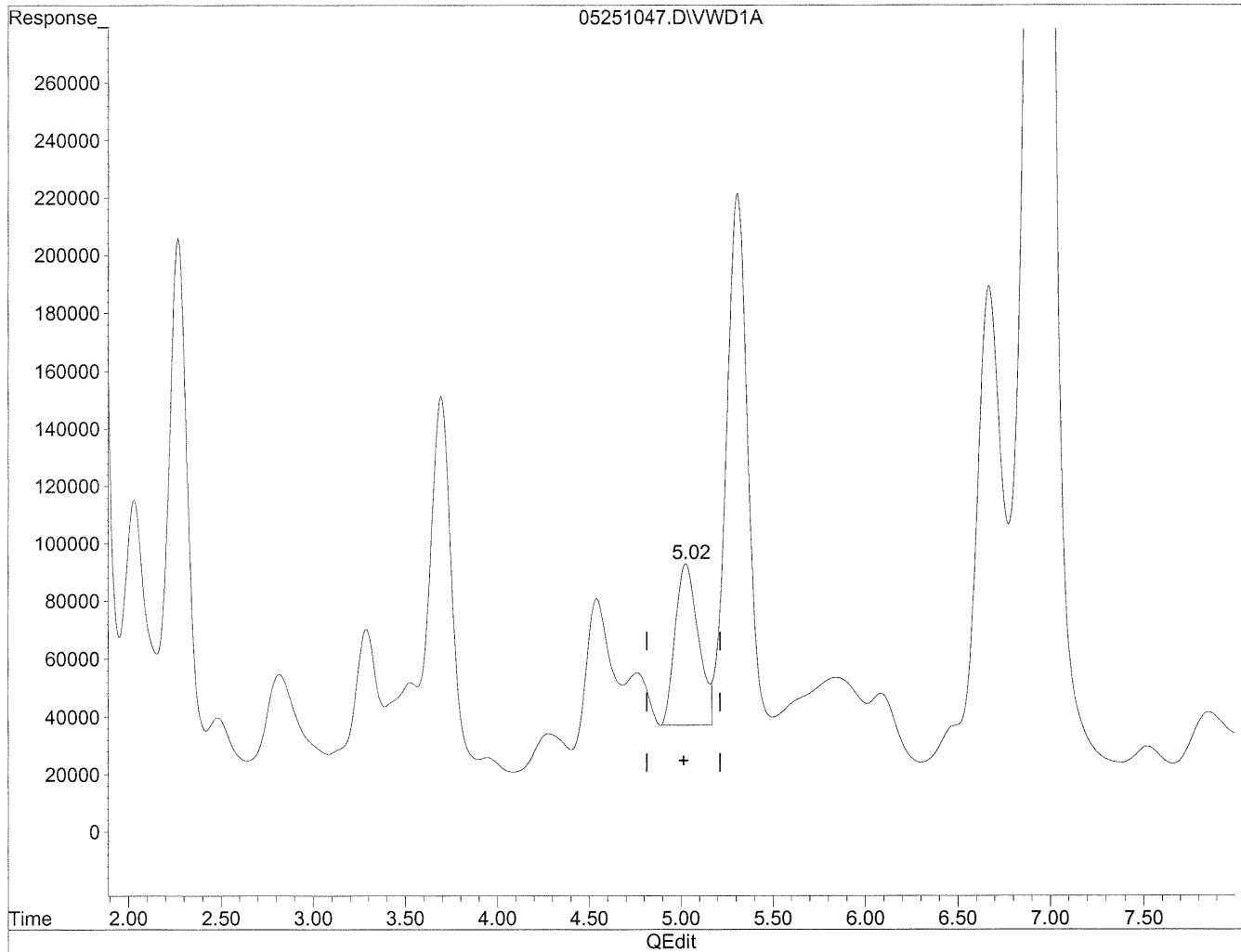
response 7364395

(+) = Expected Retention Time
05251047.D TO110510.M Fri May 28 14:46:06 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251047.D Vial: 130
Acq On : 25-May-2010, 19:27 Operator: MD
Sample : P1001793-023 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:25 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.02min 1395.079ng/ml m

response 4949331

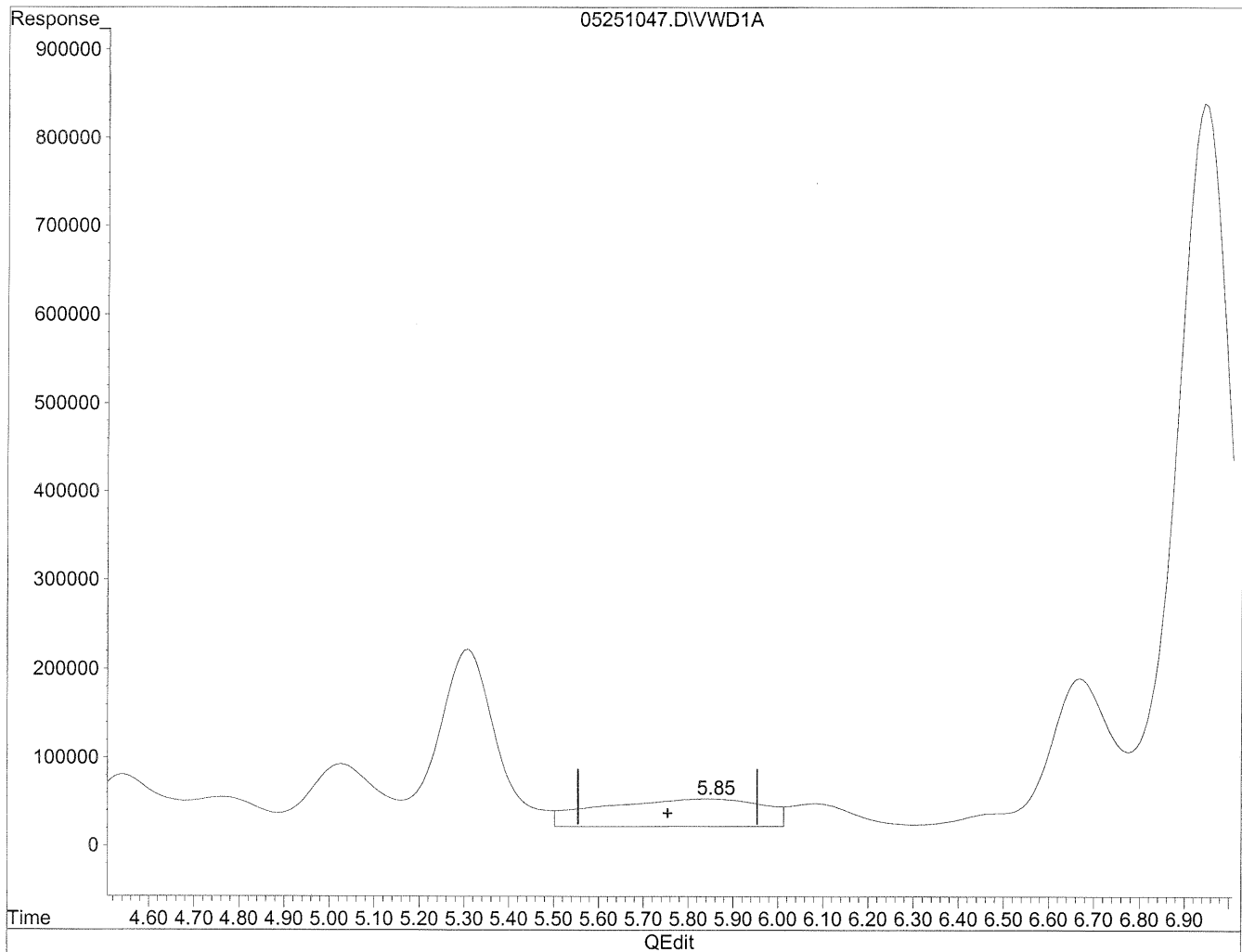
PZ
MD
6/4/10

HC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251047.D Vial: 130
Acq On : 25-May-2010, 19:27 Operator: MD
Sample : P1001793-023 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:01 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

5.85min 3883.669ng/ml

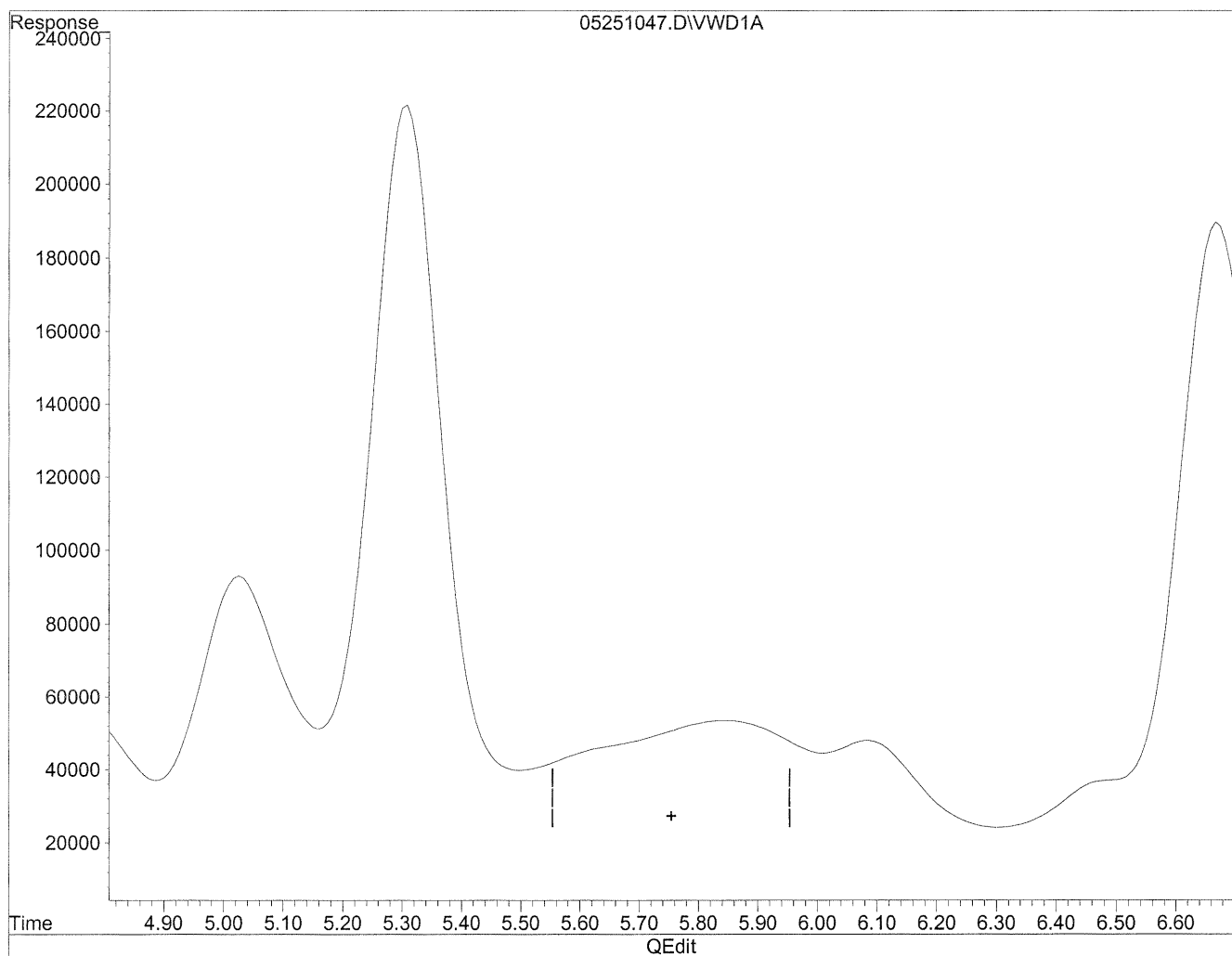
response 7905351

(+) = Expected Retention Time
05251047.D TO110510.M Fri May 28 11:25:30 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251047.D Vial: 130
Acq On : 25-May-2010, 19:27 Operator: MD
Sample : P1001793-023 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:01 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde
0.00min 0.000ng/ml d
response 0

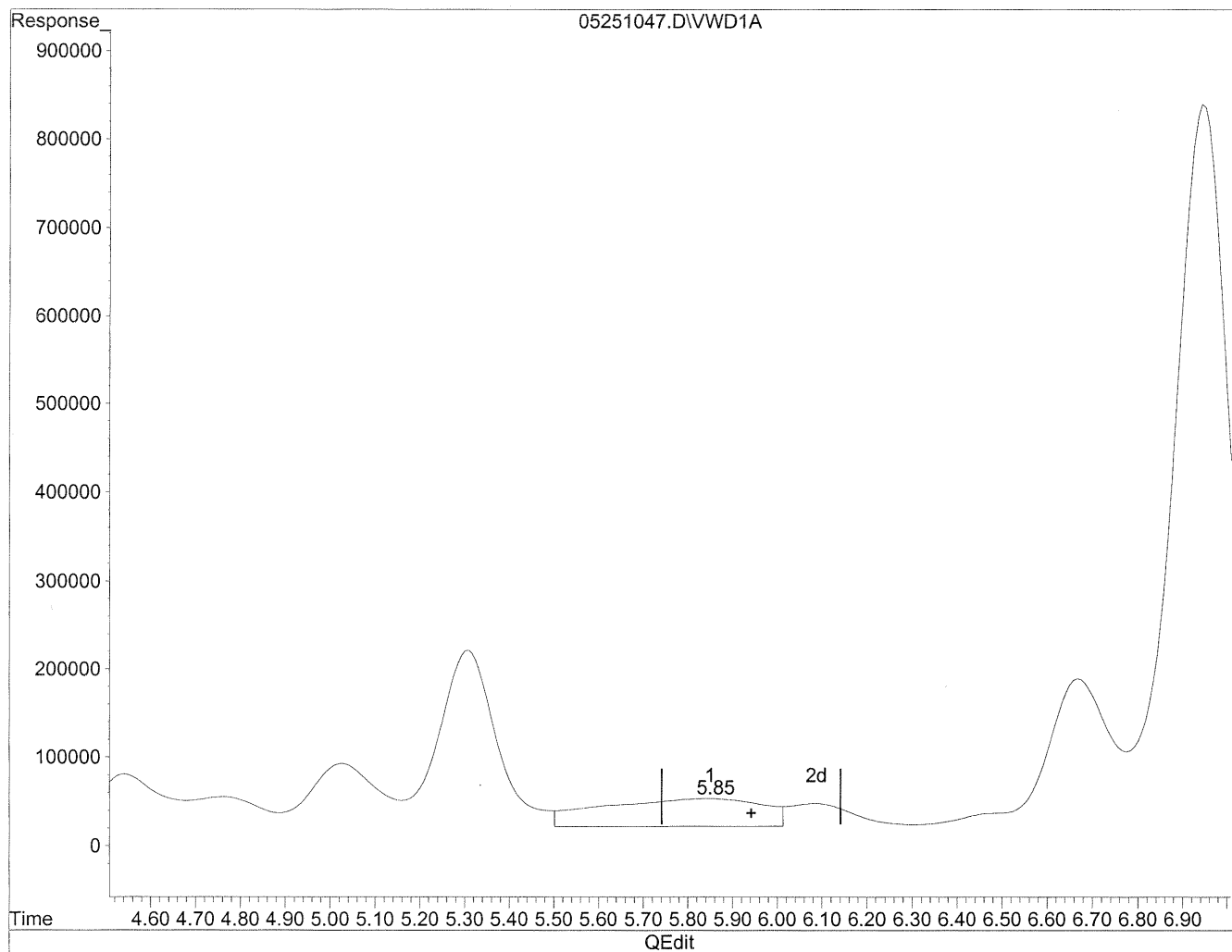
Not real
MD
6/6/10

HC
6/14/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251047.D Vial: 130
Acq On : 25-May-2010, 19:27 Operator: MD
Sample : P1001793-023 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:01 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

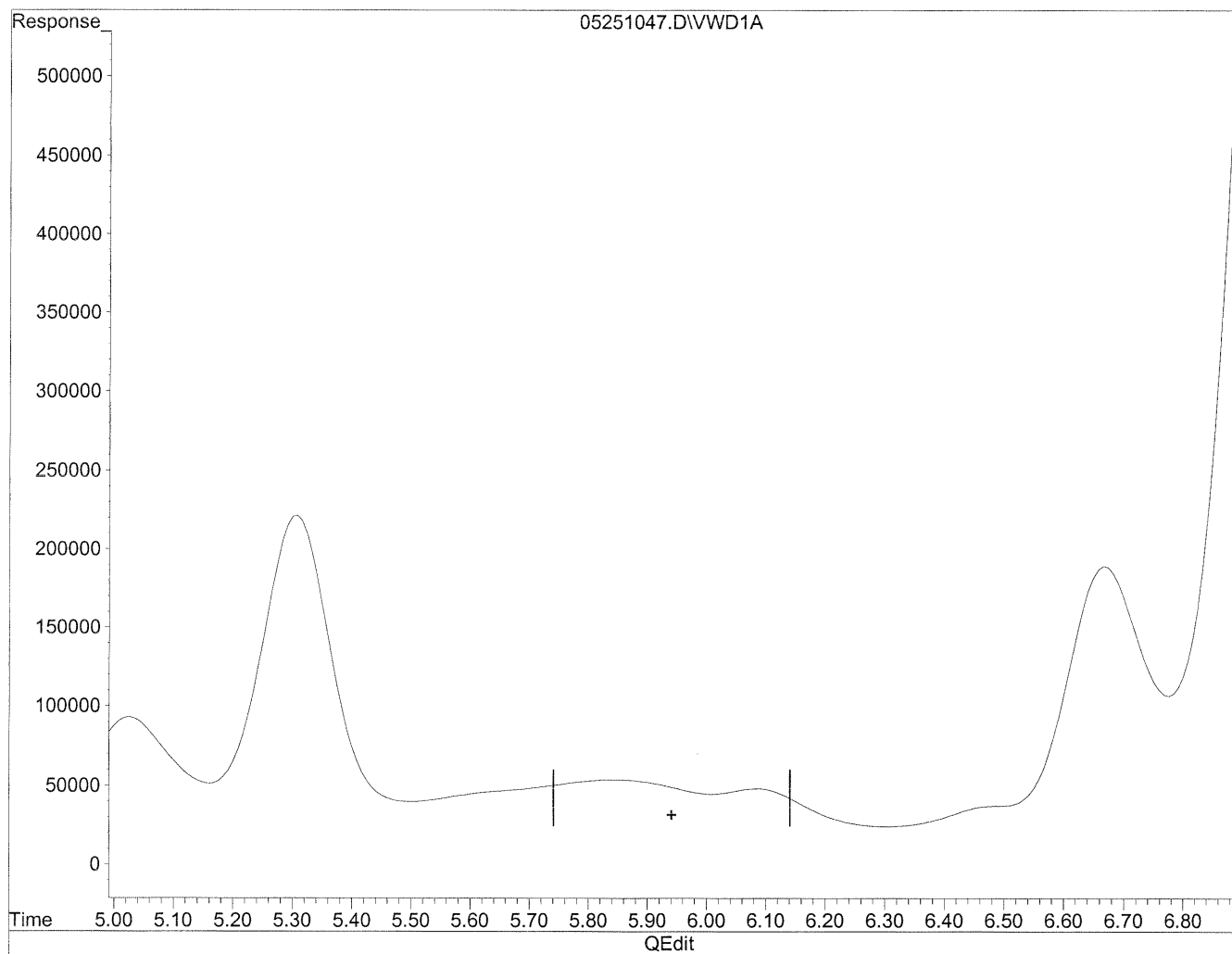


(10) m,p-Tolualdehyde
5.85min 3374.593ng/ml
response 7905351

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251047.D Vial: 130
Acq On : 25-May-2010, 19:27 Operator: MD
Sample : P1001793-023 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:01 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

0.00min 0.000ng/ml d

response 0

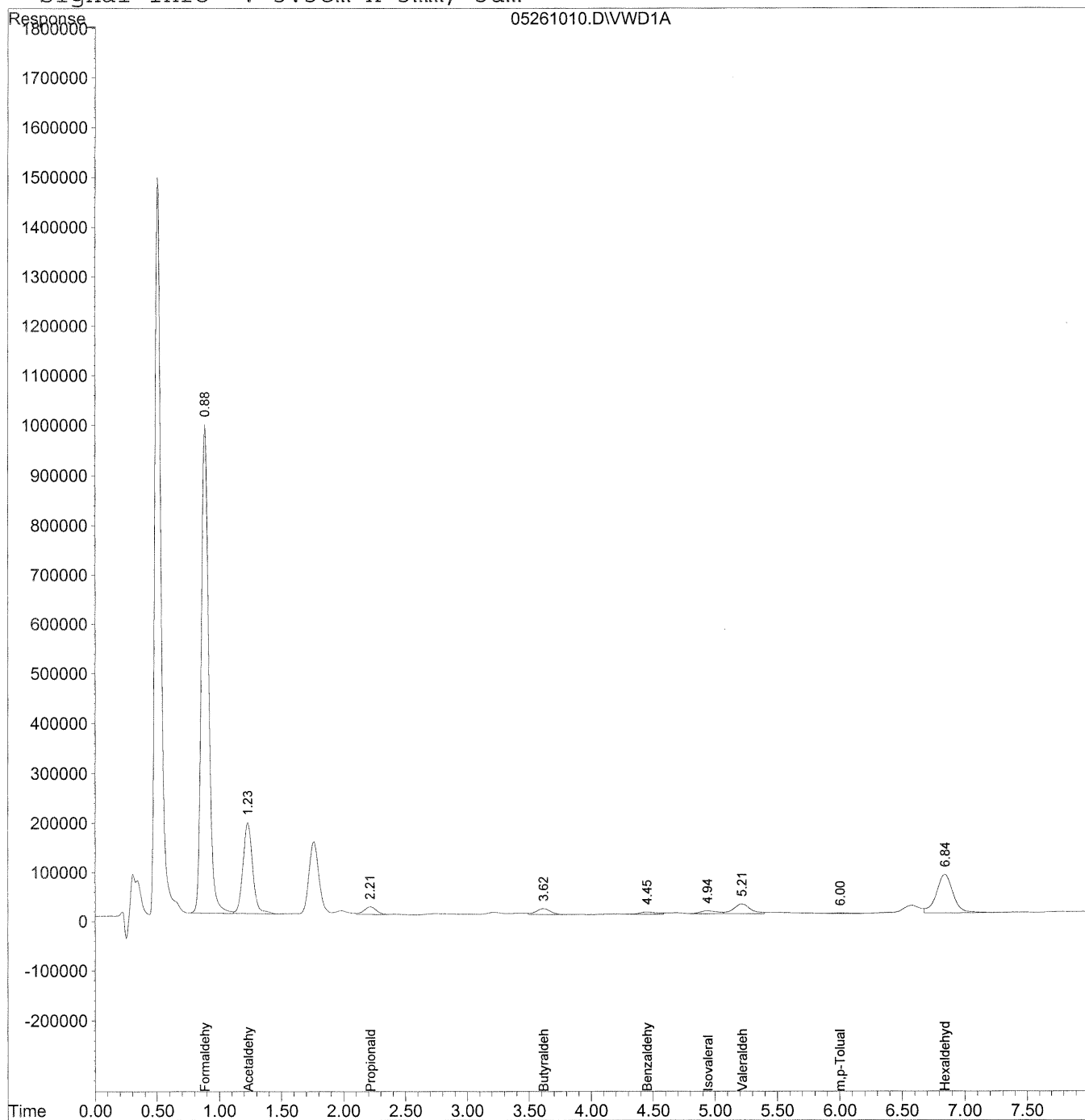
*not
real
6/4/10*

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261010.D Vial: 107
Acq On : 26-May-2010, 12:59 Operator: MD
Sample : P1001793-023 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:33 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261010.D Vial: 107
Acq On : 26-May-2010, 12:59 Operator: MD
Sample : P1001793-023 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:33 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

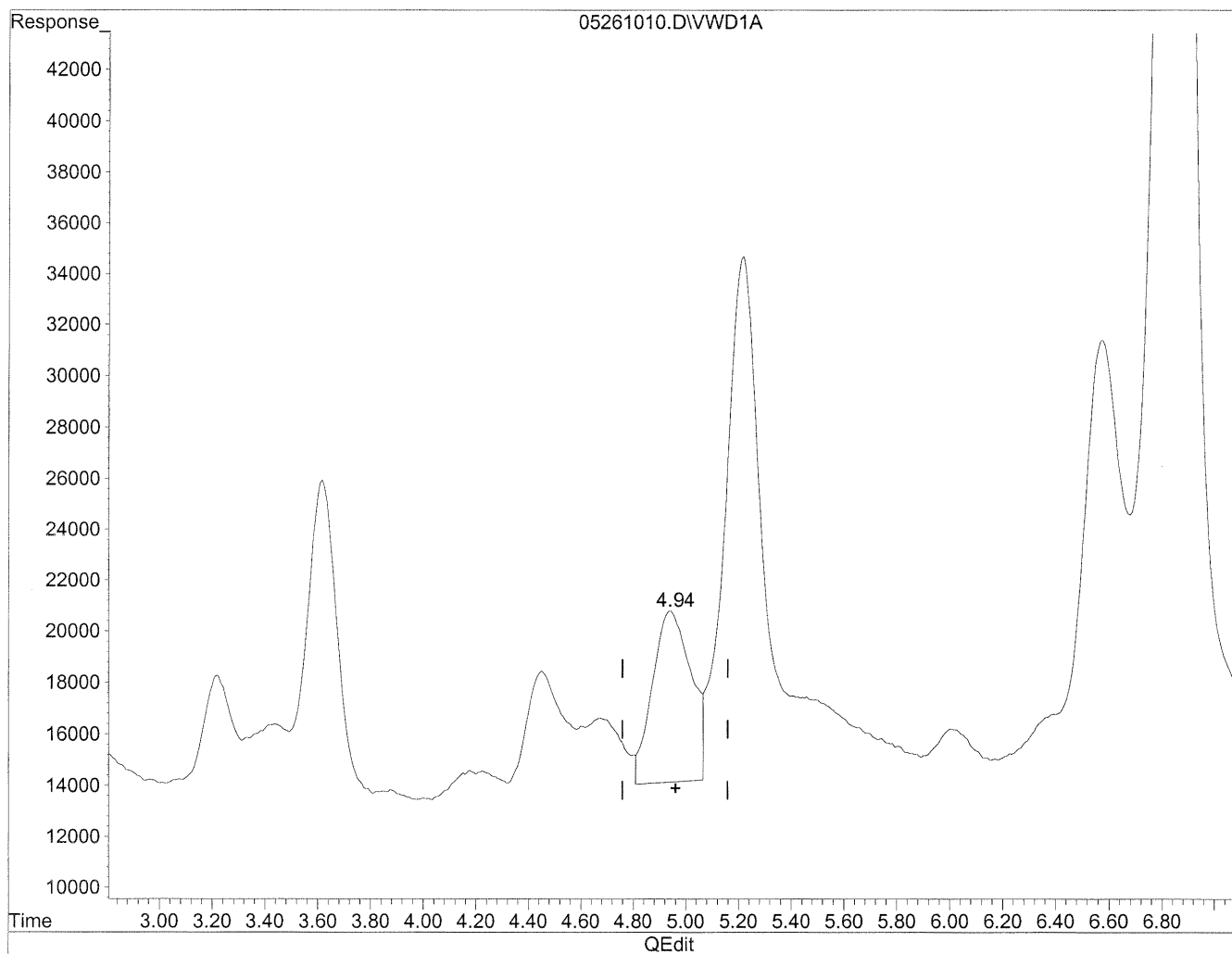
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	40698667	4360.786 ng/ml
2) Acetaldehyde	1.23	10125980	1503.435 ng/ml
3) Propionaldehyde	2.22	1098175	225.868 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.62	977308	242.550 ng/ml
6) Benzaldehyde	4.45	449757	166.163 ng/ml
7) Isovaleraldehyde	4.94	538954	151.916 ng/mlm
8) Valeraldehyde	5.21	1791263	533.970 ng/mlm
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	6.01f	112013	47.816 ng/ml
11) Hexaldehyde	6.85	7259206	2524.614 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261010.D Vial: 107
Acq On : 26-May-2010, 12:59 Operator: MD
Sample : P1001793-023 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration

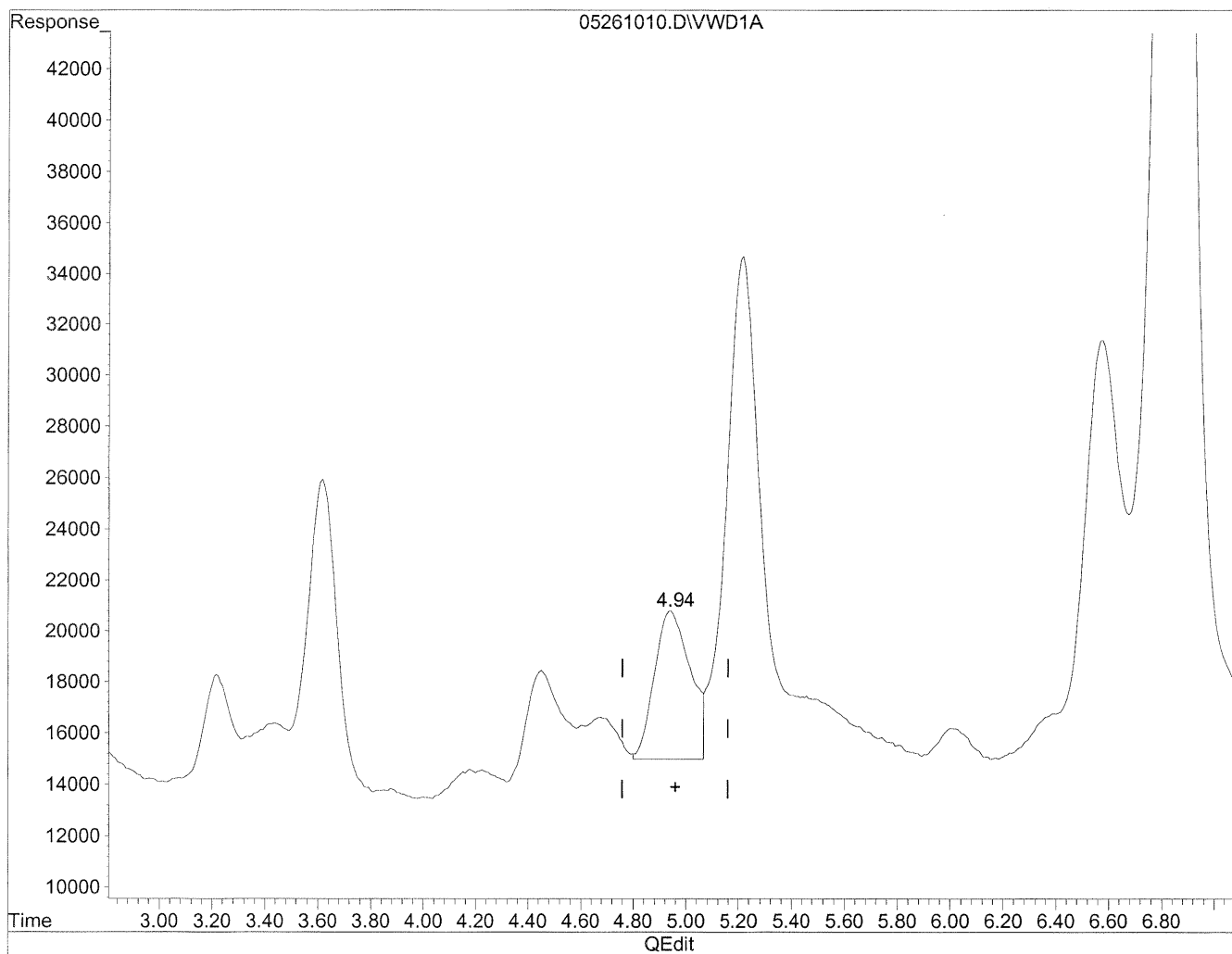


(7) Isovaleraldehyde
4.94min 190.654ng/ml
response 676384

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261010.D Vial: 107
Acq On : 26-May-2010, 12:59 Operator: MD
Sample : P1001793-023 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.94min 151.916ng/ml m

response 538954

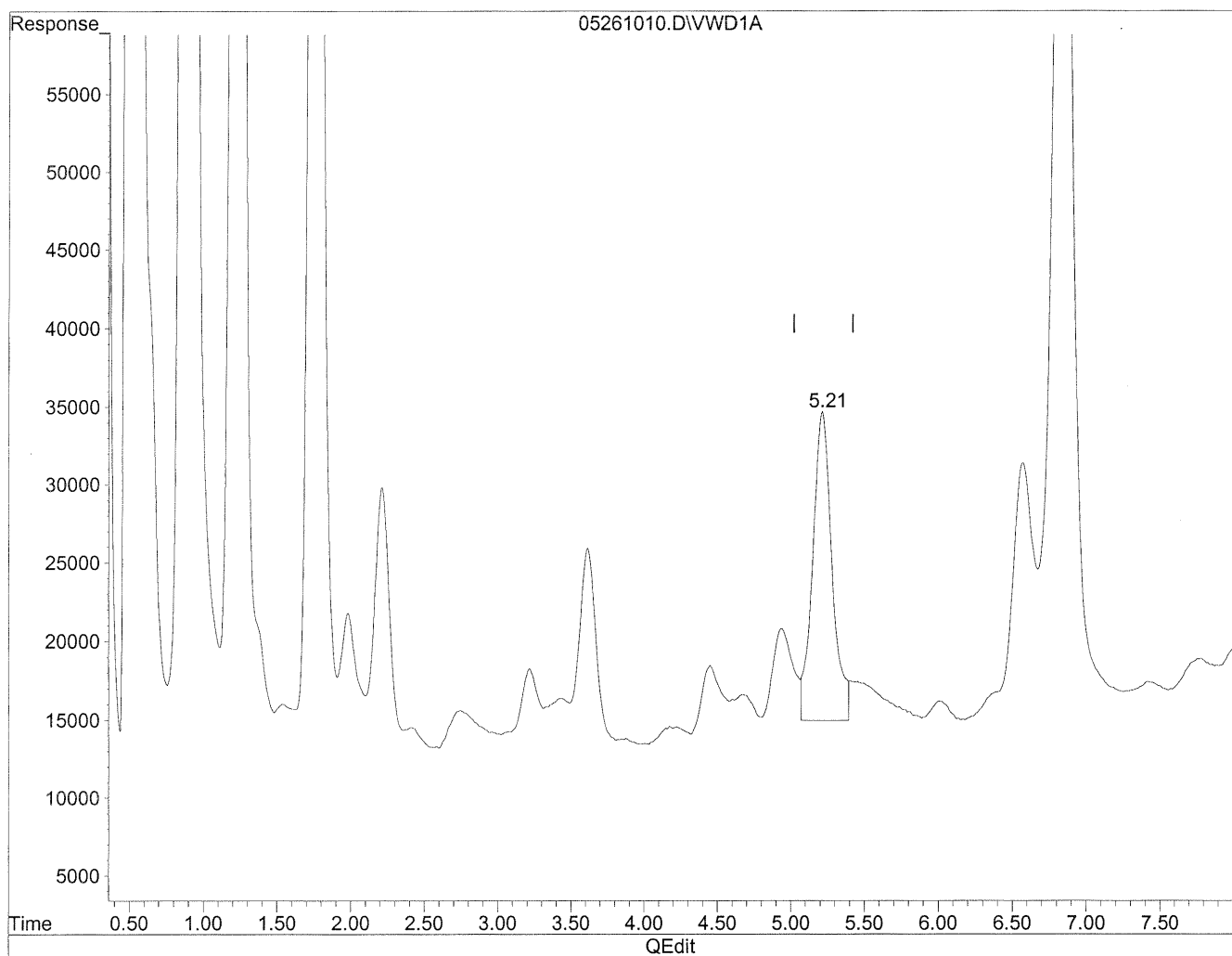
BC
6/4/10
HC
6/14/10

(+) = Expected Retention Time
05261010.D TO110510.M Fri May 28 14:33:16 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261010.D Vial: 107
Acq On : 26-May-2010, 12:59 Operator: MD
Sample : P1001793-023 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.21min 533.970ng/ml m

response 1791263

Sh
MD
6/4/10
HLL
6/4/10

(+) = Expected Retention Time

05261010.D TO110510.M

Fri May 28 14:33:59 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110456
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-024

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/26/10
Desorption Volume: 2.0 ml
Sampling Time: 20478 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	2.7	1.3	0.099	1.1	0.080	
75-07-0	Acetaldehyde	0.86	0.50	0.12	0.28	0.065	
123-38-6	Propionaldehyde	< 0.20	ND	0.25	ND	0.11	
123-72-8	Butyraldehyde	0.26	1.1	0.89	0.39	0.30	
100-52-7	Benzaldehyde	< 0.20	ND	0.11	ND	0.024	
590-86-3	Isovaleraldehyde	0.29	0.23	0.16	0.066	0.045	
110-62-3	Valeraldehyde	< 0.20	ND	0.36	ND	0.10	
66-25-1	n-Hexaldehyde	0.21	0.56	0.54	0.14	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

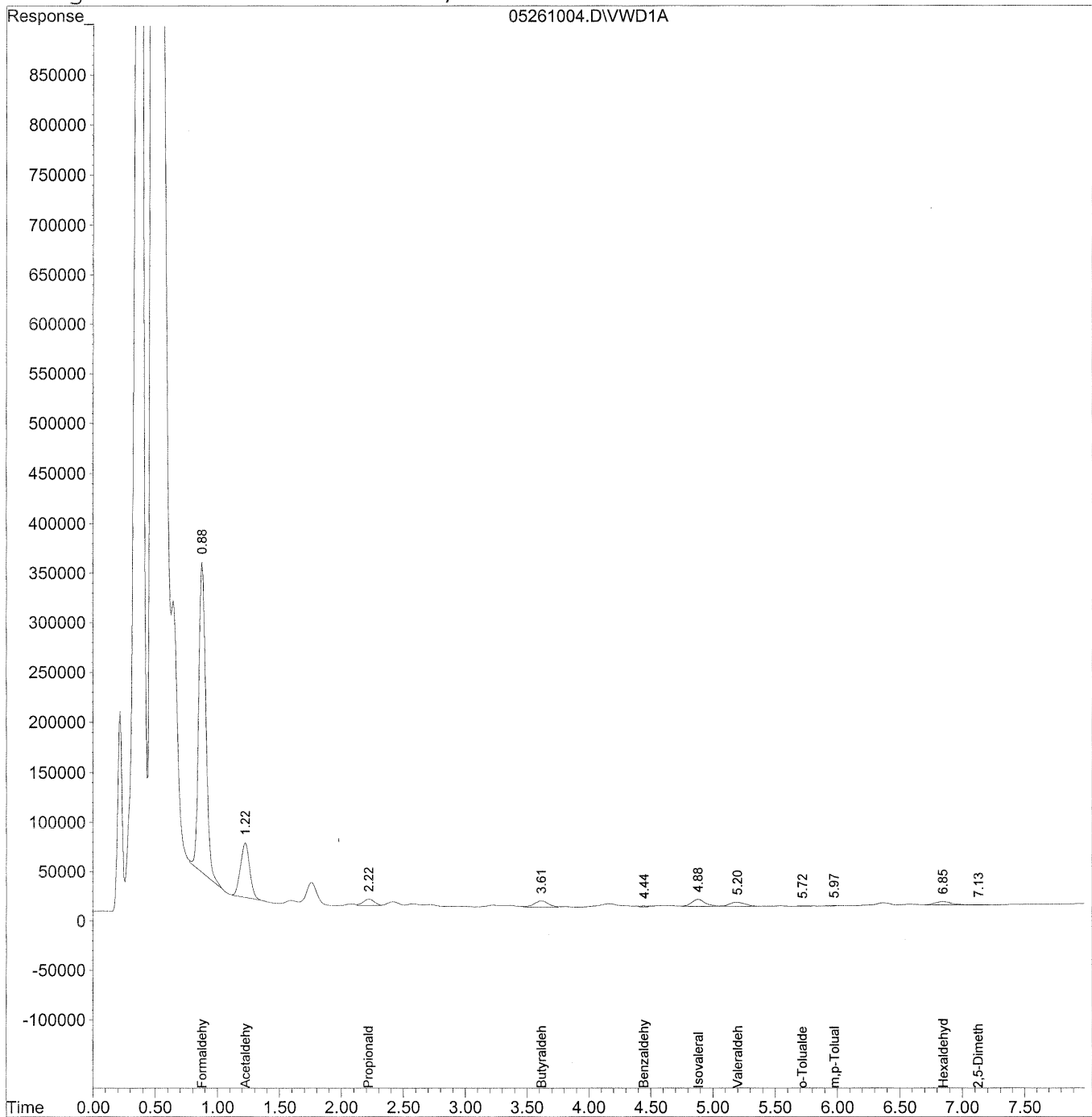
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:26 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:26 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

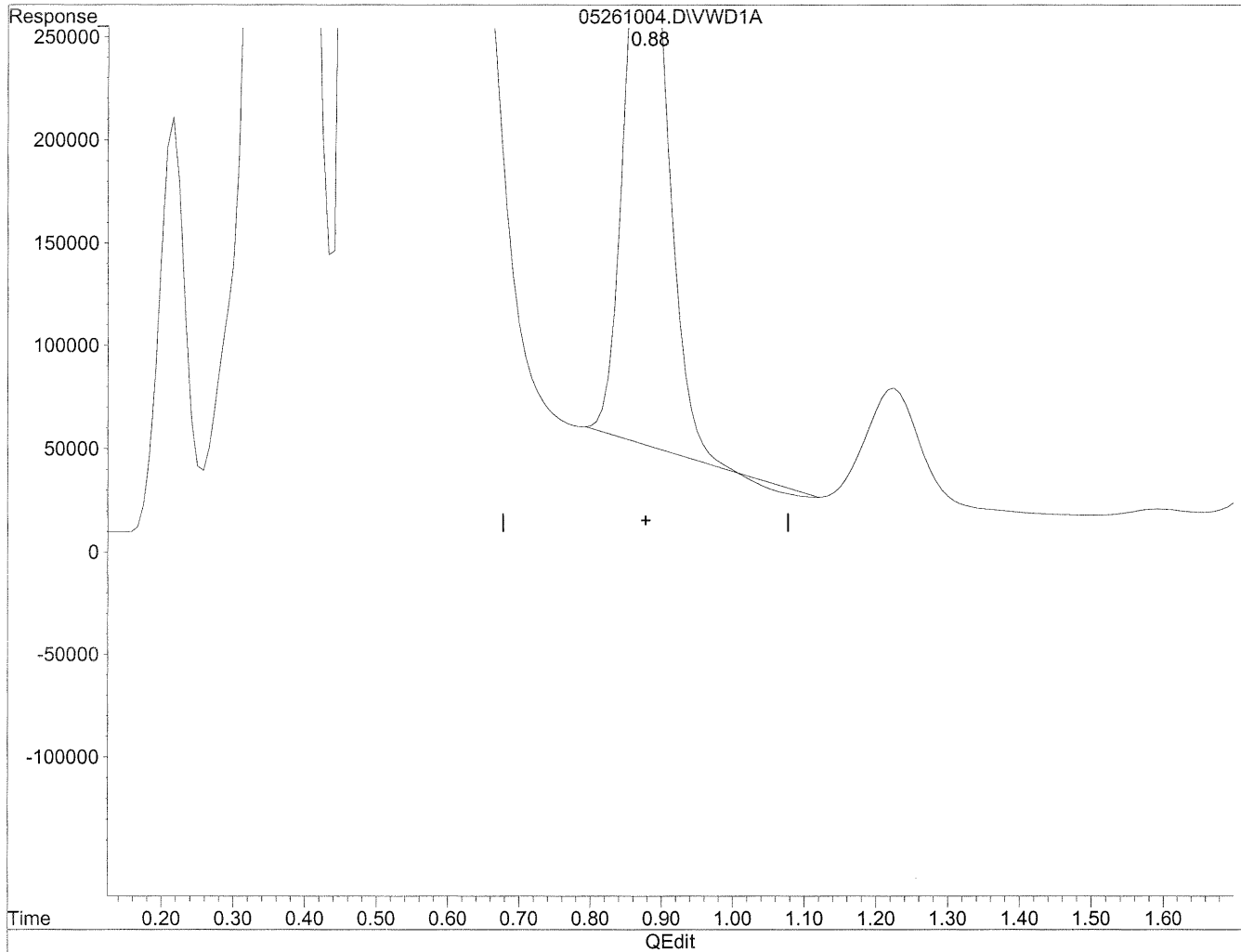
Compound		R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.88	12482734	1337.502	ng/mlm
2)	Acetaldehyde	1.22	2880487	427.675	ng/mlm
3)	Propionaldehyde	2.22	383240	78.823	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	3.61	519204	128.857	ng/mlm
6)	Benzaldehyde	4.45	42560	15.724	ng/ml
7)	Isovaleraldehyde	4.88	512757	144.532	ng/mlm
8)	Valeraldehyde	5.20	333985	99.560	ng/mlm
9)	o-Tolualdehyde	5.72	18703	9.188	ng/ml
10)	m,p-Tolualdehyde	5.98	22075	9.423	ng/ml
11)	Hexaldehyde	6.85	297800	103.569	ng/mlm
12)	2,5-Dimethylbenzaldehyde	7.13	14422	7.496	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration

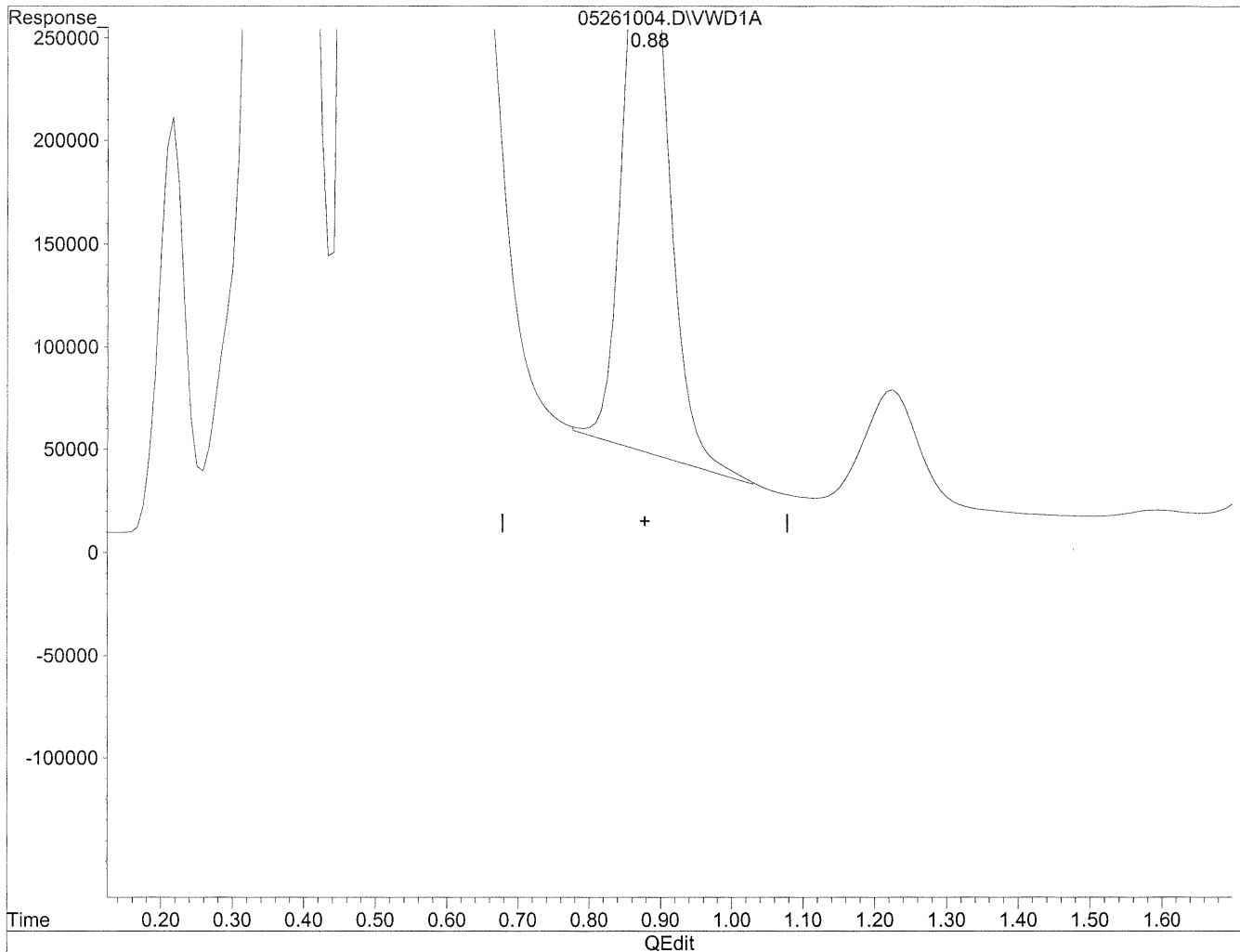


(1) Formaldehyde
0.88min 1286.453ng/ml
response 12006307

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 1337.502ng/ml m

response 12482734

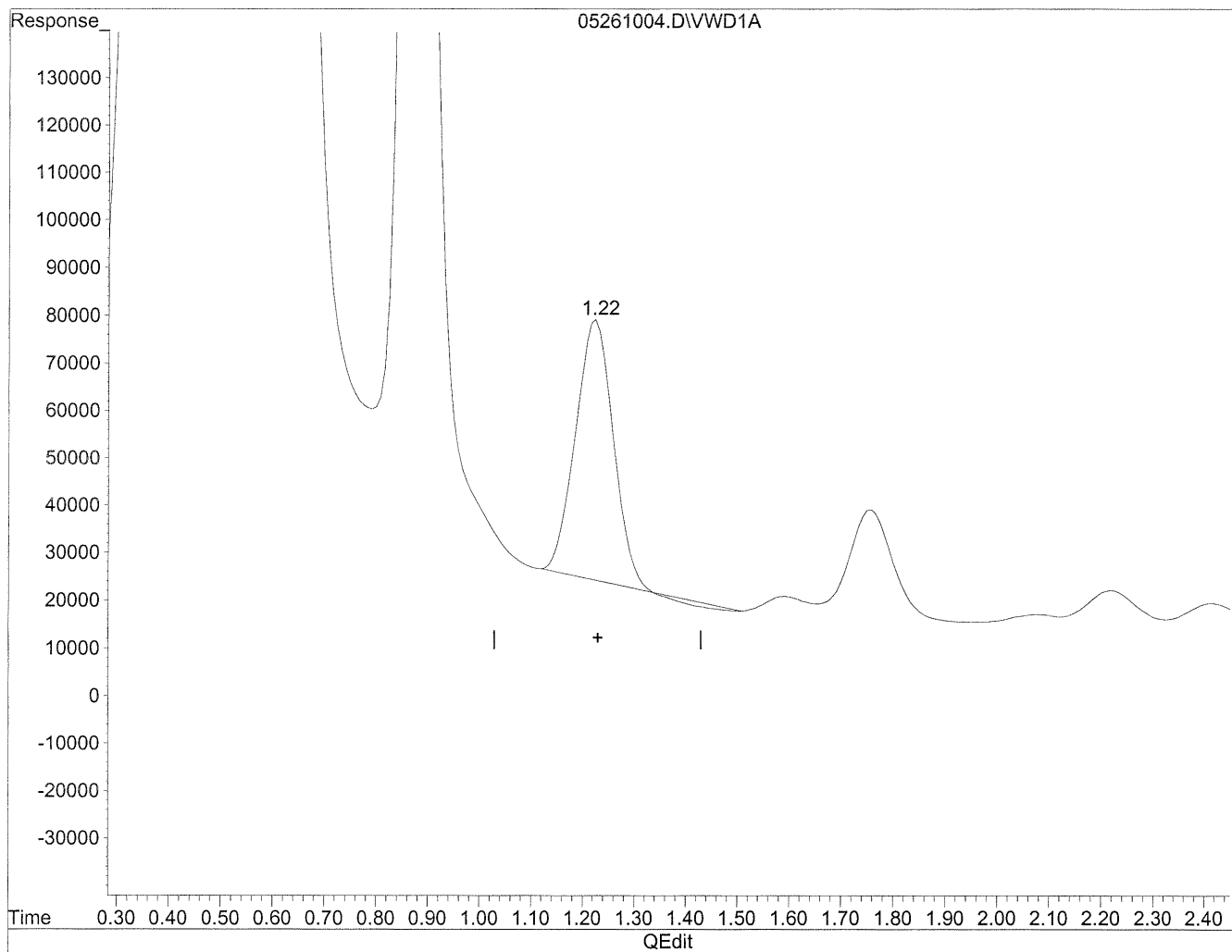
Hc
6/4/10

Be
MD
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



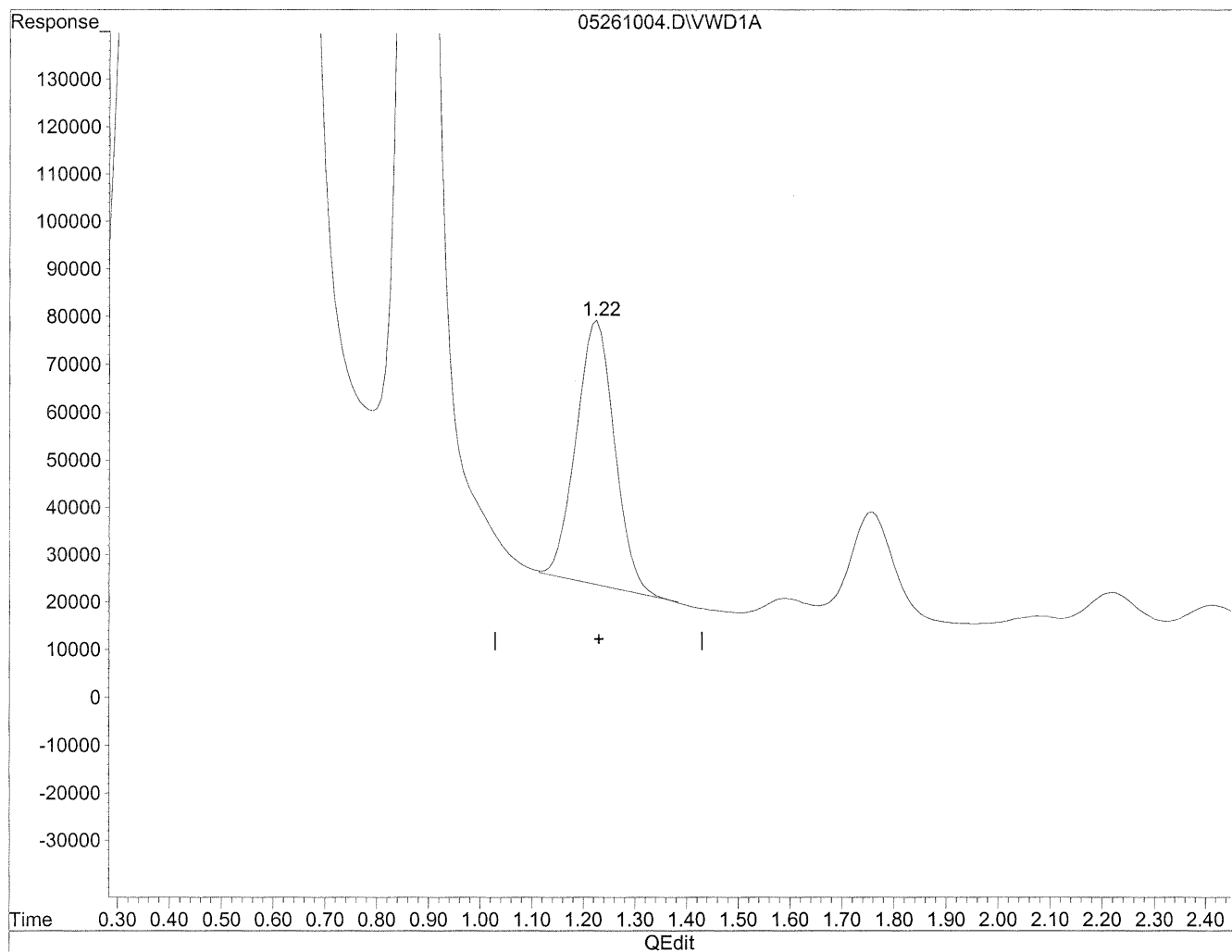
(2) Acetaldehyde
1.23min 410.291ng/ml
response 2763405

(+) = Expected Retention Time
05261004.D TO110510.M Fri May 28 14:24:18 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.22min 427.675ng/ml m

response 2880487

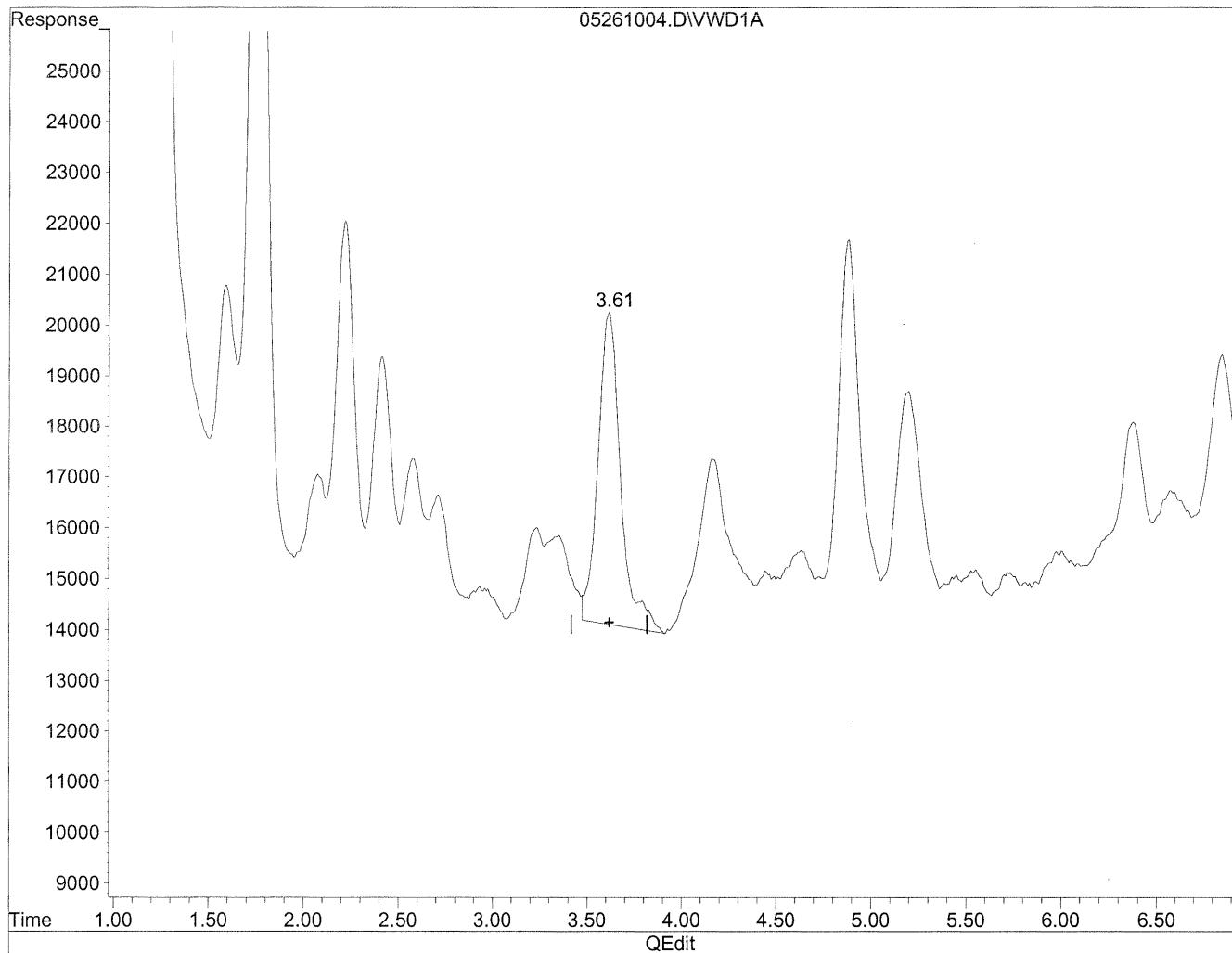
HC
6/4/10
PCE
6/4/10

(+) = Expected Retention Time
05261004.D TO110510.M Fri May 28 14:24:23 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration

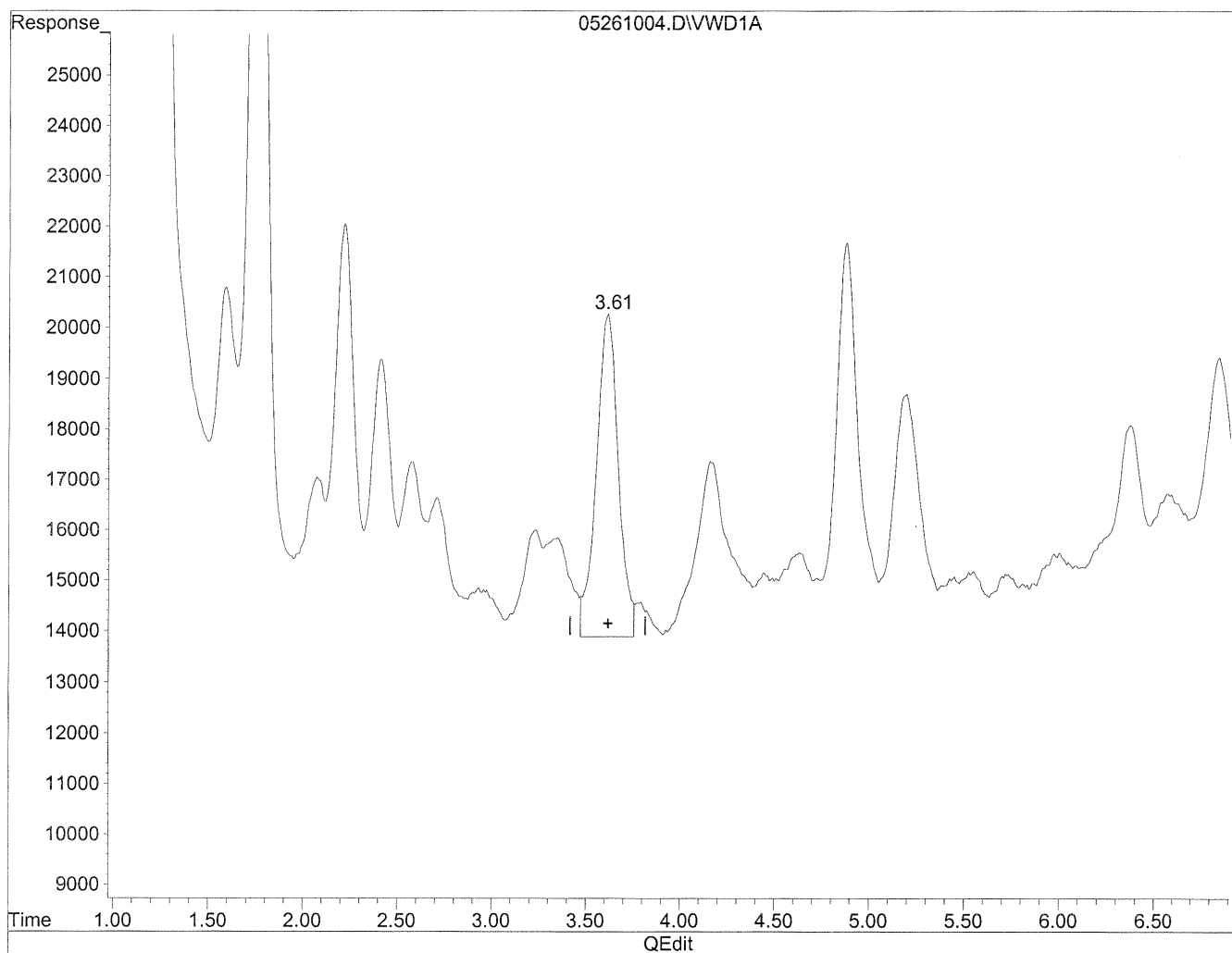


(5) Butyraldehyde
3.62min 127.132ng/ml
response 512255

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.61min 128.857ng/ml m

response 519204

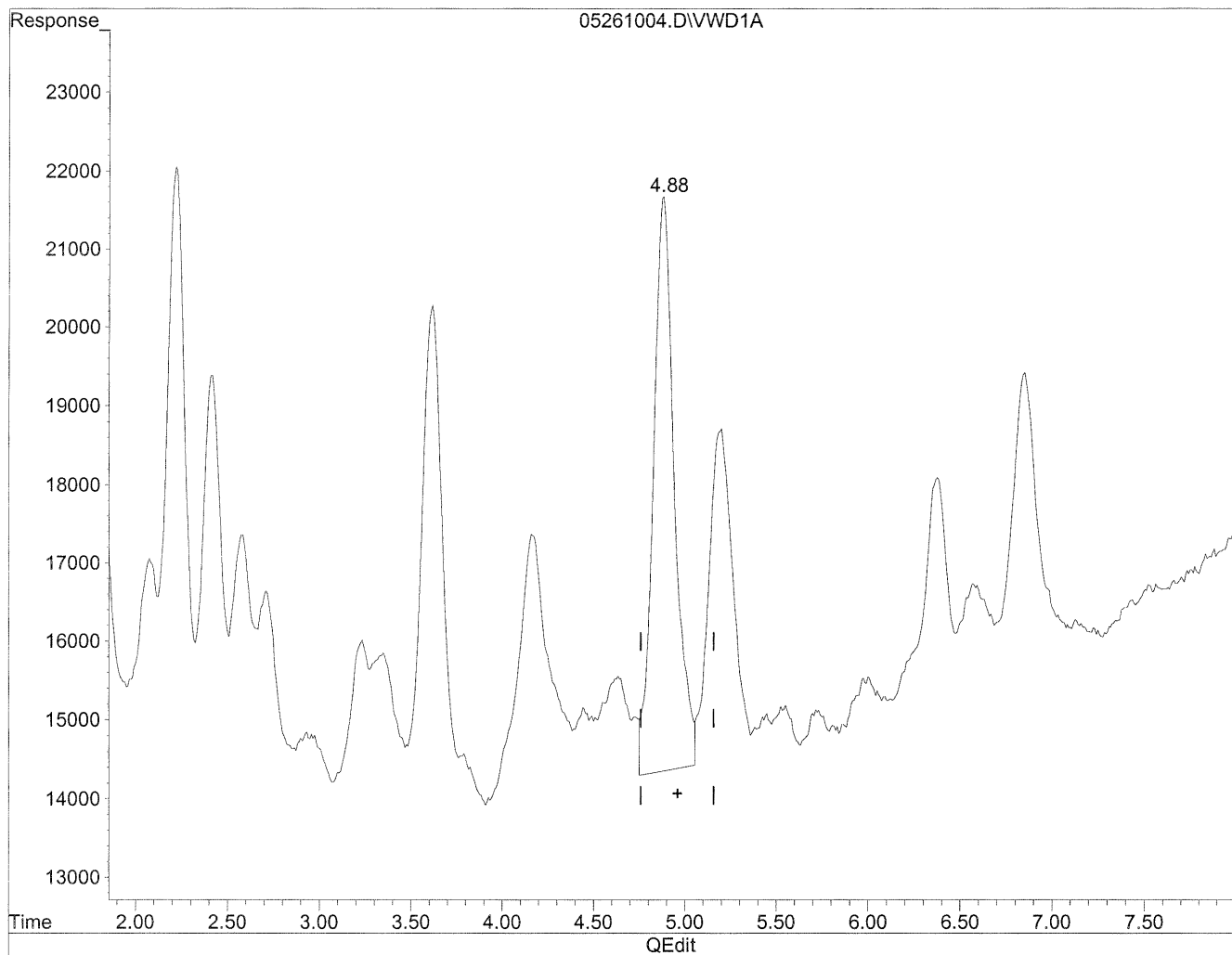
HC
6/4/10

PC, sh
(MD)
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



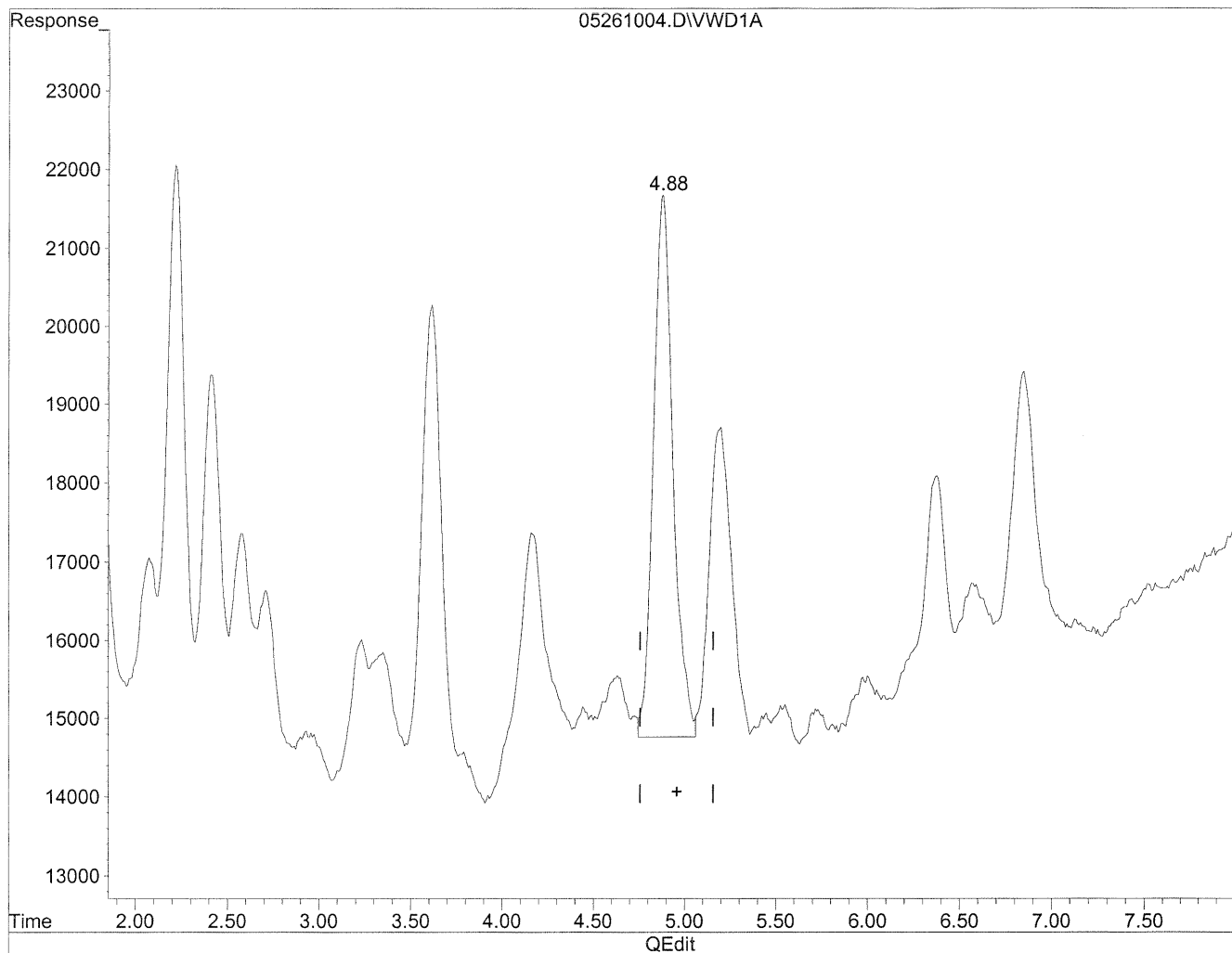
(7) Isovaleraldehyde
4.88min 165.357ng/ml
response 586637

(+) = Expected Retention Time
05261004.D TO110510.M Fri May 28 14:25:38 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.88min 144.532ng/ml m

response 512757

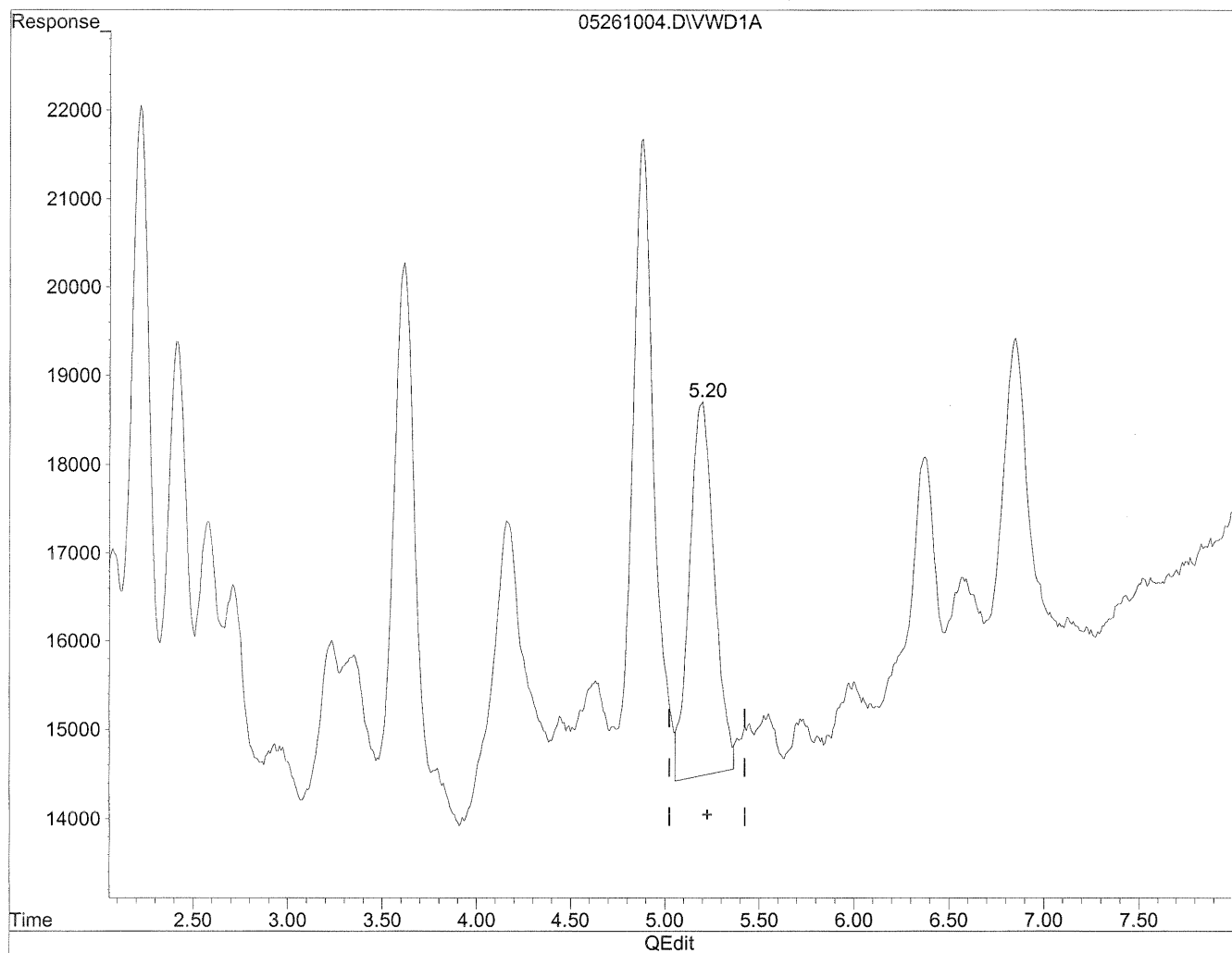
HC
6/4/10

BC
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.20min 115.586ng/ml

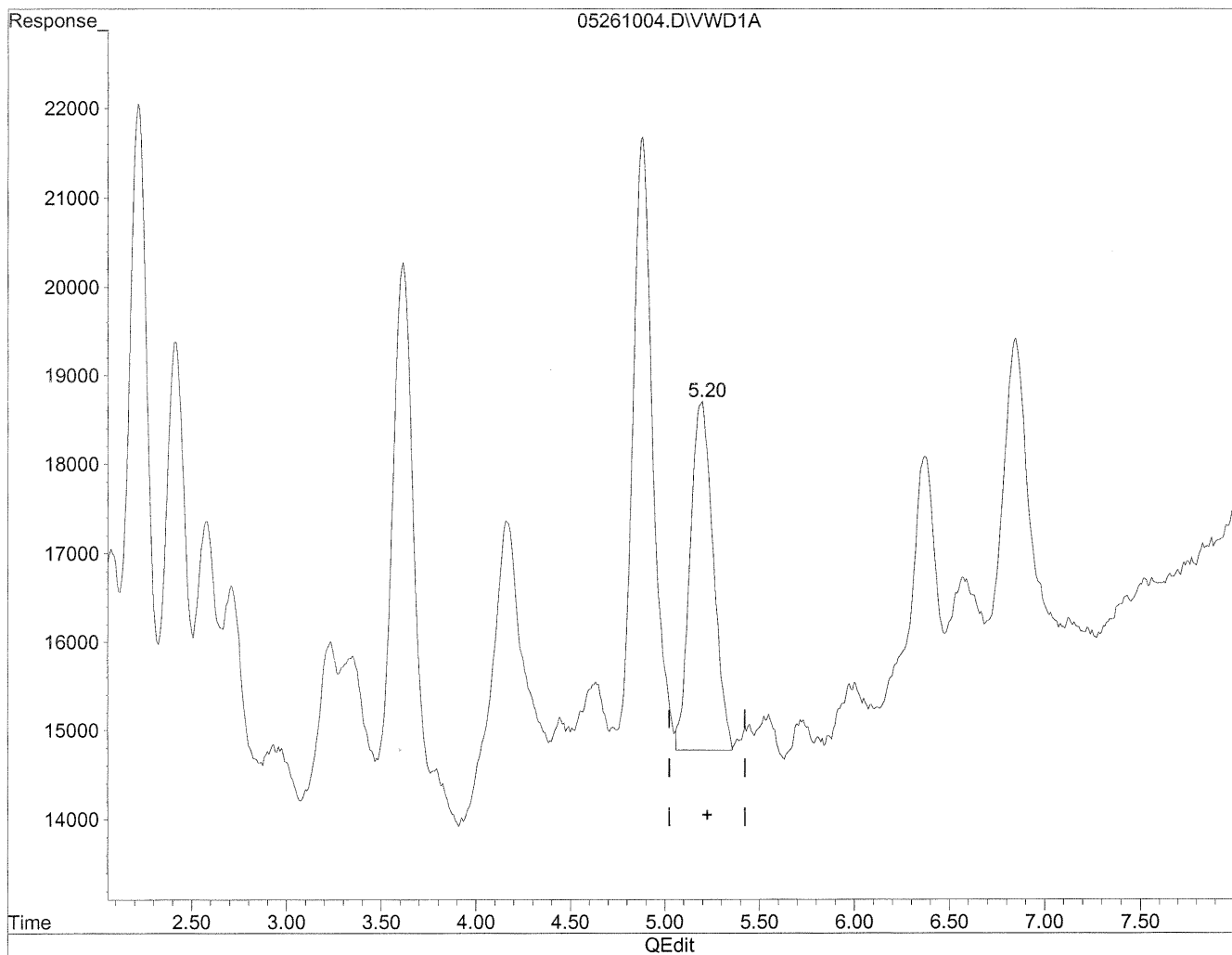
response 387747

(+) = Expected Retention Time
05261004.D TO110510.M Fri May 28 14:25:54 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.20min 99.560ng/ml m

response 333985

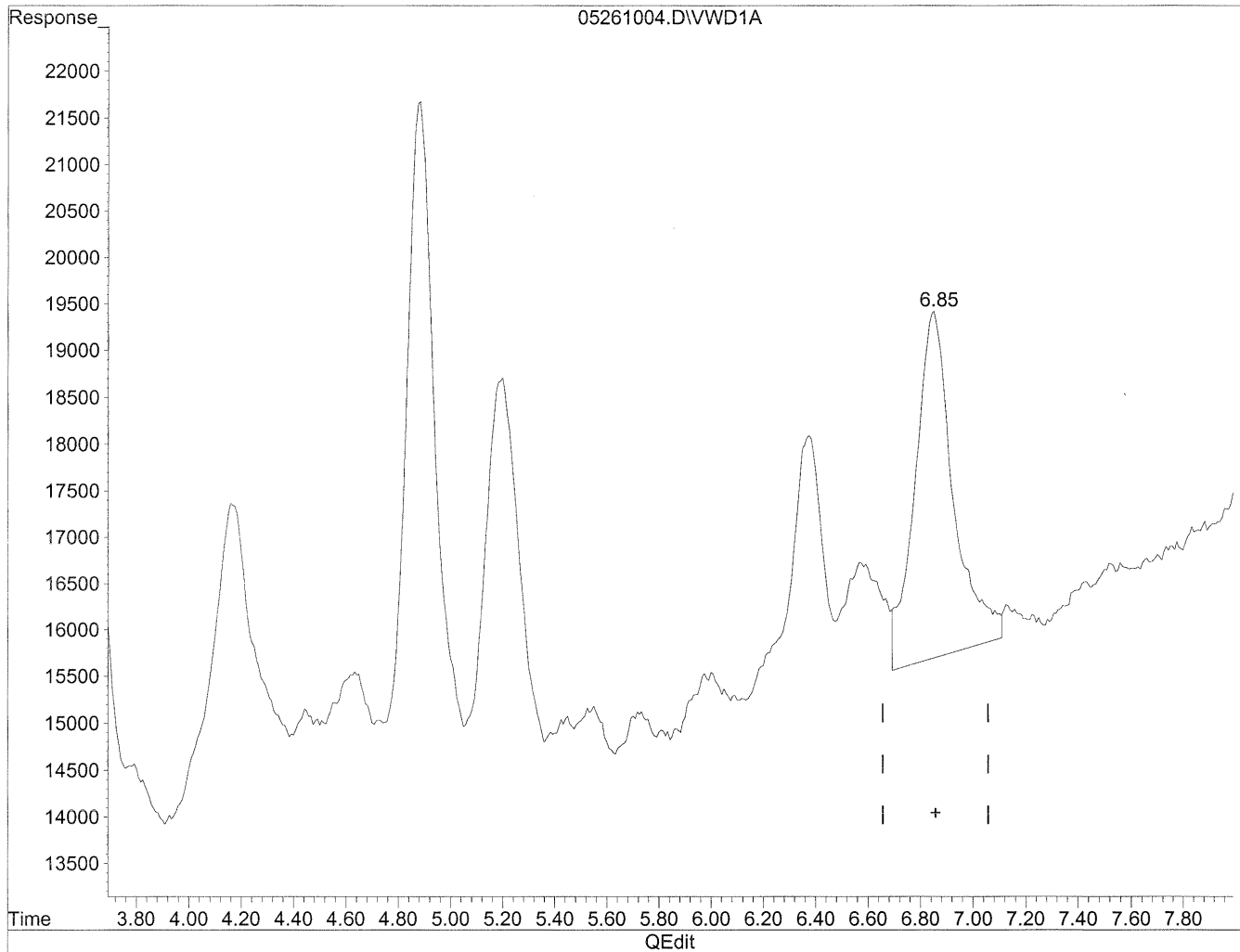
HC
6/4/10

BC
(MD)
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



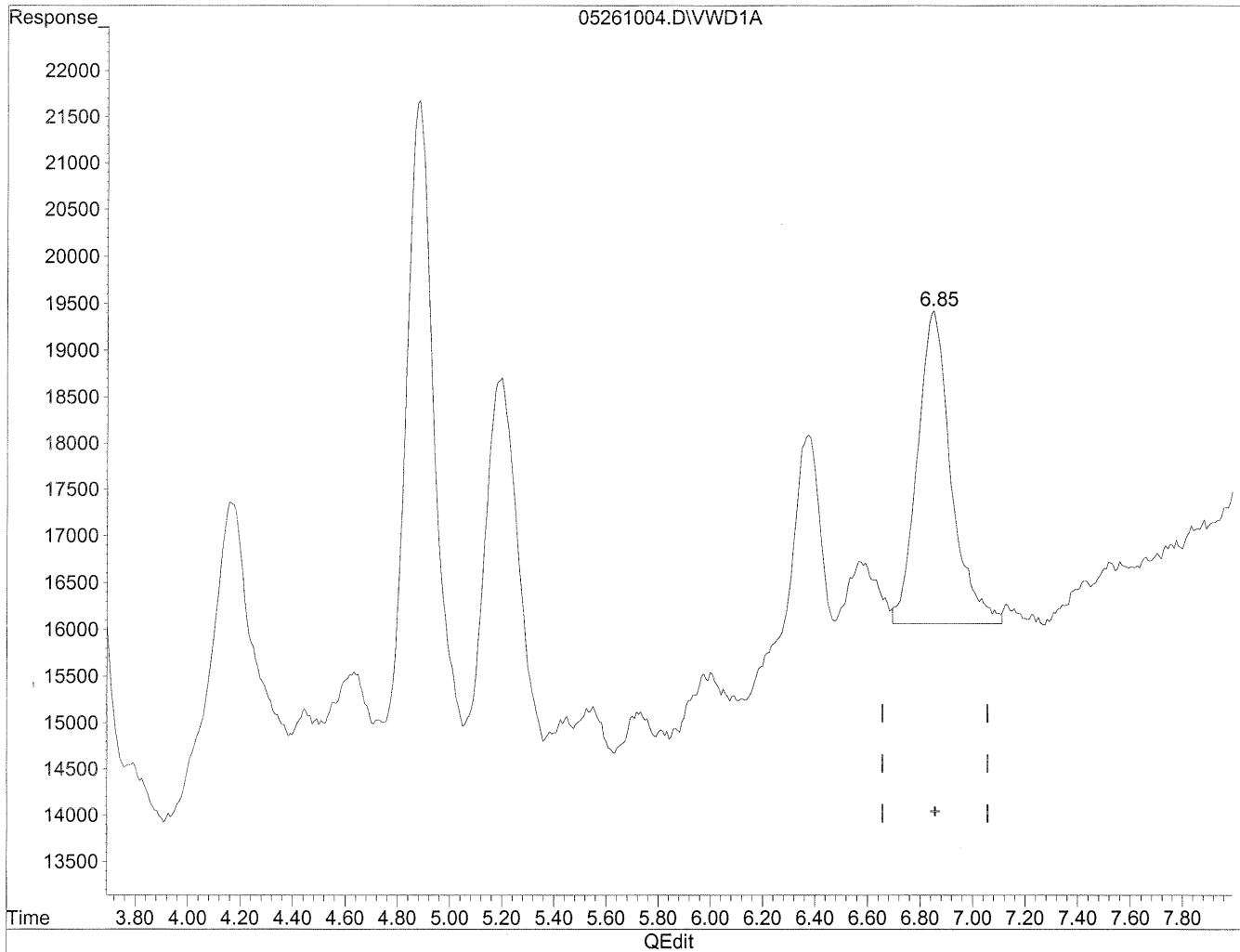
(11) Hexaldehyde
6.85min 132.113ng/ml
response 379875

(+) = Expected Retention Time
05261004.D TO110510.M Fri May 28 14:26:12 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261004.D Vial: 101
Acq On : 26-May-2010, 11:55 Operator: MD
Sample : P1001793-024 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:06 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.85min 103.569ng/ml m

response 297800

HL
6/4/10

12
6/4/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110457
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-025

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: NA Minutes

CAS #	Compound	Result µg/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 0.20	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

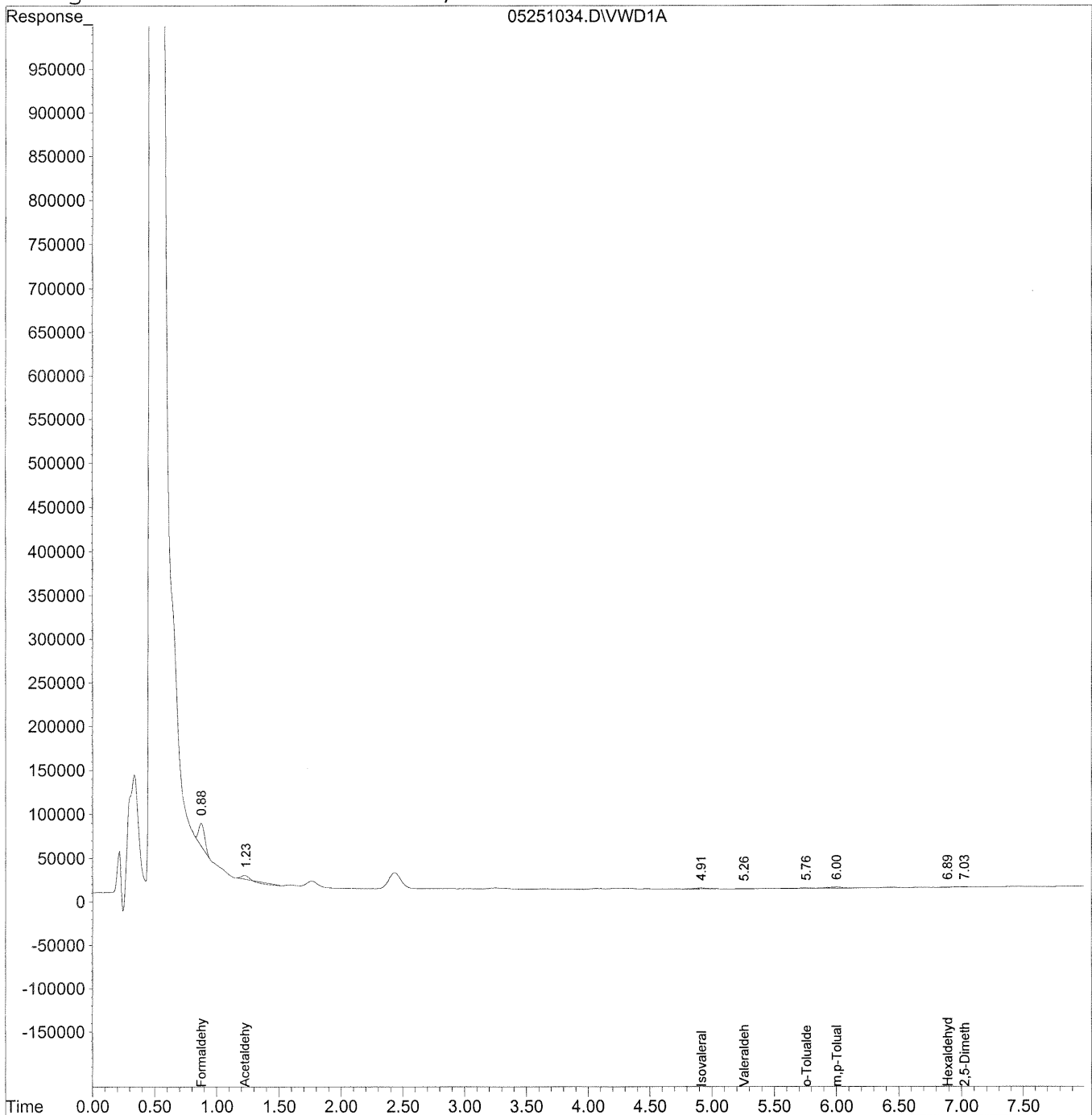
Verified By: Per Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251034.D Vial: 121
 Acq On : 25-May-2010, 17:12 Operator: MD
 Sample : P1001793-025 2ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 11:05 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 14:13:10 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251034.D Vial: 121
Acq On : 25-May-2010, 17:12 Operator: MD
Sample : P1001793-025 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:05 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

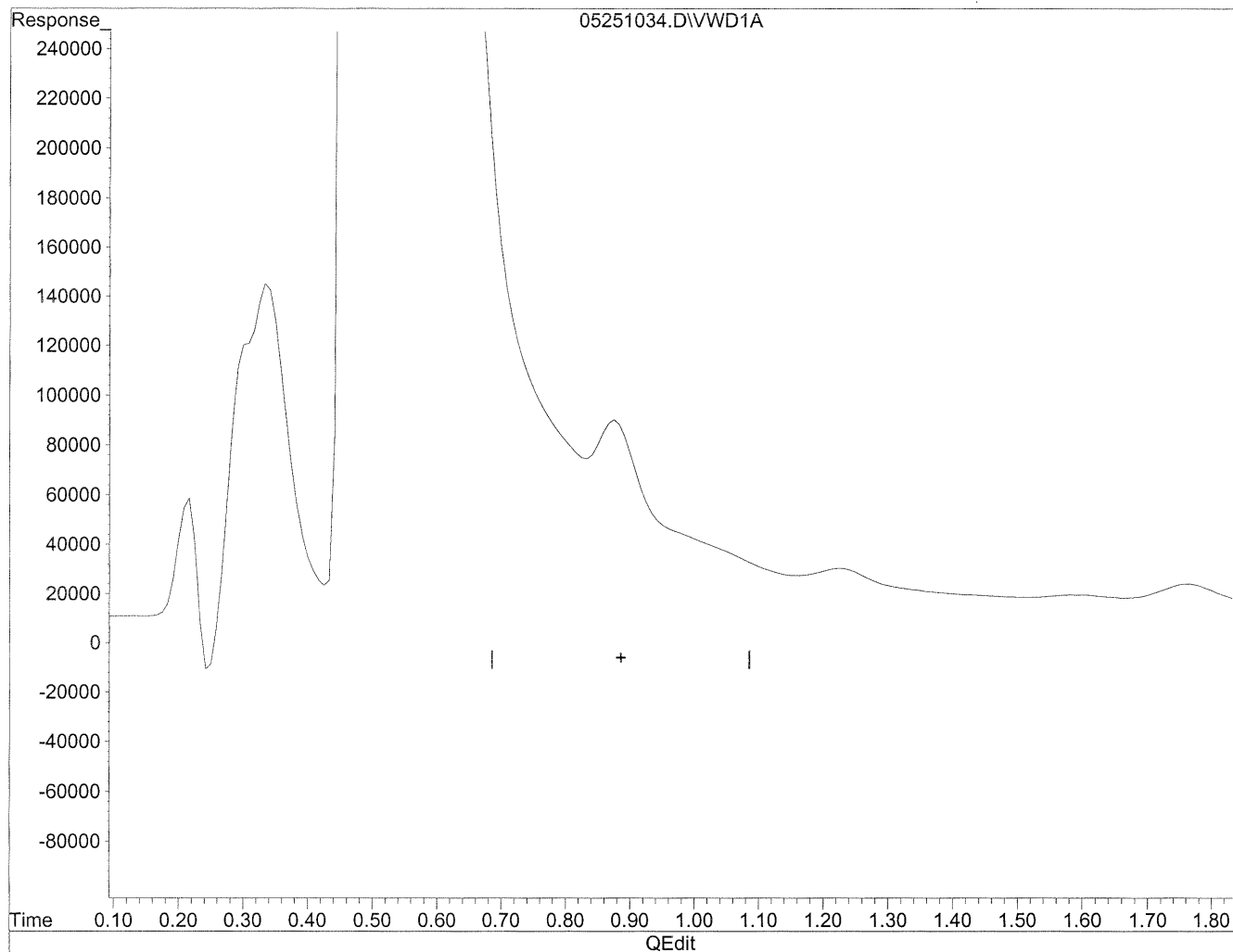
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.88	902782	96.731 ng/mlm
2)	Acetaldehyde	1.23	49512	7.351 ng/ml
3)	Propionaldehyde	0.00	0	N.D. ng/ml
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	0.00	0	N.D. ng/ml
6)	Benzaldehyde	0.00	0	N.D. ng/ml
7)	Isovaleraldehyde	4.92	97897	27.595 ng/ml
8)	Valeraldehyde	5.26	26738	7.970 ng/ml
9)	o-Tolualdehyde	5.76	46871	23.027 ng/ml
10)	m,p-Tolualdehyde	6.00	122500	52.292 ng/ml
11)	Hexaldehyde	6.89	9557	3.324 ng/ml
12)	2,5-Dimethylbenzaldehyde	7.03f	5877	3.055 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251034.D Vial: 121
Acq On : 25-May-2010, 17:12 Operator: MD
Sample : P1001793-025 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 17:35 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration

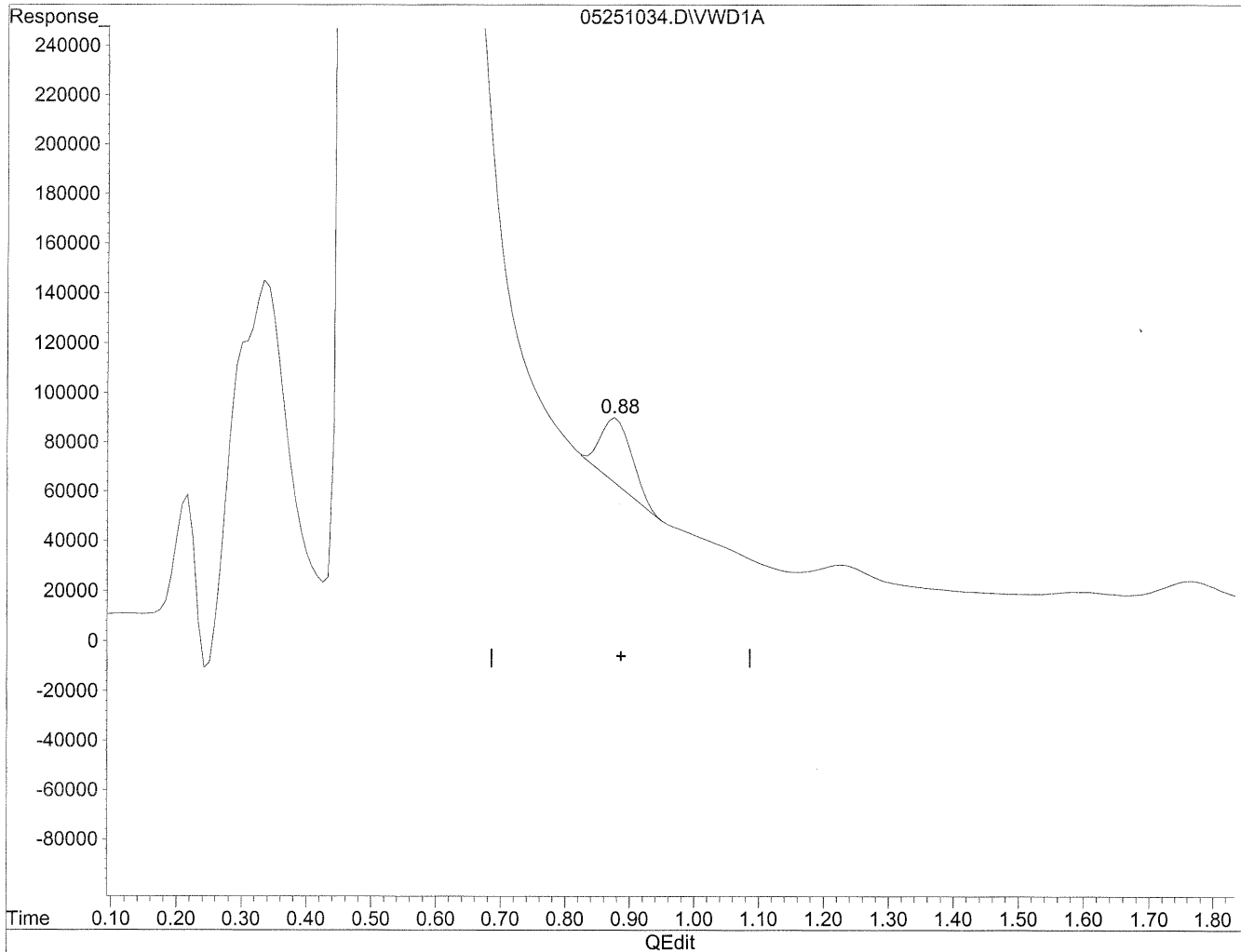


(1) Formaldehyde
0.89min 0.000ng/ml
response 0

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251034.D Vial: 121
Acq On : 25-May-2010, 17:12 Operator: MD
Sample : P1001793-025 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 17:35 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 96.731ng/ml m

response 902782

LC
MD
6/4/10

HC
6/4/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110496
Client Project ID: 17131

CAS Project ID: P1001793
 CAS Sample ID: P1001793-026

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/26/10 & 5/28/10
Desorption Volume: 2.0 ml
Sampling Time: 20319 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	55	27	0.099	22	0.081	
75-07-0	Acetaldehyde	16	9.2	0.12	5.1	0.065	
123-38-6	Propionaldehyde	3.0	3.7	0.25	1.6	0.11	
123-72-8	Butyraldehyde	2.3	10	0.89	3.5	0.30	
100-52-7	Benzaldehyde	8.7	4.7	0.11	1.1	0.025	M
590-86-3	Isovaleraldehyde	0.81	0.65	0.16	0.18	0.046	
110-62-3	Valeraldehyde	2.7	4.9	0.36	1.4	0.10	
66-25-1	n-Hexaldehyde	8.0	22	0.55	5.3	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

M = Matrix interference; results may be biased .

NA = Not applicable.

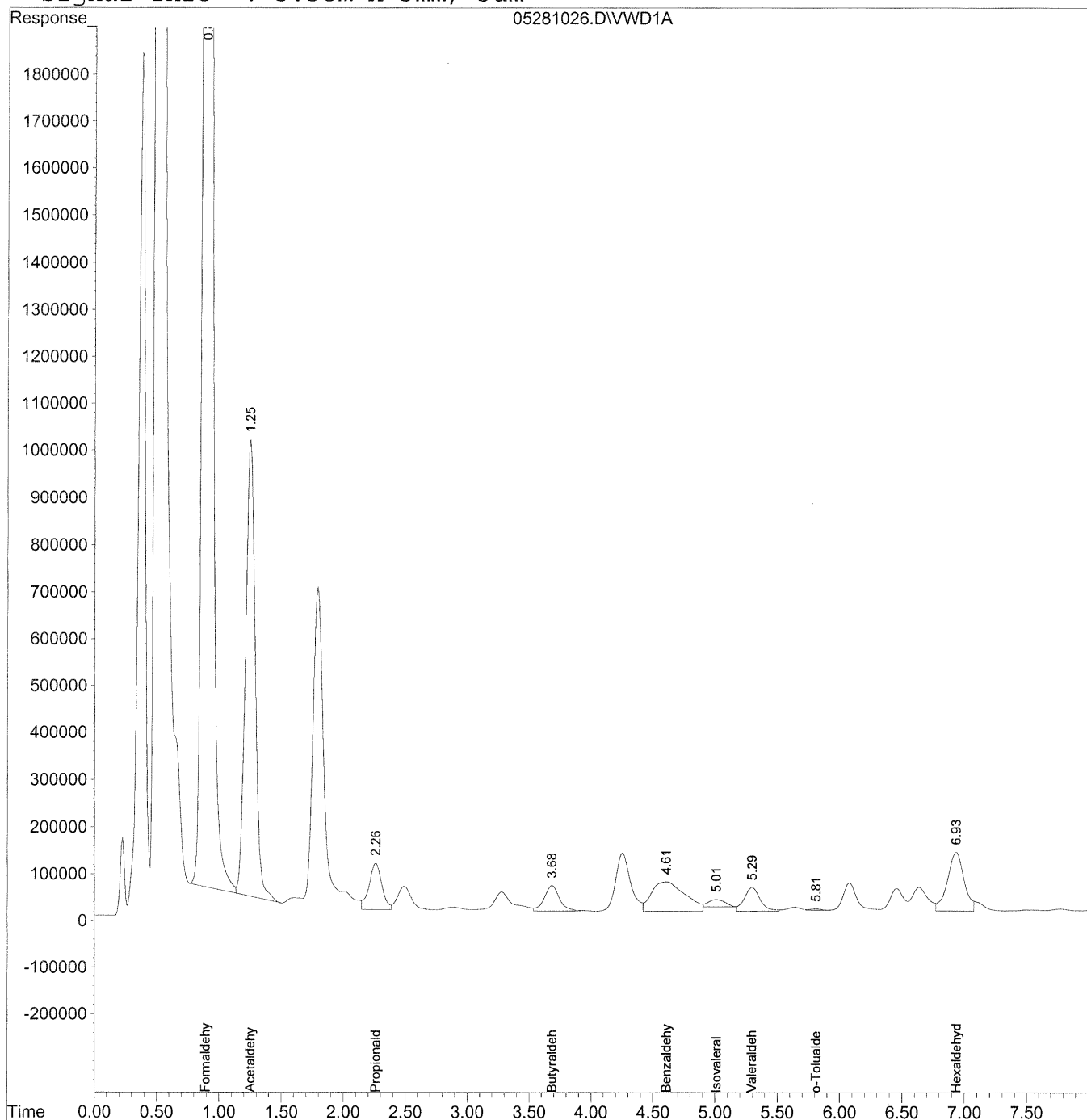
Verified By: RC Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 4 11:34 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 4 11:34 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

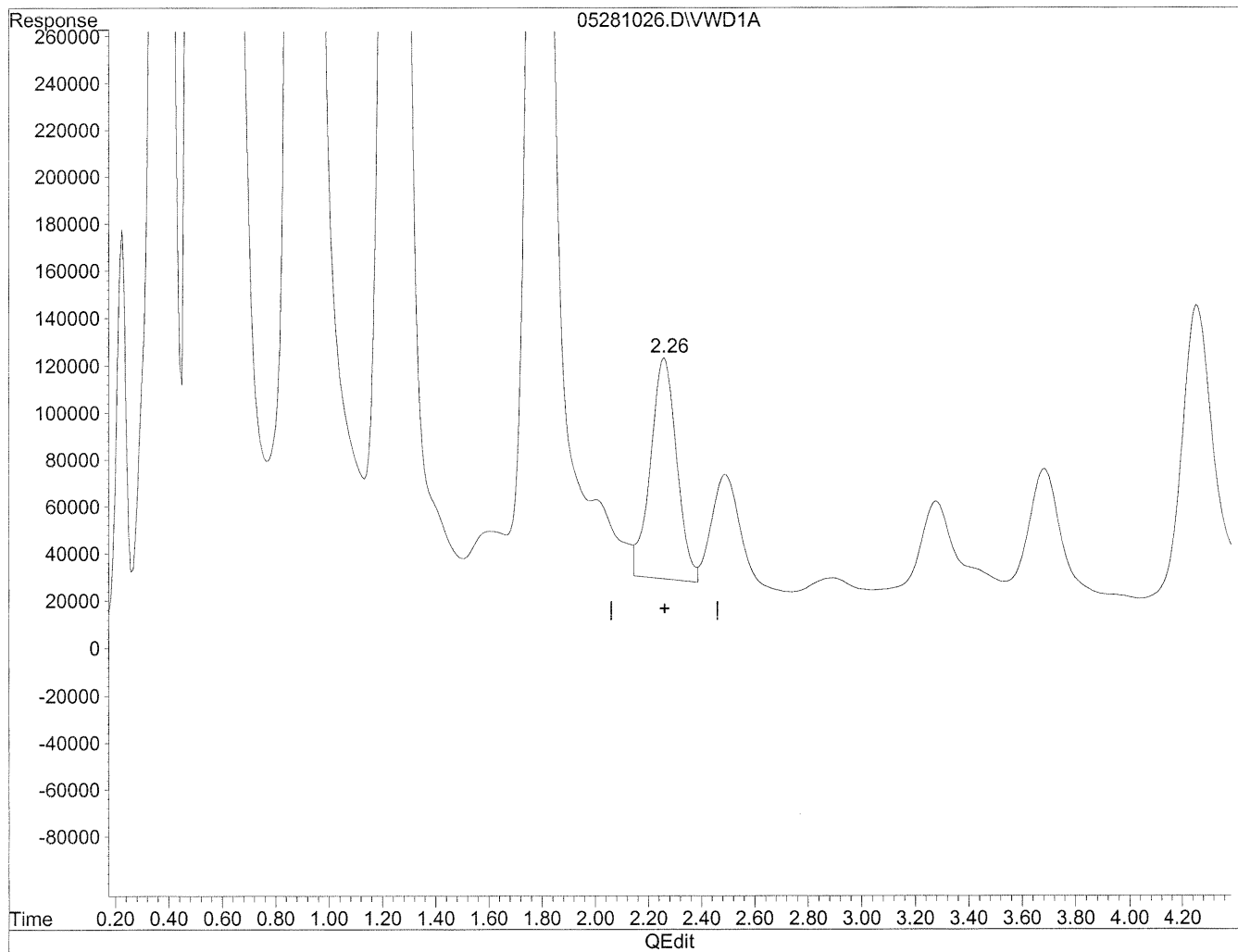
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.90	260866180	27951.322 ng/ml <i>dil</i>
2) Acetaldehyde	1.25	52972536	7864.996 ng/ml
3) Propionaldehyde	2.26	7206038	1482.107 ng/mlm
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.68	4640336	1151.647 ng/mlm
6) Benzaldehyde	4.61	11783491	4353.416 ng/ml
7) Isovaleraldehyde	5.01	1428251	402.584 ng/mlm
8) Valeraldehyde	5.30	4543619	1354.438 ng/ml
9) o-Tolualdehyde	5.81	177559	87.230 ng/mlm
10) m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11) Hexaldehyde	6.93	11489472	3995.820 ng/mlm
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.26min 1339.885ng/ml

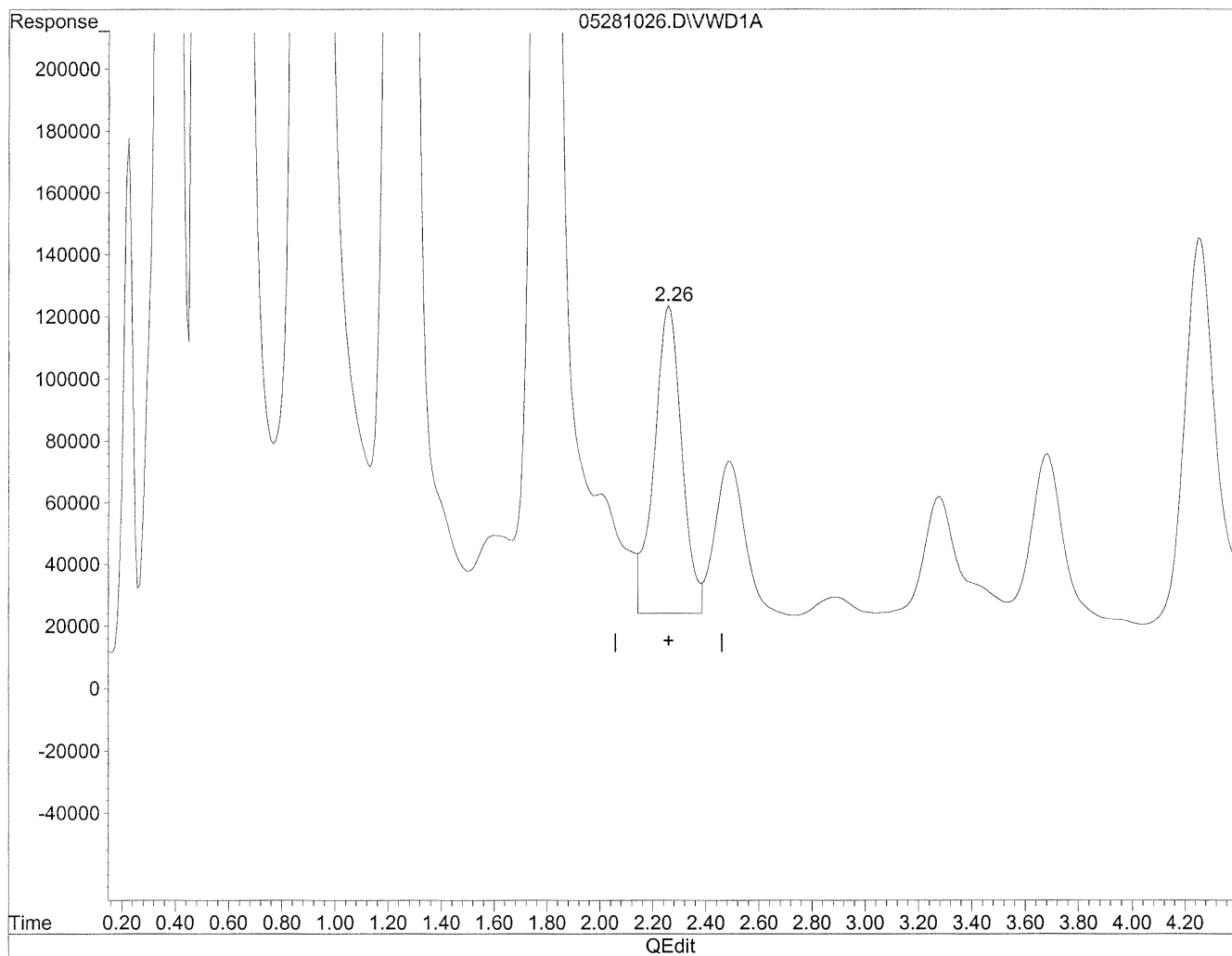
response 6514552

(+) = Expected Retention Time
05281026.D TO110510.M Fri Jun 04 11:31:24 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.26min 1482.107ng/ml m

response 7206038

7/1
6/4/10

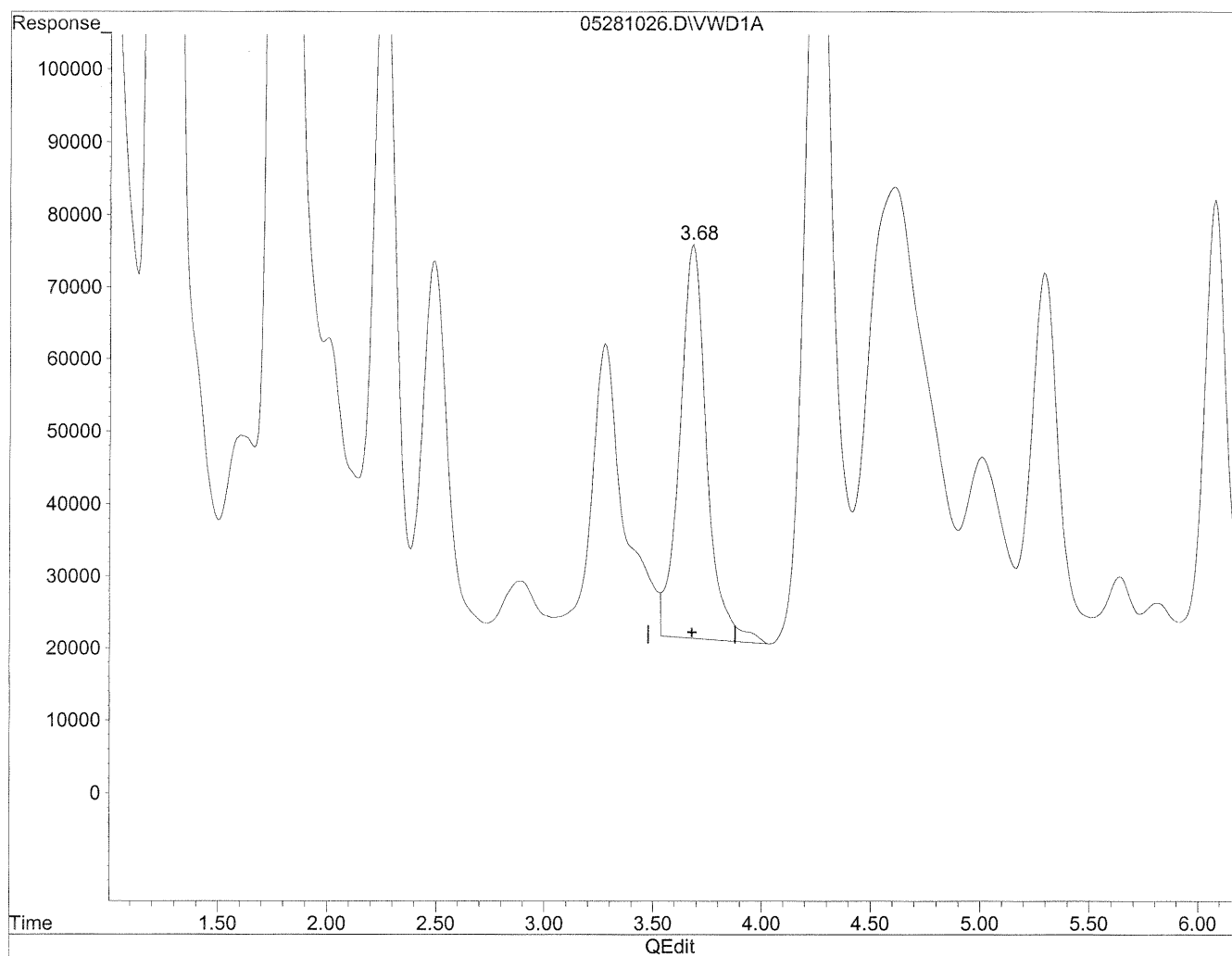
PC
(12)
6/4/10

(+) = Expected Retention Time
05281026.D TO110510.M Fri Jun 04 11:31:48 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

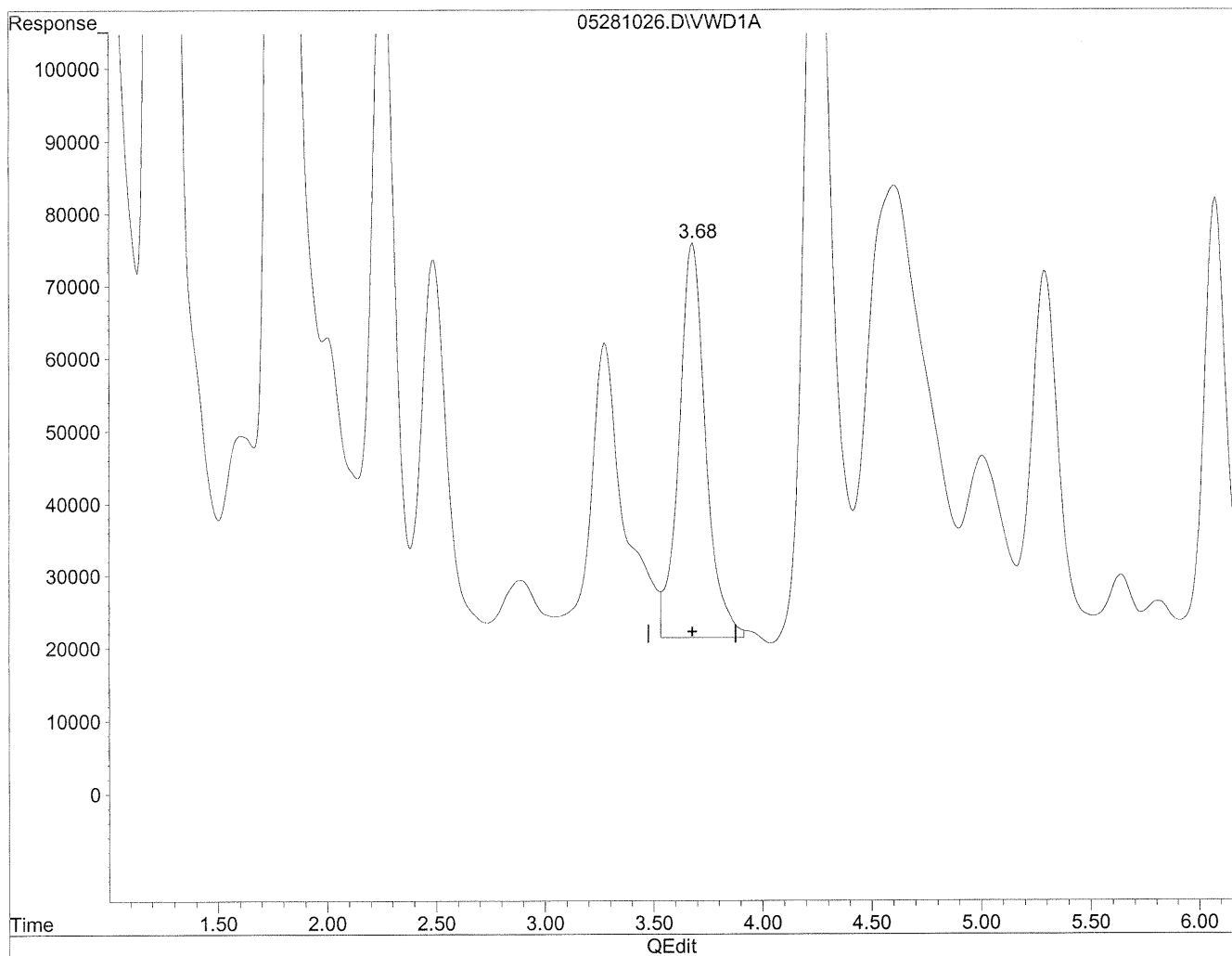
3.68min 1173.797ng/ml

response 4729586

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.68min 1151.647ng/ml m

response 4640336

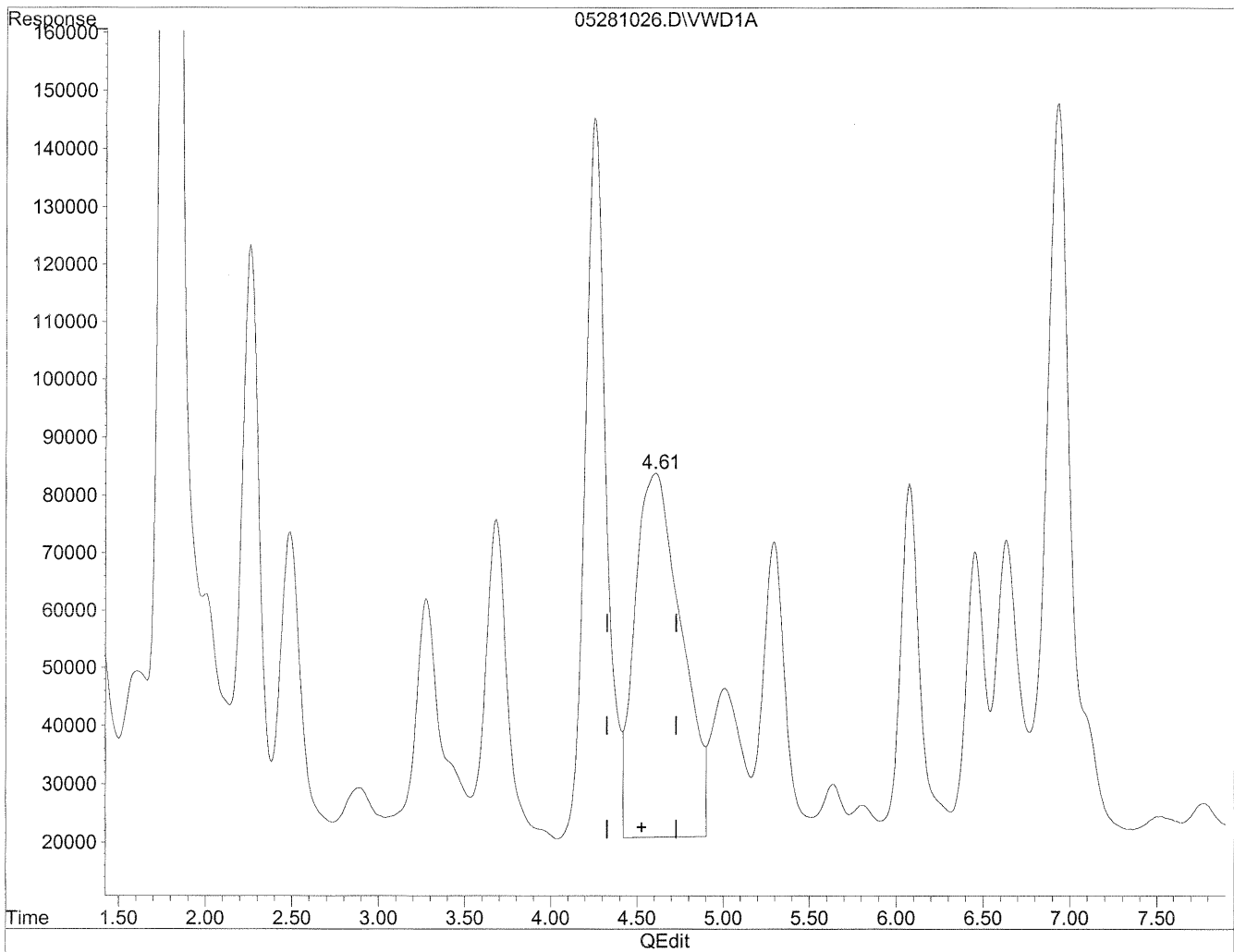
HL
6/4/10
Sh
6/4/10

(+) = Expected Retention Time
05281026.D TO110510.M Fri Jun 04 11:32:08 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

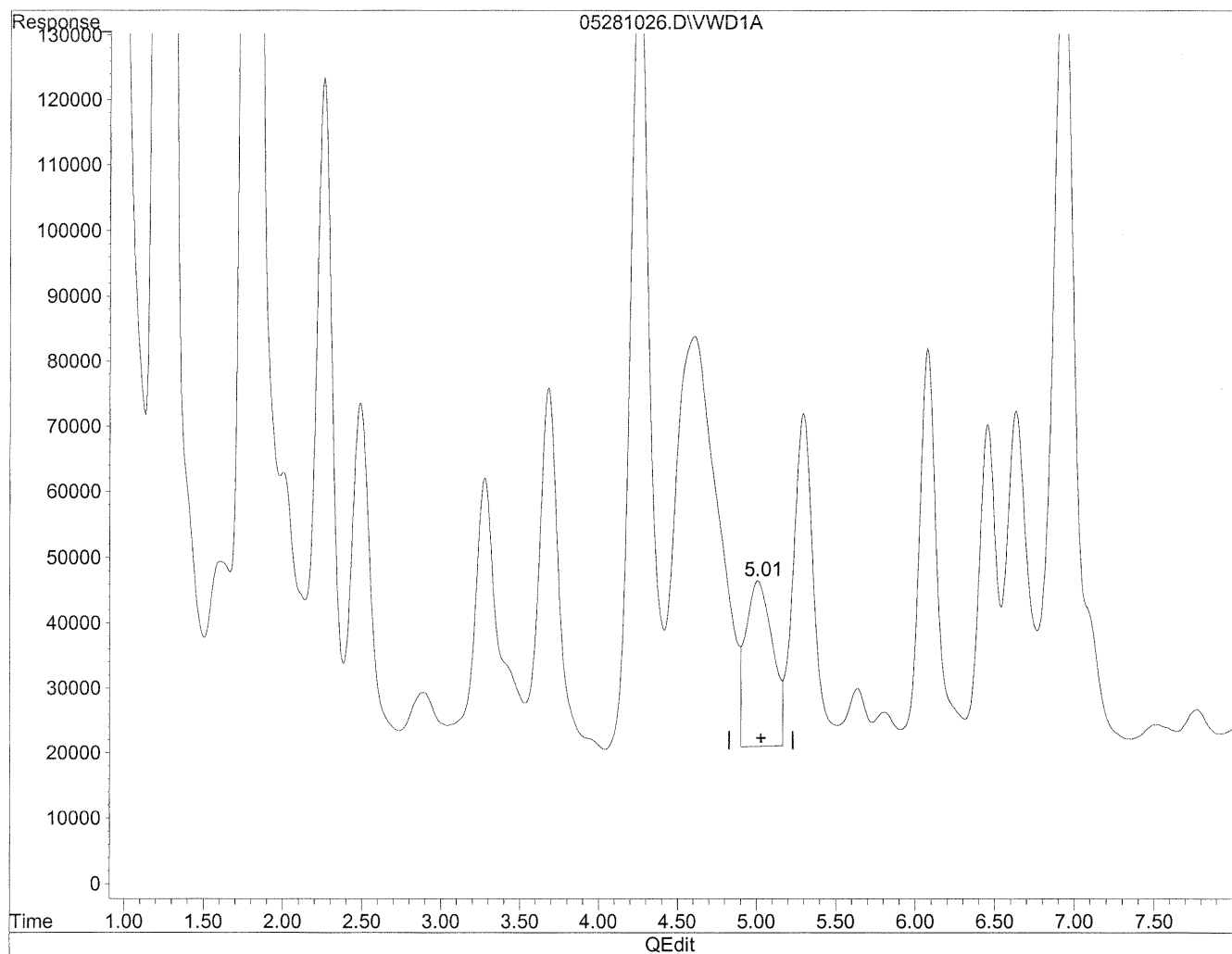
4.61min 4353.416ng/ml

response 11783491

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration

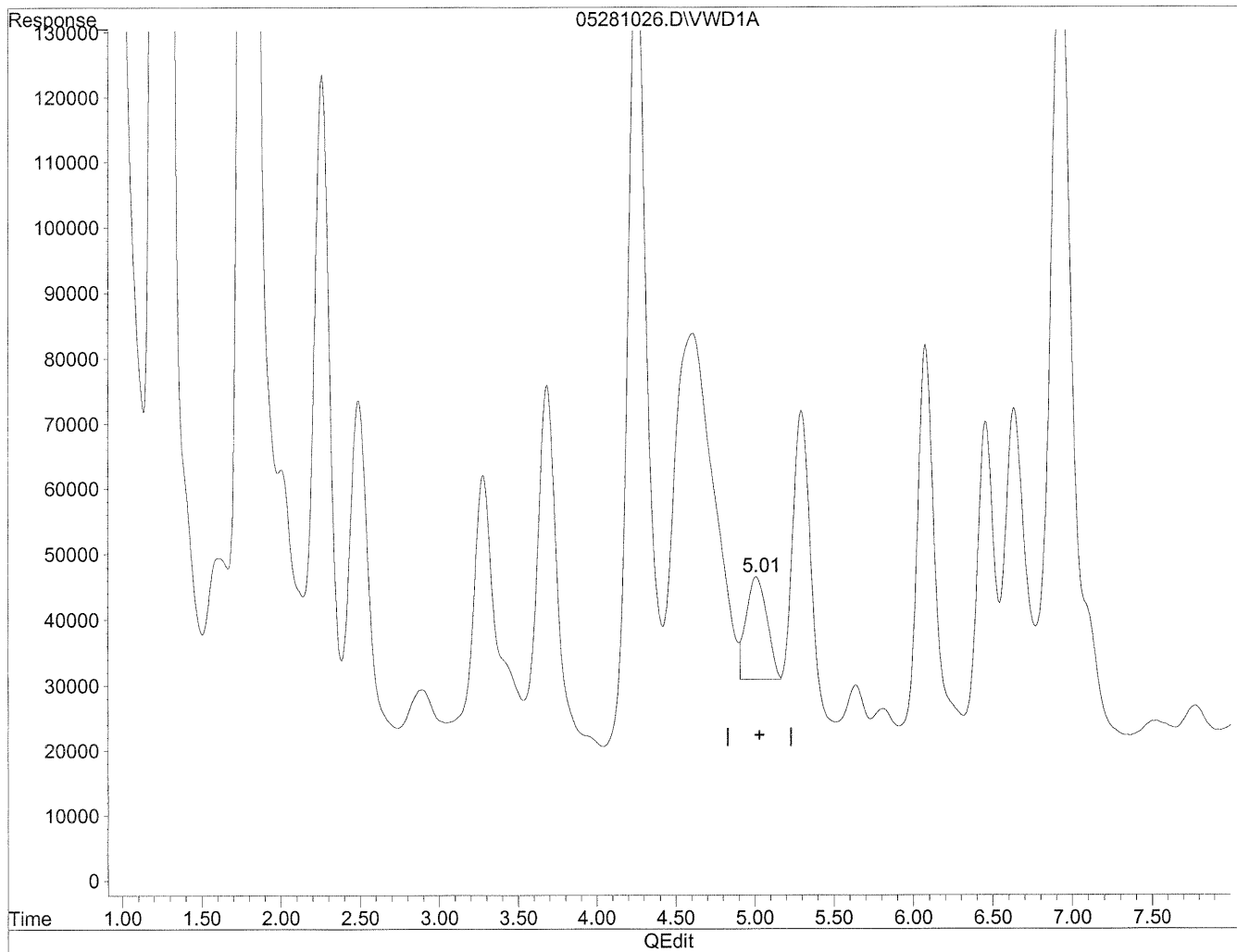


(7) Isovaleraldehyde
5.01min 845.861ng/ml
response 3000867

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.01min 402.584ng/ml m

response 1428251

HC
6/4/10
12
6/4/10

(+) = Expected Retention Time

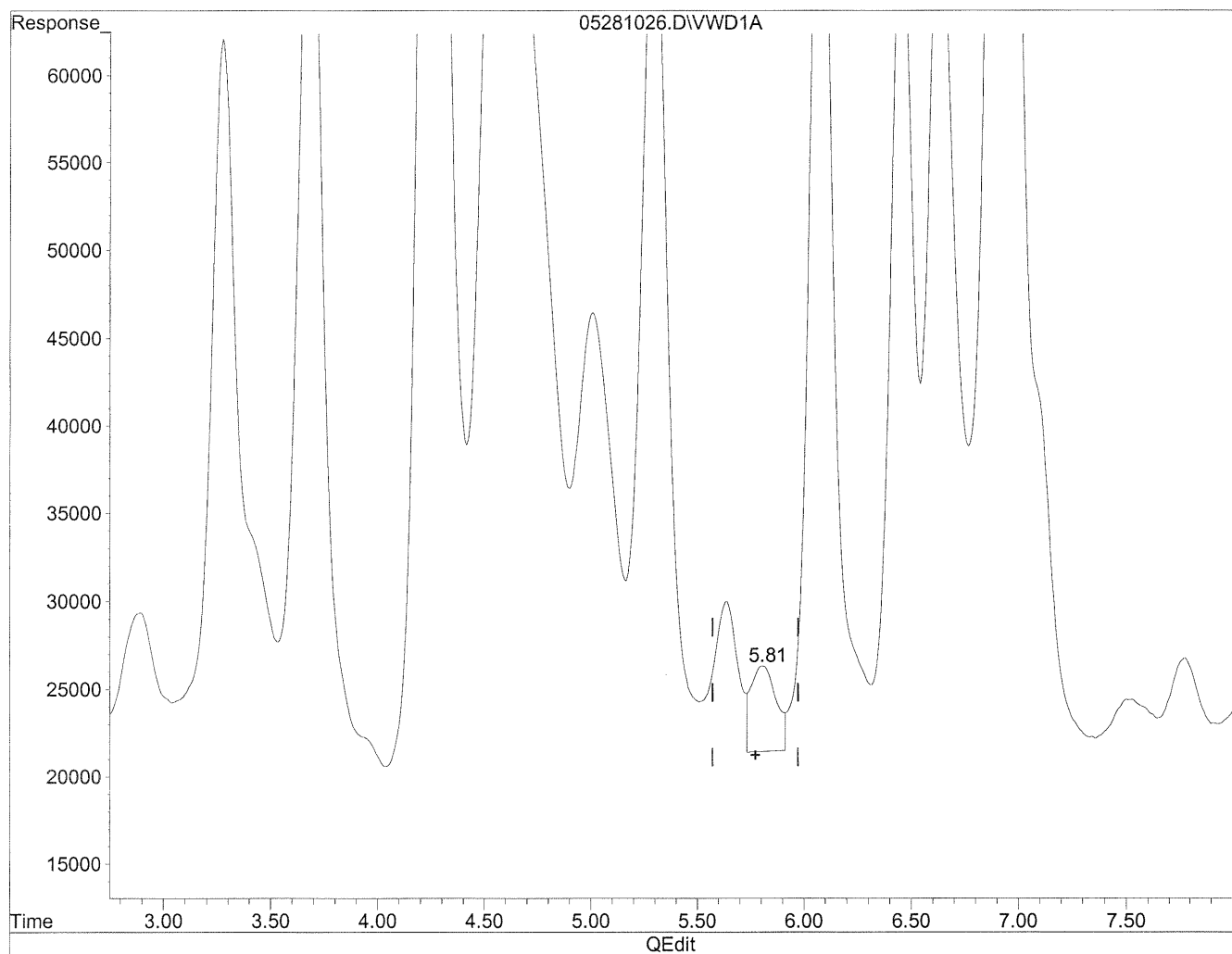
05281026.D TO110510.M

Fri Jun 04 11:33:05 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration

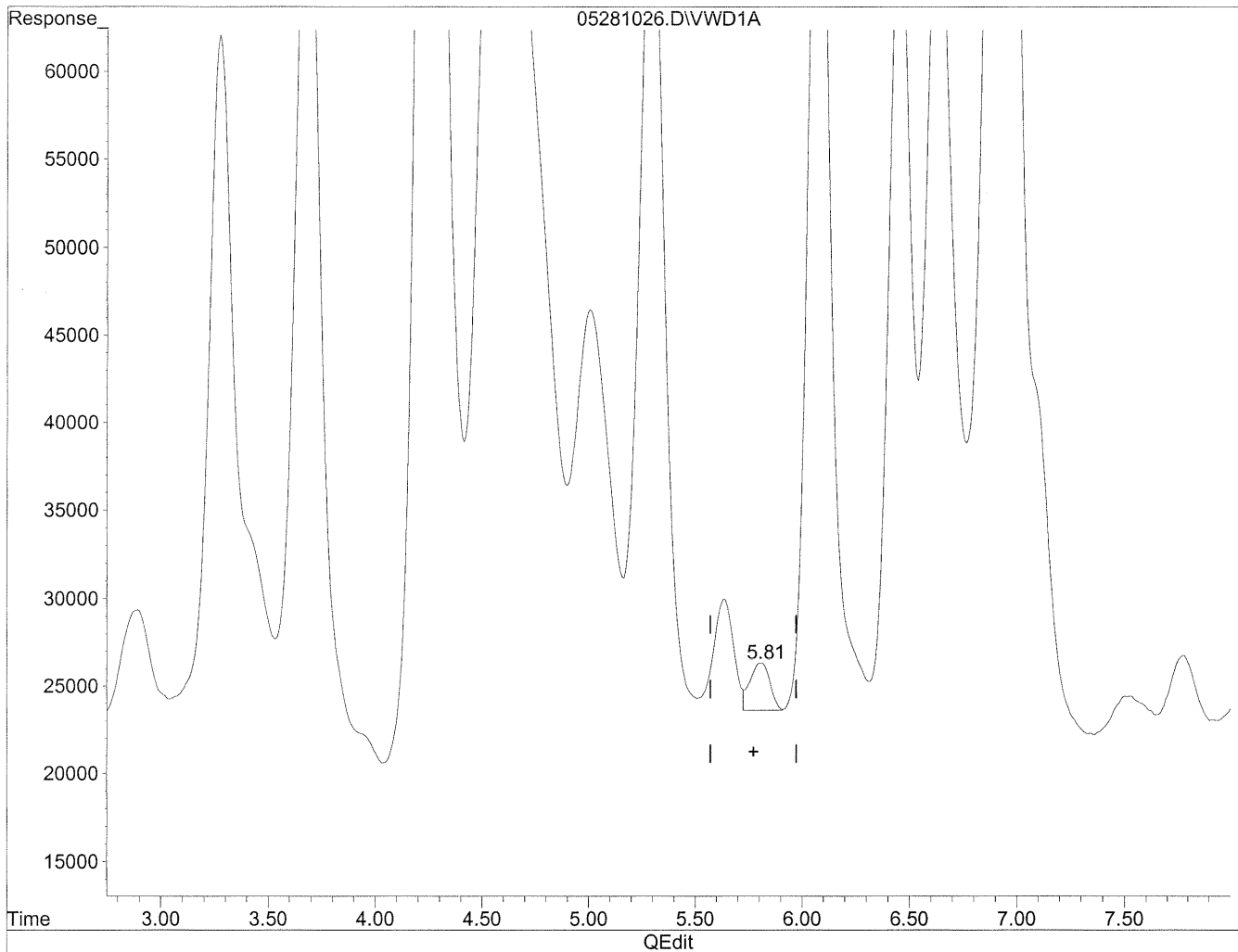


(9) o-Tolualdehyde
5.81min 199.300ng/ml
response 405682

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

5.81min 87.230ng/ml m

response 177559

HC
6/4/10

APC
6/4/10

(+) = Expected Retention Time

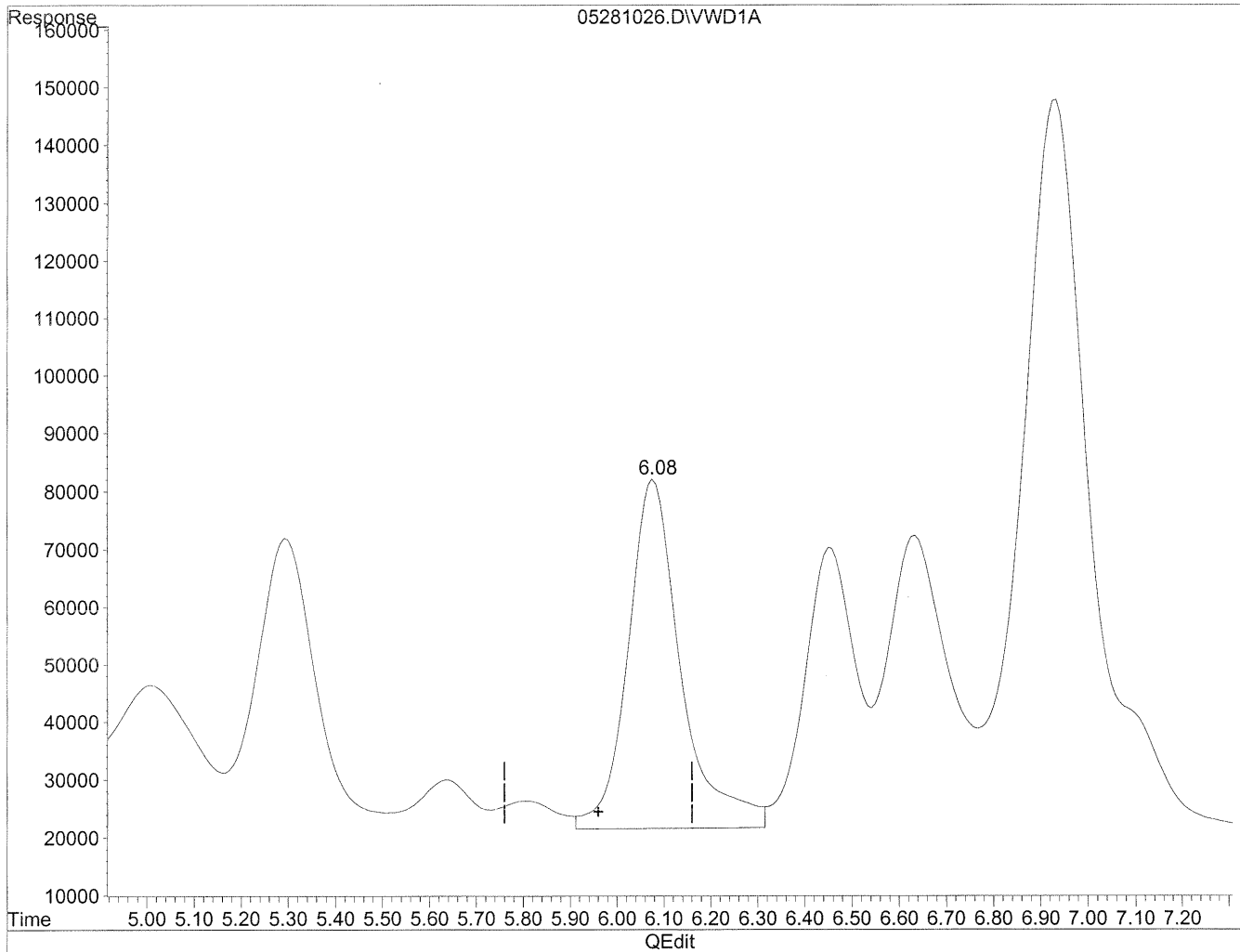
05281026.D TO110510.M

Fri Jun 04 11:33:43 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration

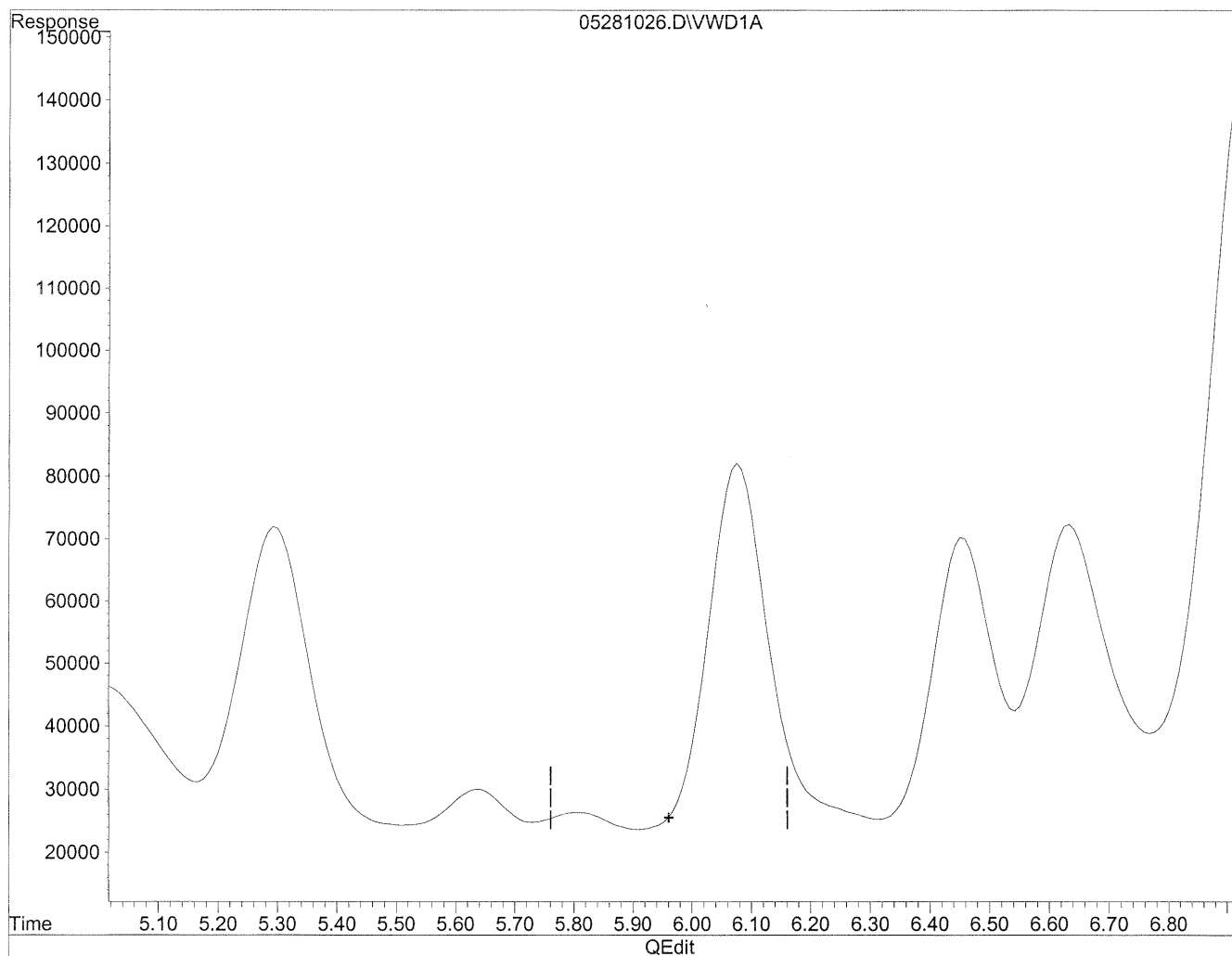


(10) m,p-Tolualdehyde
6.08min 2022.999ng/ml
response 4739096

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

0.00min 0.000ng/ml d

response 0

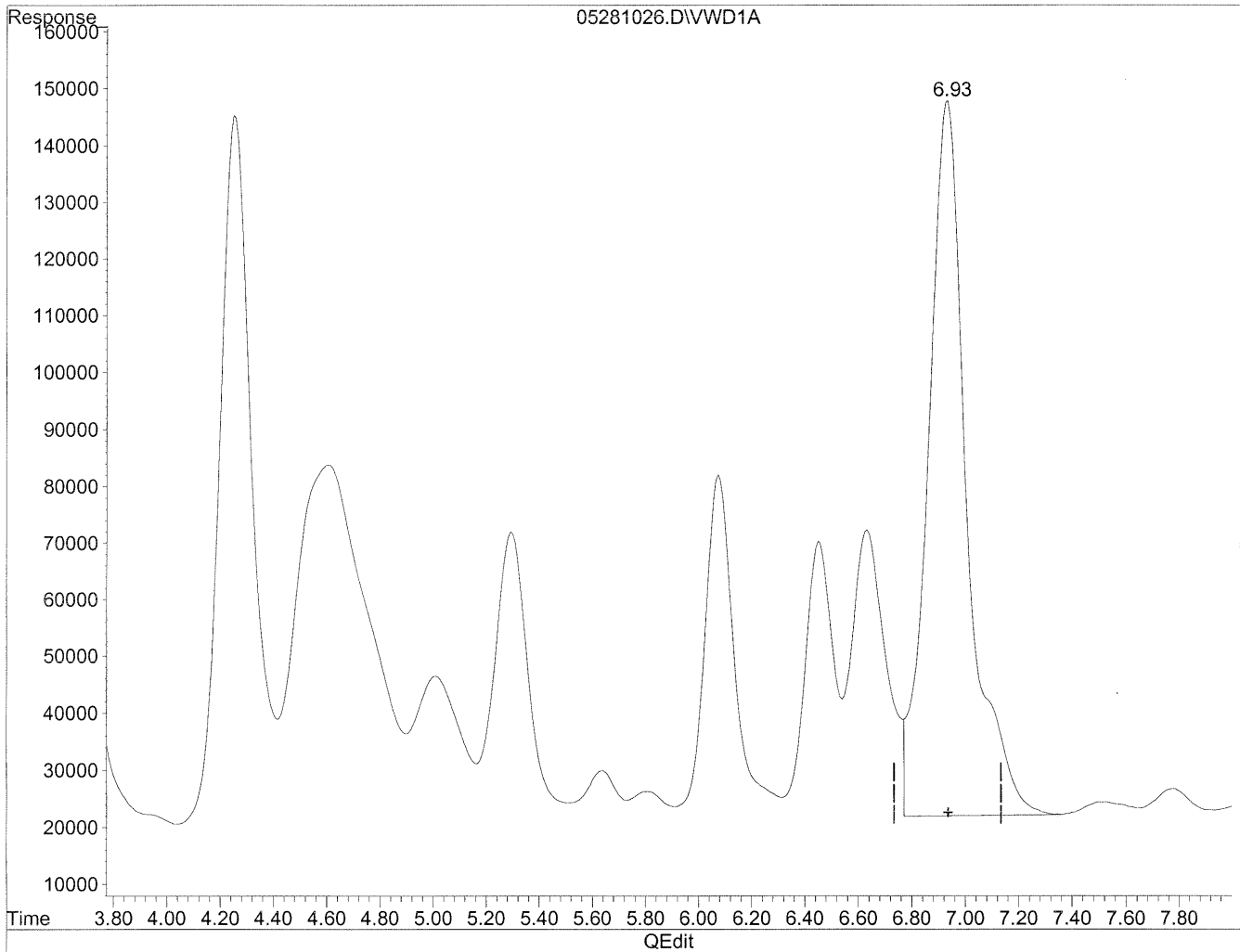
JLC
6/4/10

MD
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.93min 4397.424ng/ml

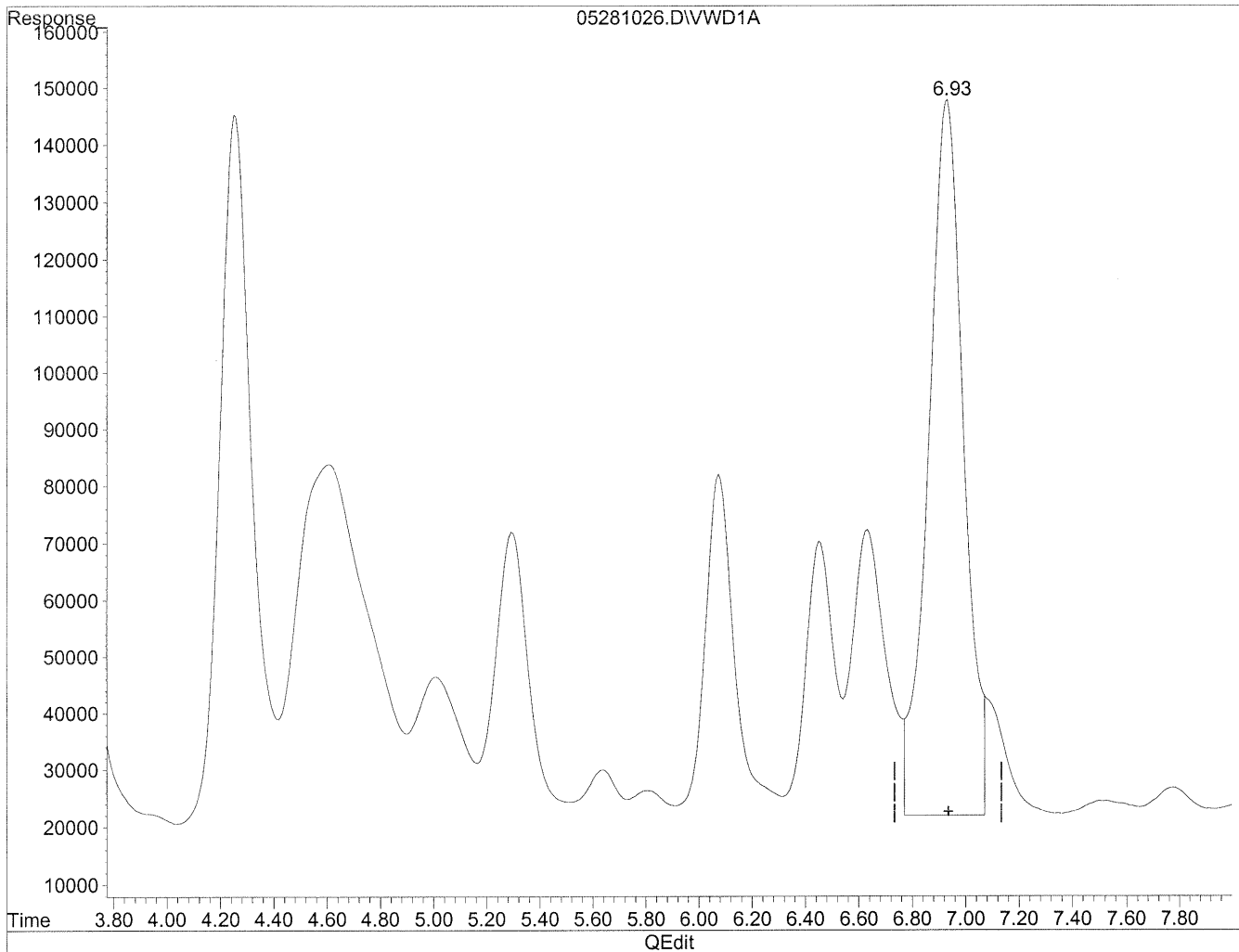
response 12644235

(+) = Expected Retention Time
05281026.D TO110510.M Fri Jun 04 11:33:57 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281026.D Vial: 121
Acq On : 28-May-2010, 17:31 Operator: MD
Sample : P1001793-026 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.93min 3995.820ng/ml m

response 11489472

HC
6/4/10

SH
(M)
6/4/10

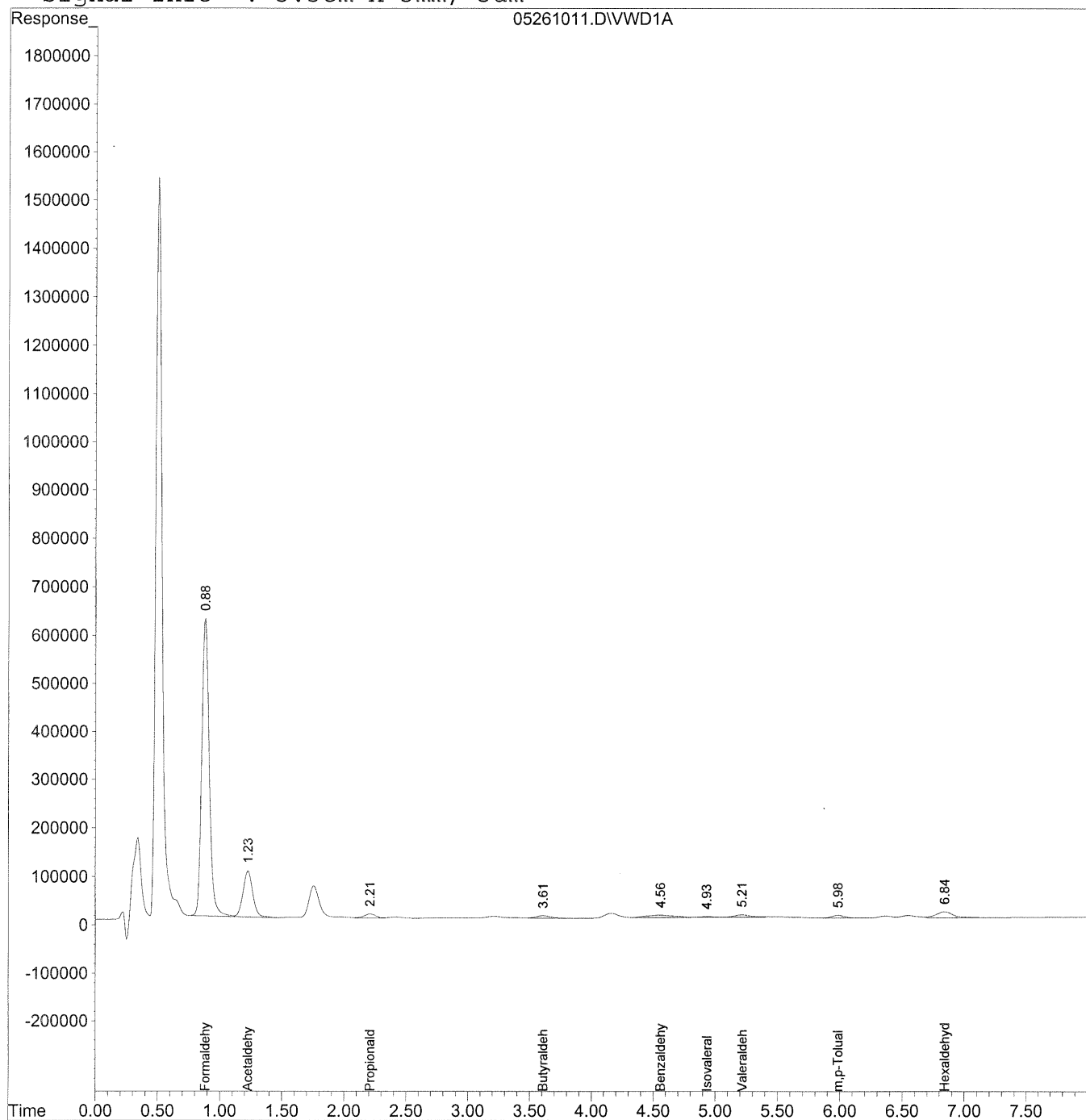
(+) = Expected Retention Time
05281026.D TO110510.M Fri Jun 04 11:34:08 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261011.D Vial: 108
 Acq On : 26-May-2010, 13:09 Operator: MD
 Sample : P1001793-026 2m 10x dil Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 14:35 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 26 11:46:33 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261011.D Vial: 108
Acq On : 26-May-2010, 13:09 Operator: MD
Sample : P1001793-026 2mL 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:35 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

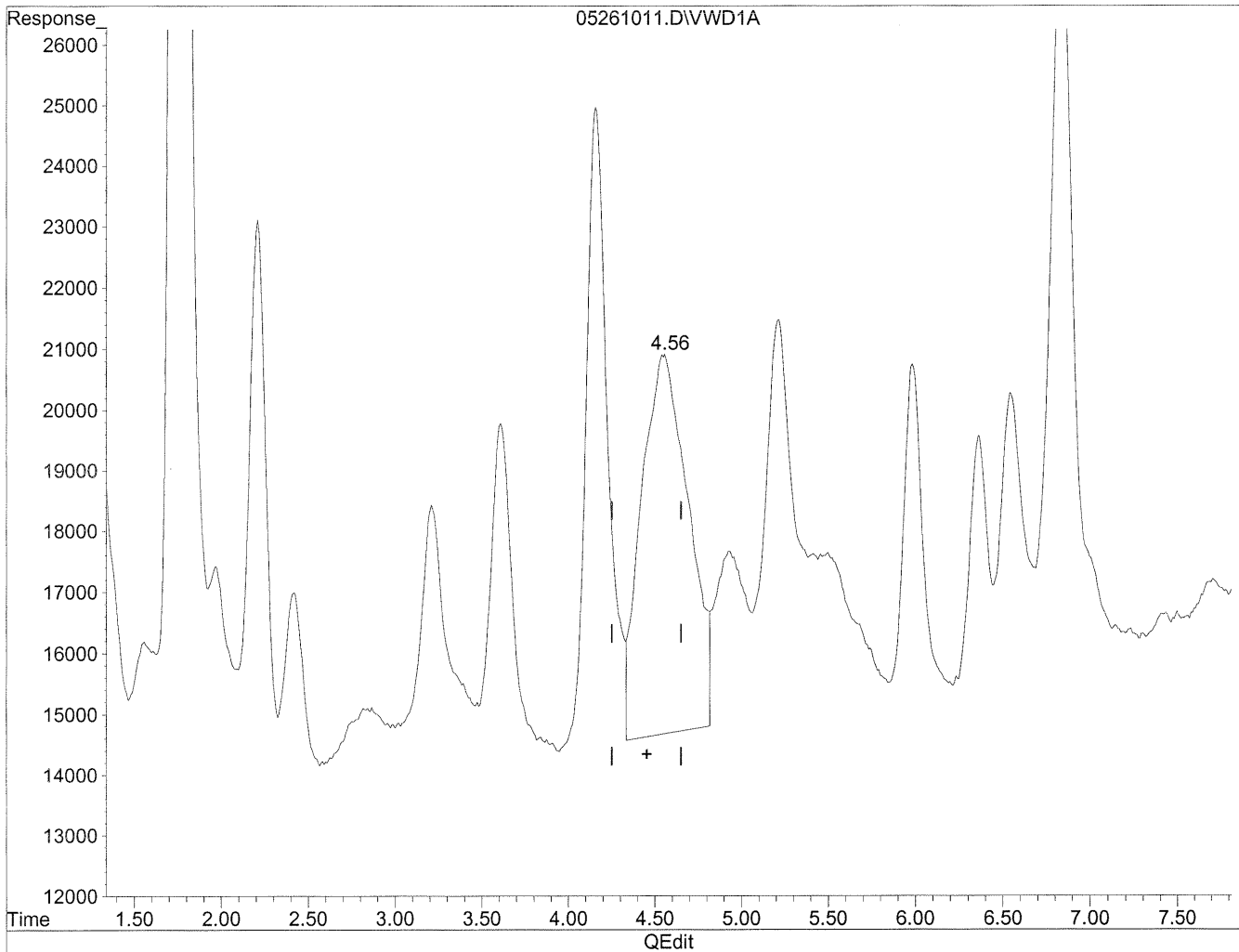
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	25770028	2761.210 ng/ml
2) Acetaldehyde	1.23	5179406	769.002 ng/ml
3) Propionaldehyde	2.21	578189	118.919 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.61	443008	109.946 ng/ml
6) Benzaldehyde	4.56f	743806	274.799 ng/mlm
7) Isovaleraldehyde	4.93	85763	24.174 ng/mlm
8) Valeraldehyde	5.21	465227	138.683 ng/mlm
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	5.99f	392122	167.387 ng/ml
11) Hexaldehyde	6.84	1186612	412.681 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261011.D Vial: 108
Acq On : 26-May-2010, 13:09 Operator: MD
Sample : P1001793-026 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration

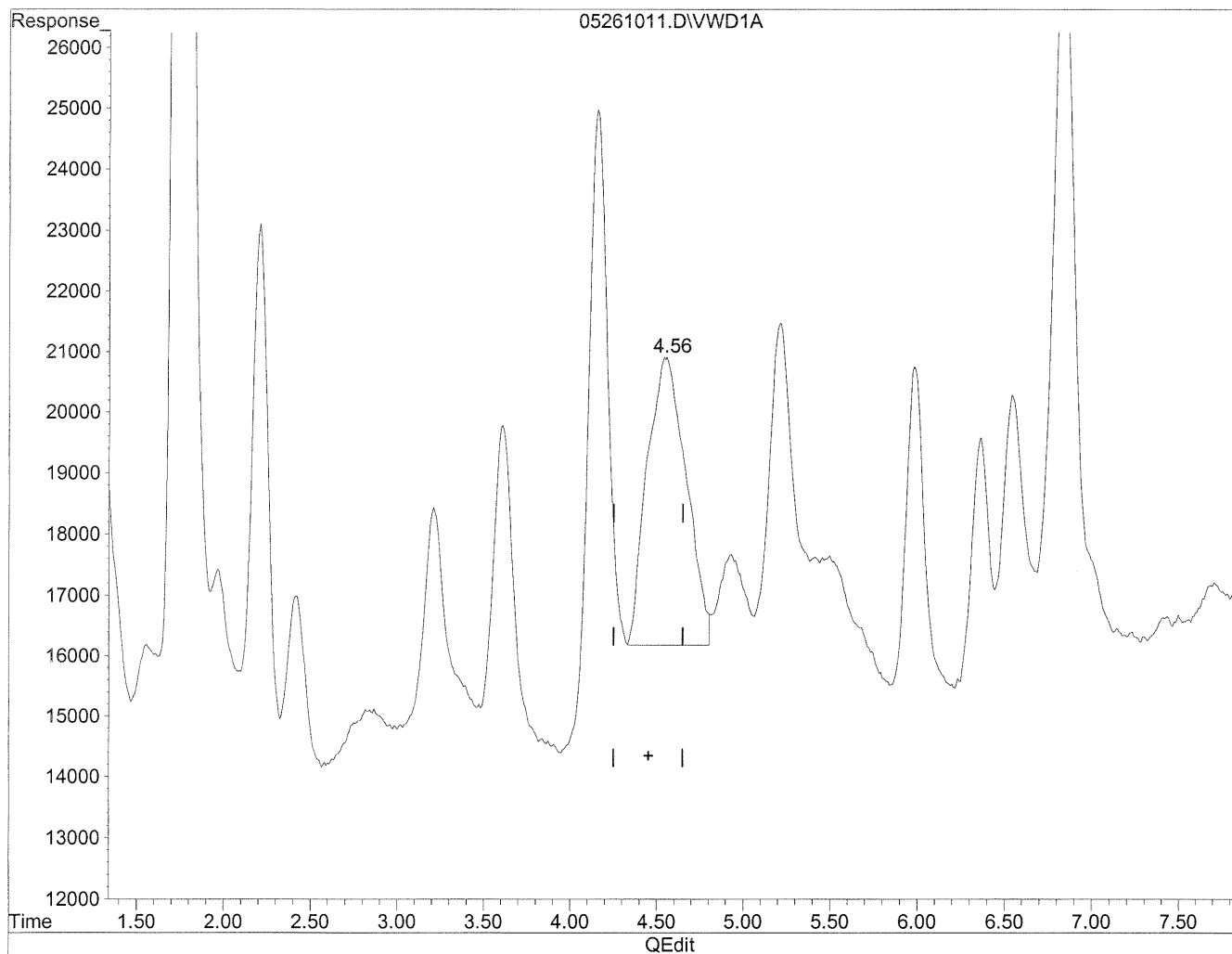


(6) Benzaldehyde
4.56min 436.049ng/ml
response 1180263

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261011.D Vial: 108
Acq On : 26-May-2010, 13:09 Operator: MD
Sample : P1001793-026 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.56min 274.799ng/ml m

response 743806

AK
6/4/10

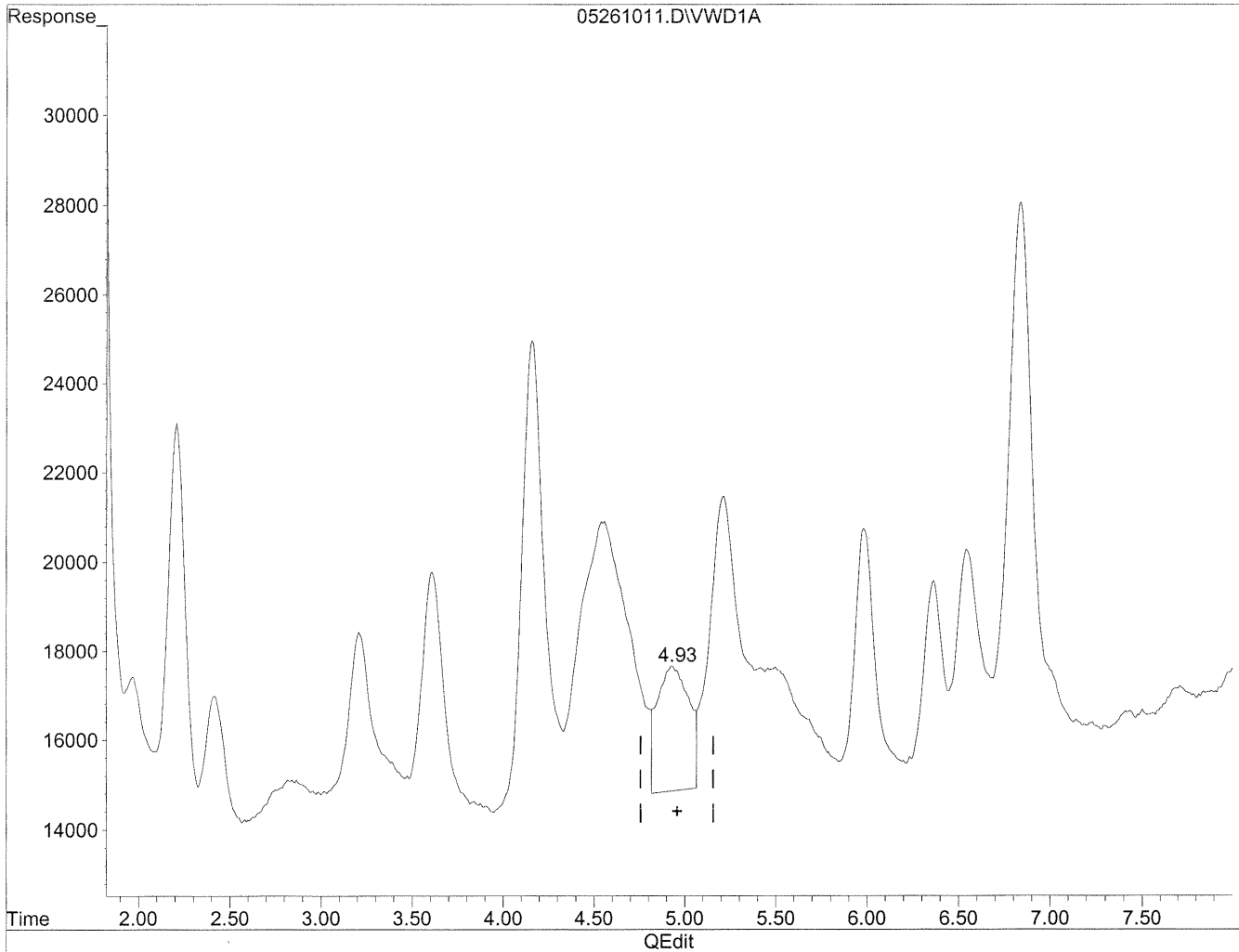
(n)
6/4/10
use direct mg
to report.

(+) = Expected Retention Time
05261011.D TO110510.M Fri May 28 14:34:58 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261011.D Vial: 108
Acq On : 26-May-2010, 13:09 Operator: MD
Sample : P1001793-026 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

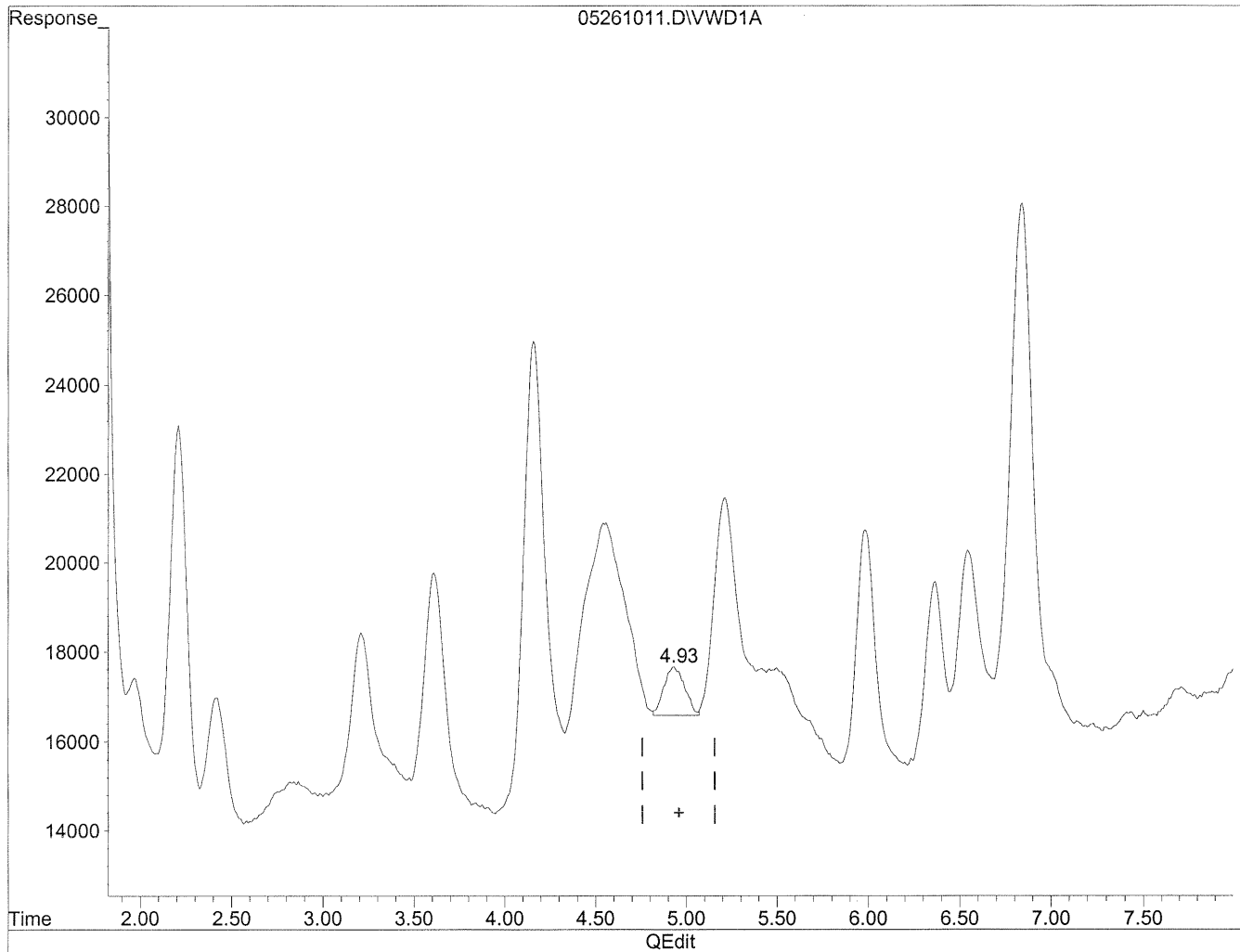
4.93min 96.241ng/ml

response 341436

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261011.D Vial: 108
Acq On : 26-May-2010, 13:09 Operator: MD
Sample : P1001793-026 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.93min 24.174ng/ml m

response 85763

HL
6/4/10

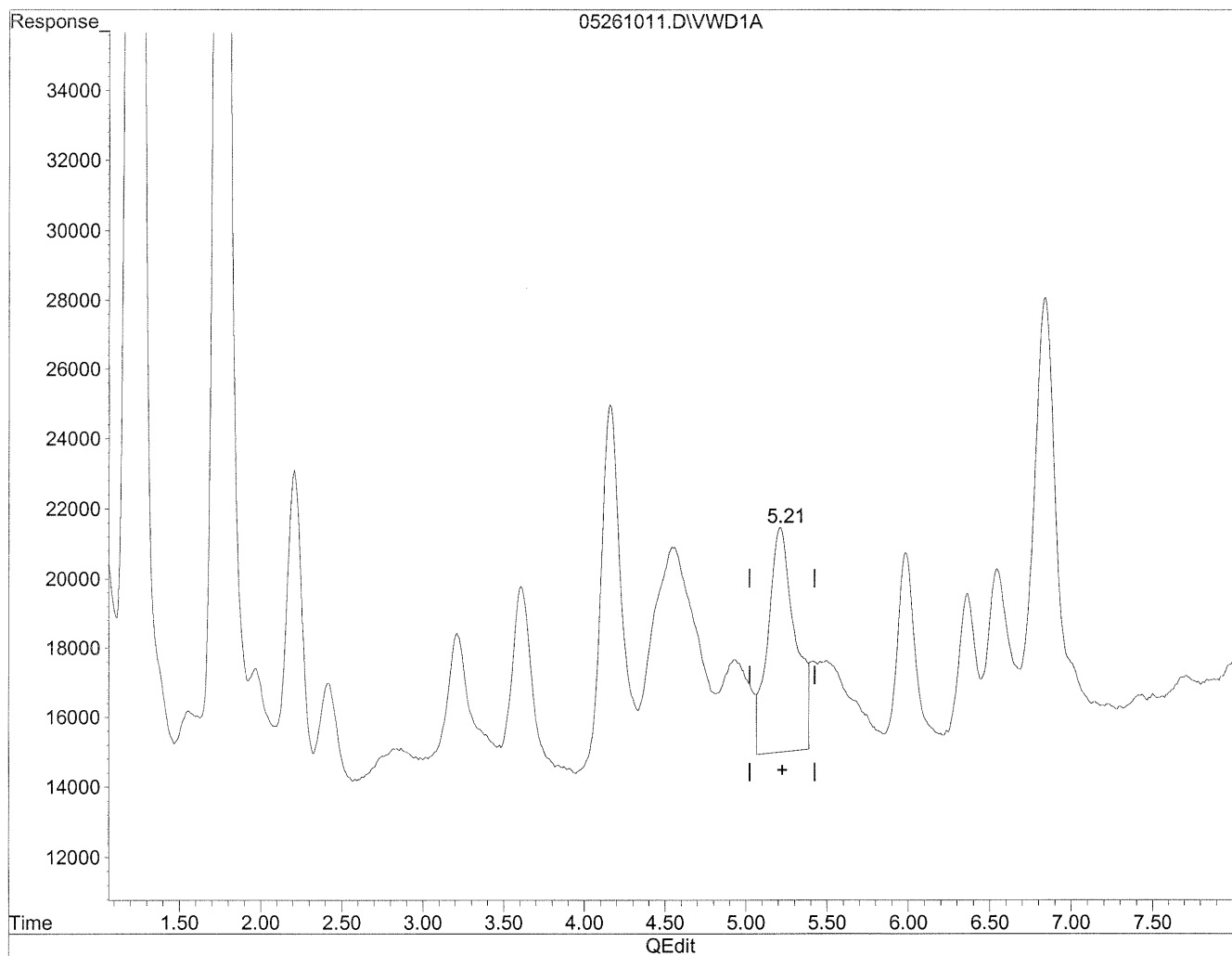
HL
6/4/10

(+) = Expected Retention Time
05261011.D TO110510.M Fri May 28 14:35:42 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261011.D Vial: 108
Acq On : 26-May-2010, 13:09 Operator: MD
Sample : P1001793-026 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.22min 224.305ng/ml

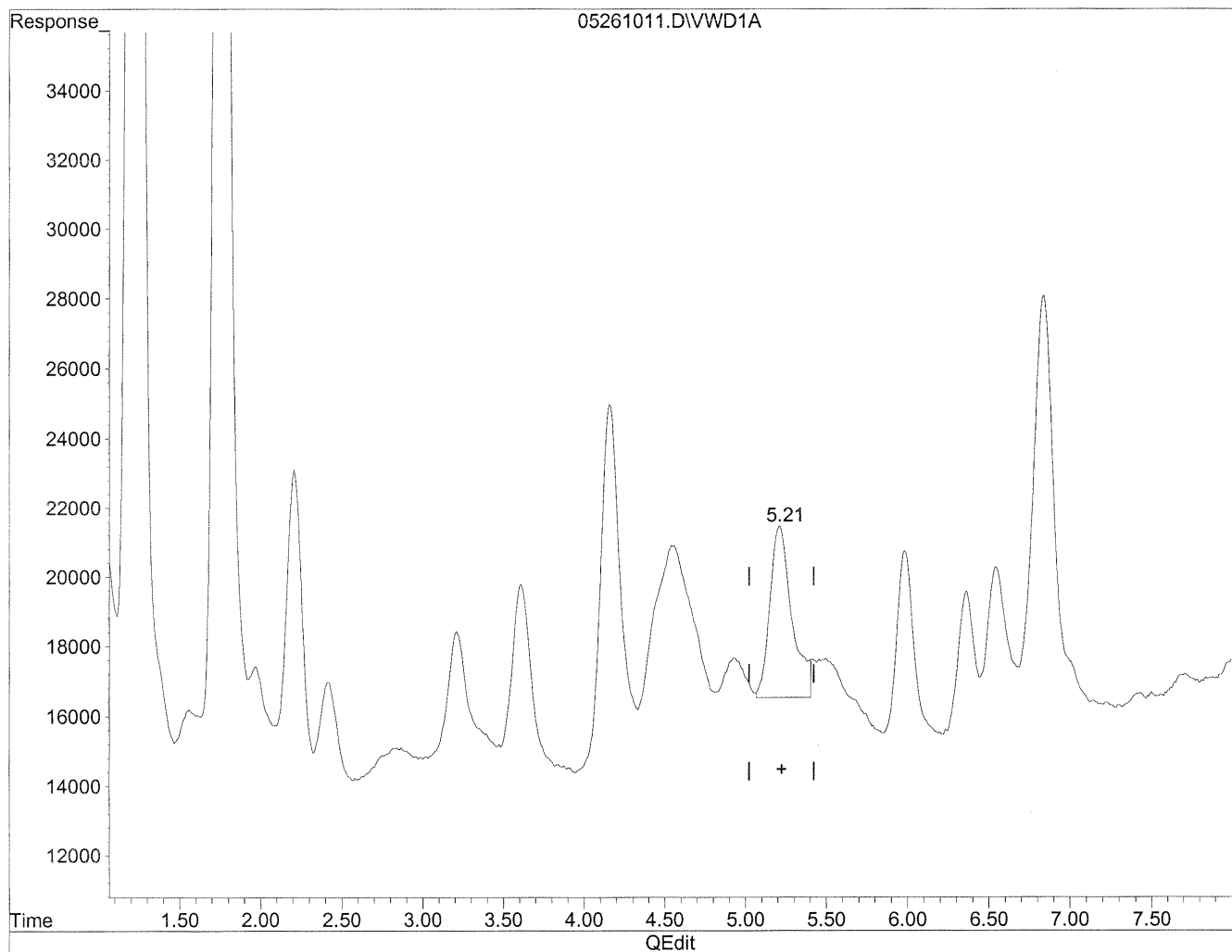
response 752458

(+) = Expected Retention Time
05261011.D TO110510.M Fri May 28 14:35:54 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261011.D Vial: 108
Acq On : 26-May-2010, 13:09 Operator: MD
Sample : P1001793-026 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 13:20 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.21min 138.683ng/ml m

response 465227

(+) = Expected Retention Time
05261011.D TO110510.M Fri May 28 14:36:08 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110497
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-027

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/26/10 & 5/28/10
Desorption Volume: 2.0 ml
Sampling Time: 20319 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	58	29	0.099	23	0.081	
75-07-0	Acetaldehyde	14	8.1	0.12	4.5	0.065	
123-38-6	Propionaldehyde	2.5	3.2	0.25	1.3	0.11	
123-72-8	Butyraldehyde	2.2	9.8	0.89	3.3	0.30	
100-52-7	Benzaldehyde	7.0	3.8	0.11	0.87	0.025	M
590-86-3	Isovaleraldehyde	0.73	0.59	0.16	0.17	0.046	
110-62-3	Valeraldehyde	2.7	4.9	0.36	1.4	0.10	
66-25-1	n-Hexaldehyde	8.3	23	0.55	5.5	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

M = Matrix interference; results may be biased .

NA = Not applicable.

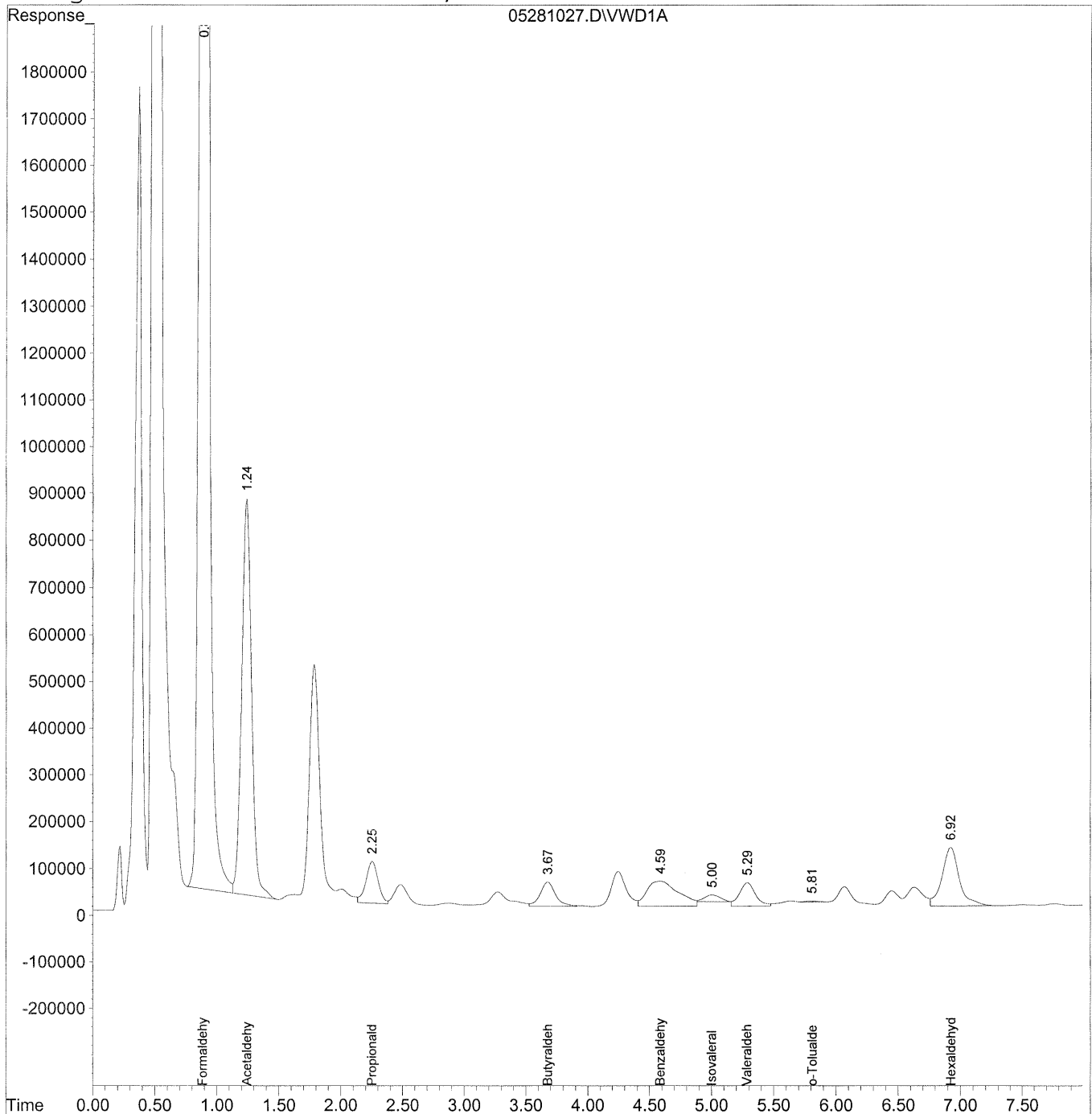
Verified By: FC Date: 6/2/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
Acq On : 28-May-2010, 17:42 Operator: MD
Sample : P1001793-027 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 4 11:36 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
Acq On : 28-May-2010, 17:42 Operator: MD
Sample : P1001793-027 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 4 11:36 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

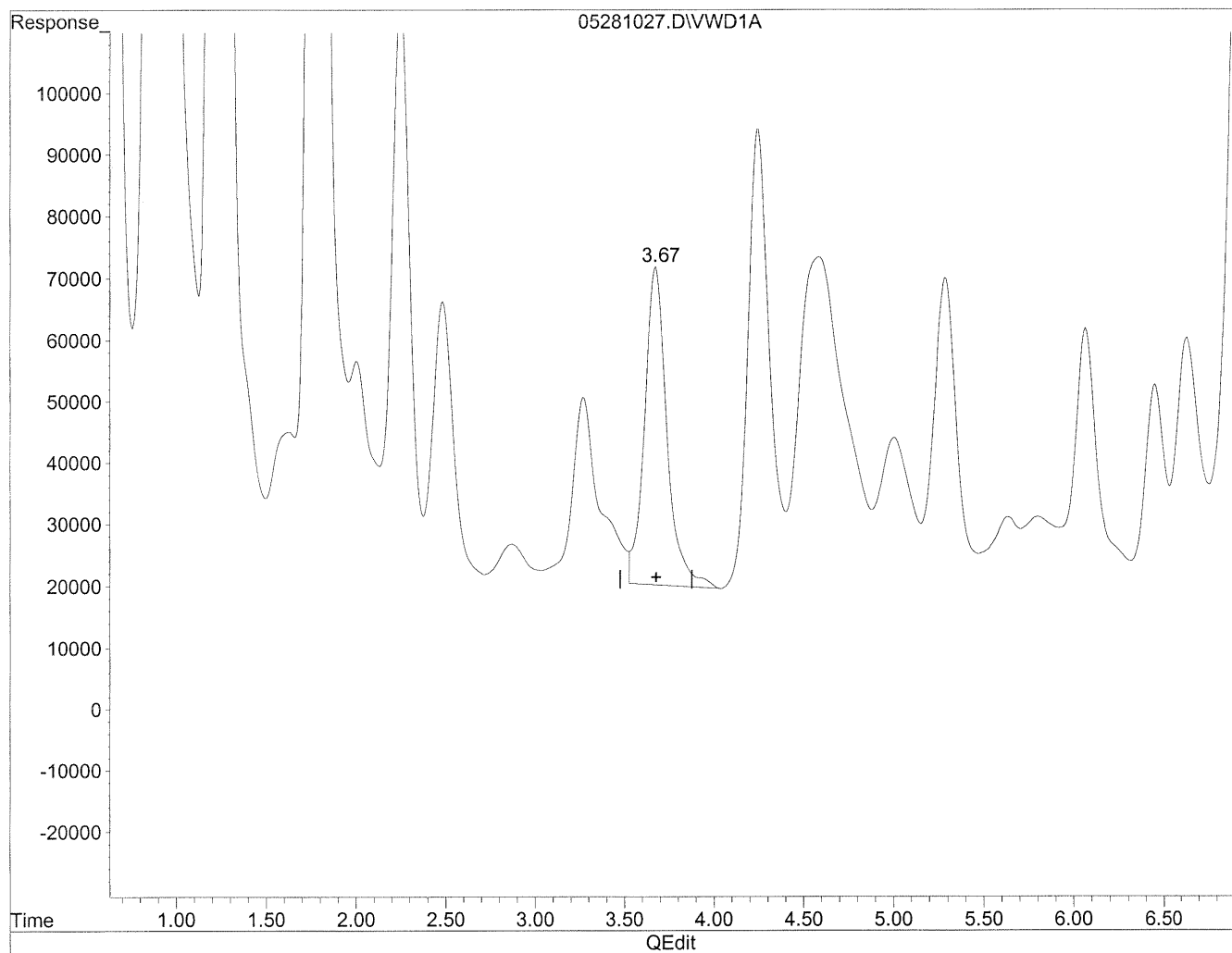
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	273059429	29257.806 ng/ml <i>dil</i>
2) Acetaldehyde	1.24	46730275	6938.188 ng/ml
3) Propionaldehyde	2.25	6162130	1267.401 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.67	4432686	1100.112 ng/mlm
6) Benzaldehyde	4.59	9532116	3521.644 ng/ml
7) Isovaleraldehyde	5.00	1293666	364.649 ng/mlm
8) Valeraldehyde	5.29	4493154	1339.395 ng/ml
9) o-Tolualdehyde	5.81	142506	70.009 ng/mlm
10) m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11) Hexaldehyde	6.93	11924083	4146.969 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
Acq On : 28-May-2010, 17:42 Operator: MD
Sample : P1001793-027 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.68min 1115.595ng/ml

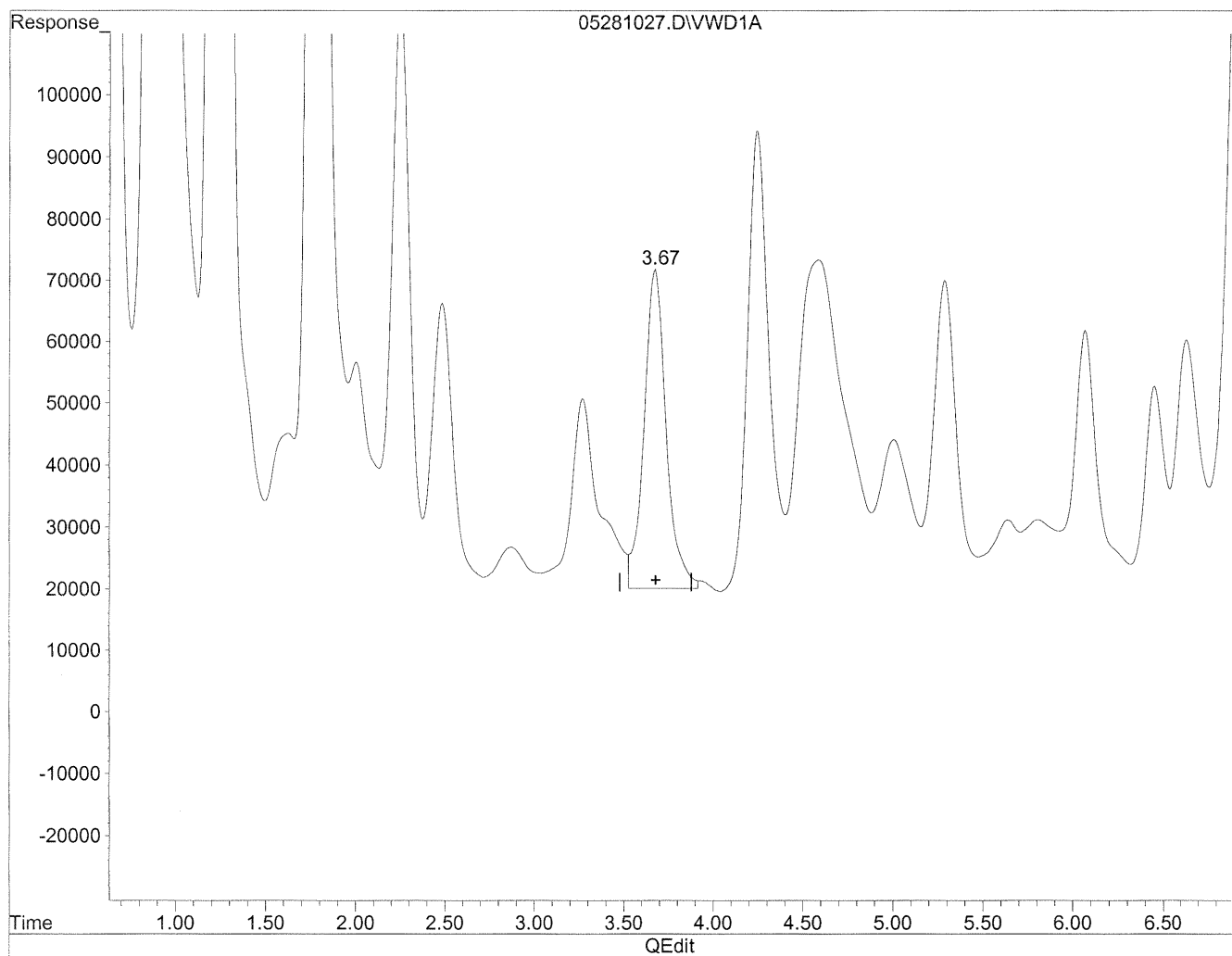
response 4495070

(+) = Expected Retention Time
05281027.D TO110510.M Fri Jun 04 11:34:57 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
Acq On : 28-May-2010, 17:42 Operator: MD
Sample : P1001793-027 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.67min 1100.112ng/ml m

response 4432686

MC
6/4/10

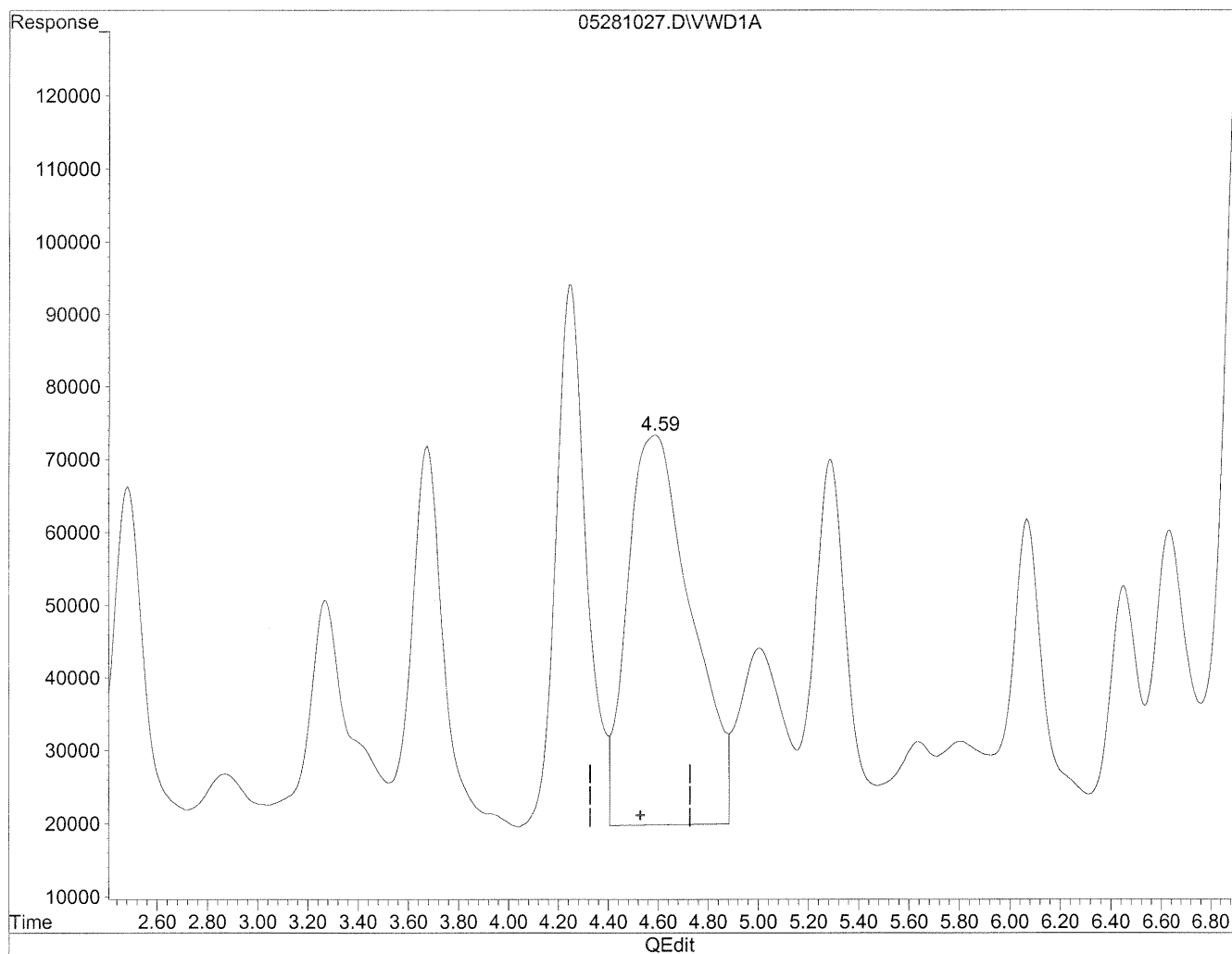
MD
sh 6/4/10

(+) = Expected Retention Time
05281027.D TO110510.M Fri Jun 04 11:35:05 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
Acq On : 28-May-2010, 17:42 Operator: MD
Sample : P1001793-027 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.59min 3521.644ng/ml

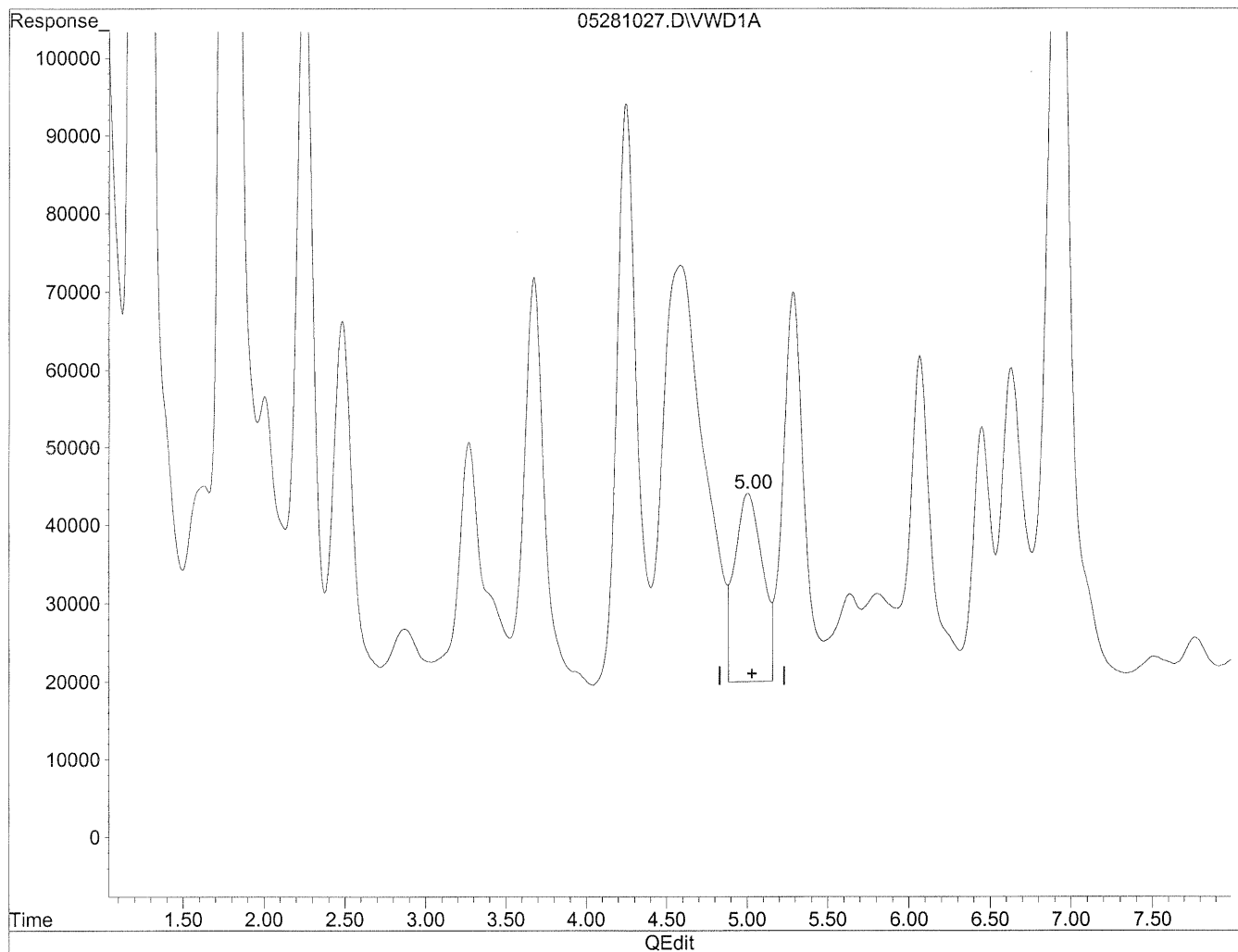
response 9532116

(+) = Expected Retention Time
05281027.D TO110510.M Fri Jun 04 11:35:11 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
Acq On : 28-May-2010, 17:42 Operator: MD
Sample : P1001793-027 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



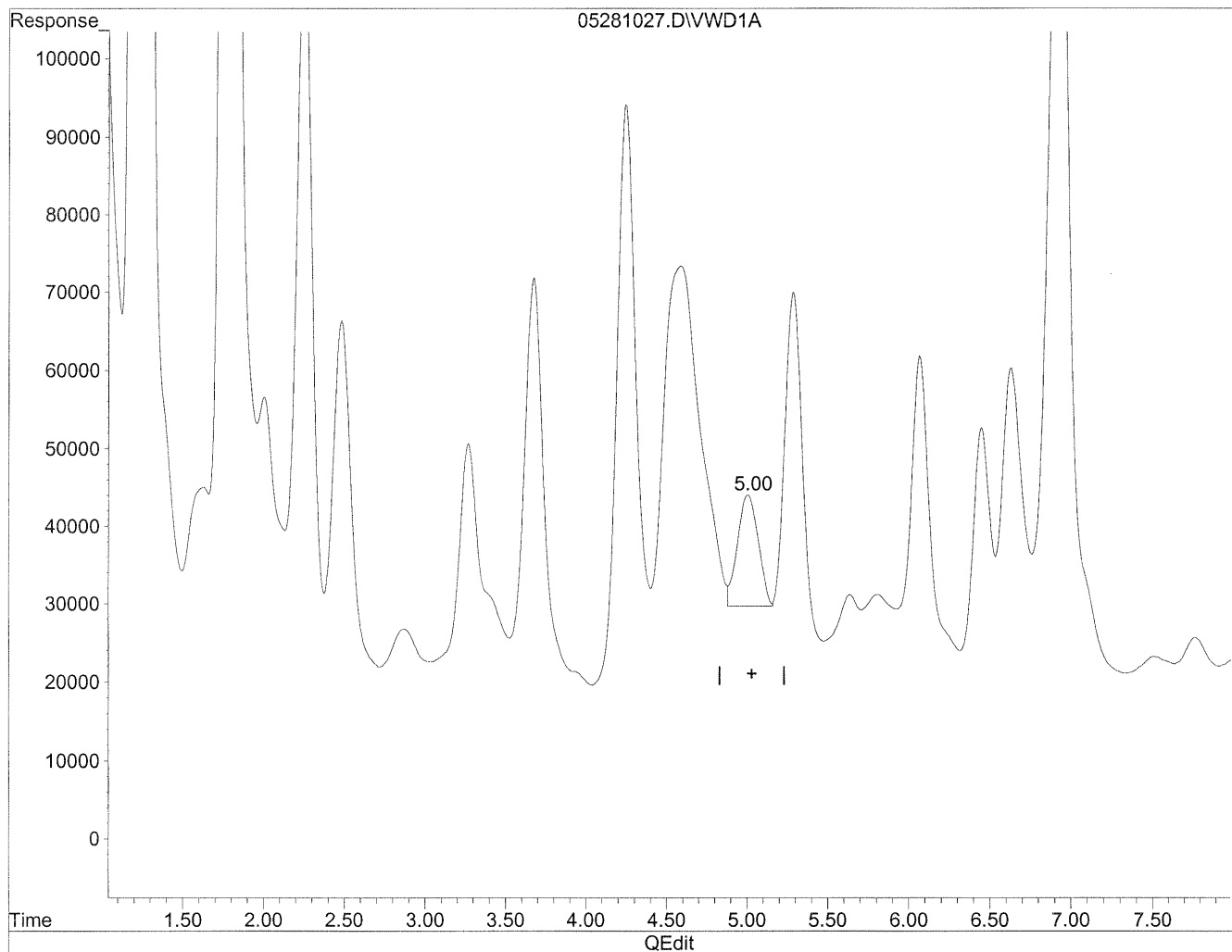
(7) Isovaleraldehyde
5.01min 810.802ng/ml
response 2876488

(+) = Expected Retention Time
05281027.D TO110510.M Fri Jun 04 11:35:23 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
Acq On : 28-May-2010, 17:42 Operator: MD
Sample : P1001793-027 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.00min 364.649ng/ml m

response 1293666

HC
4/4/10

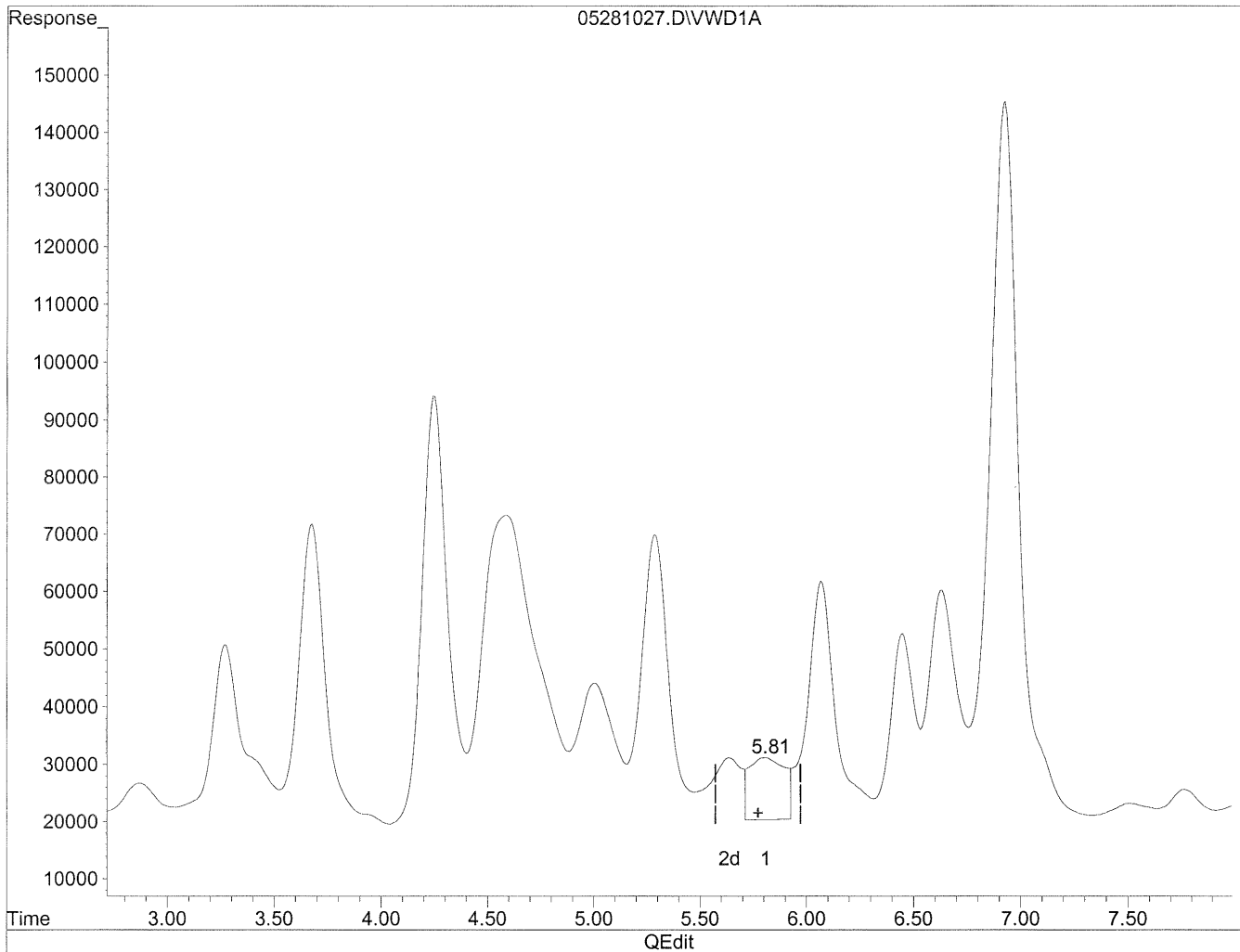
12
②
6/4/10

(+) = Expected Retention Time
05281027.D TO110510.M Fri Jun 04 11:35:38 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
Acq On : 28-May-2010, 17:42 Operator: MD
Sample : P1001793-027 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



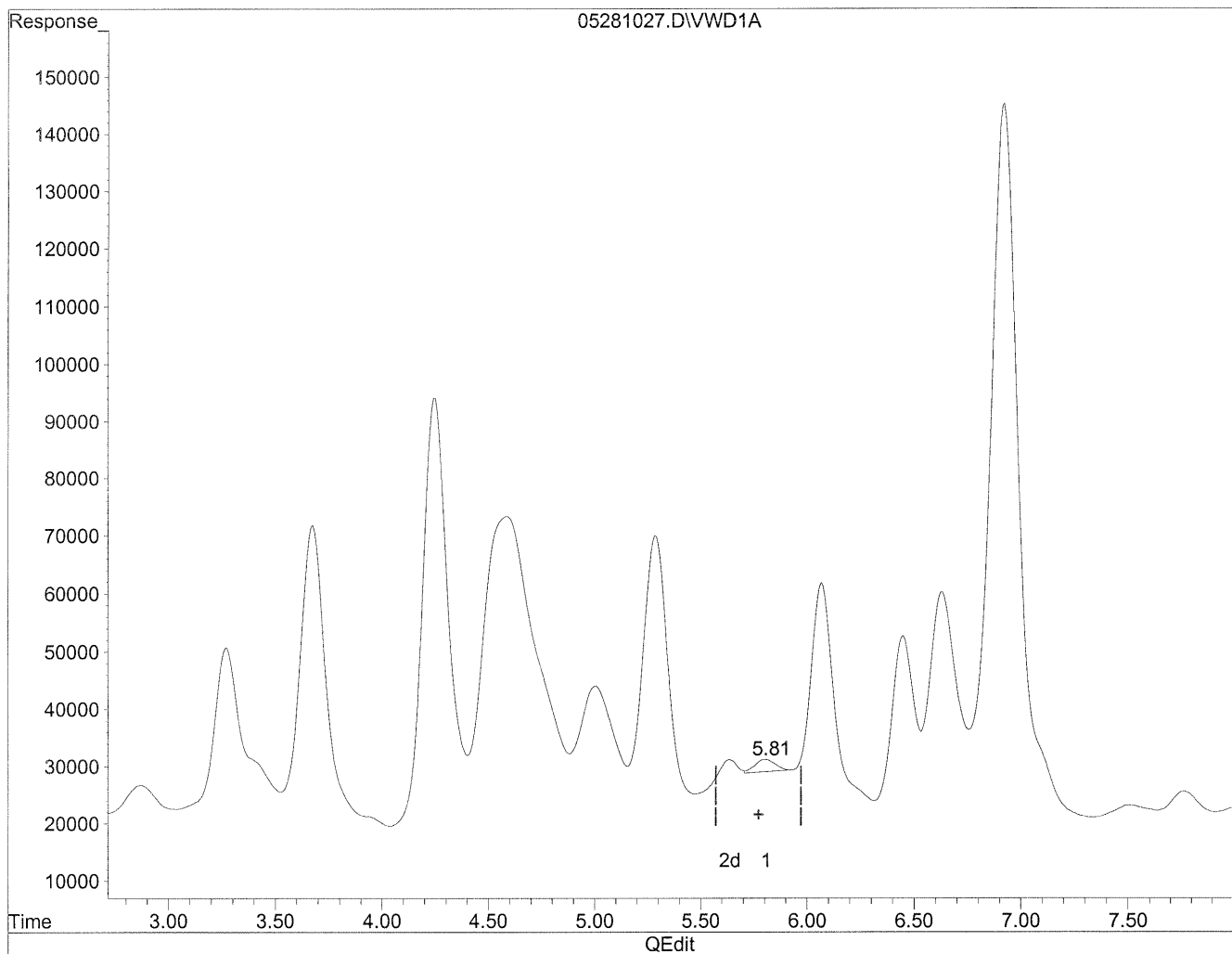
(9) o-Tolualdehyde
5.81min 621.212ng/ml
response 1264500

(+) = Expected Retention Time
05281027.D TO110510.M Fri Jun 04 11:36:01 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
 Acq On : 28-May-2010, 17:42 Operator: MD
 Sample : P1001793-027 2.0ml Inst : VWD
 Misc : rerun Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 15:52:42 2010
 Response via : Multiple Level Calibration



(9) o-Tolualdehyde

5.81min 70.009ng/ml m

response 142506

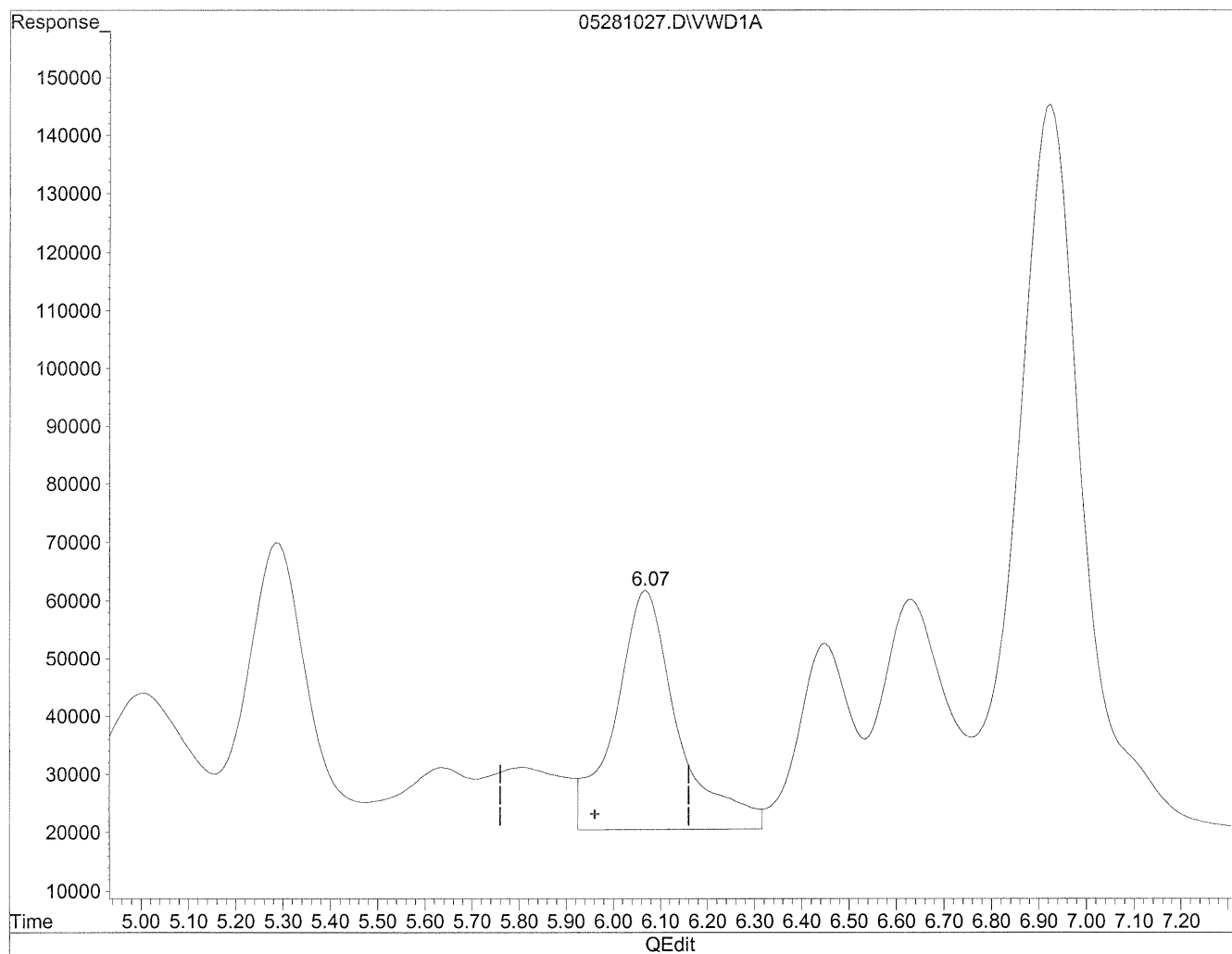
AC
6/4/10

W
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
Acq On : 28-May-2010, 17:42 Operator: MD
Sample : P1001793-027 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

6.07min 1625.694ng/ml

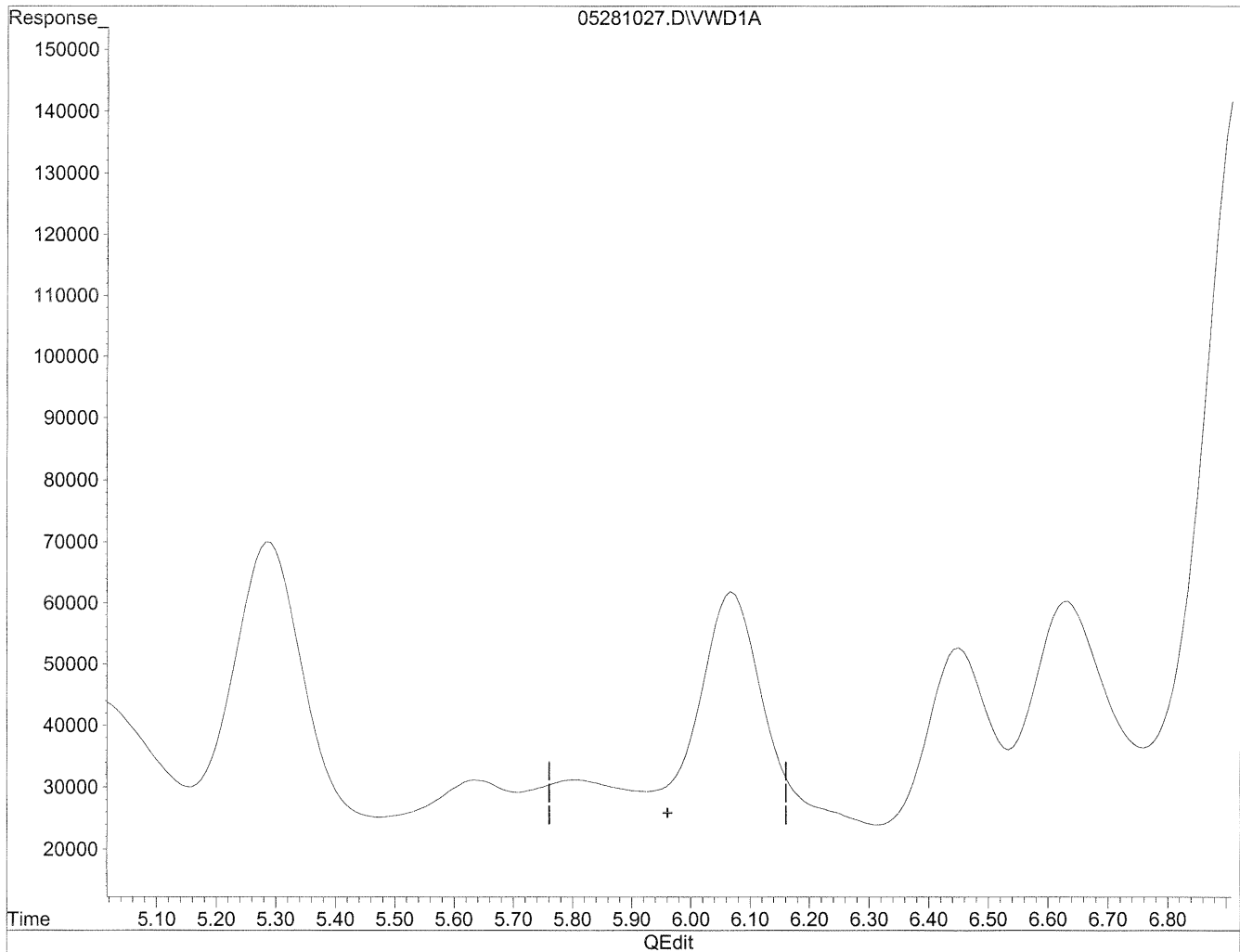
response 3808365

(+) = Expected Retention Time
05281027.D TO110510.M Fri Jun 04 11:36:09 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281027.D Vial: 122
Acq On : 28-May-2010, 17:42 Operator: MD
Sample : P1001793-027 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

0.00min 0.000ng/ml d

response 0

HC
6/4/10

MP
(n)
6/4/10

(+) = Expected Retention Time

05281027.D TO110510.M

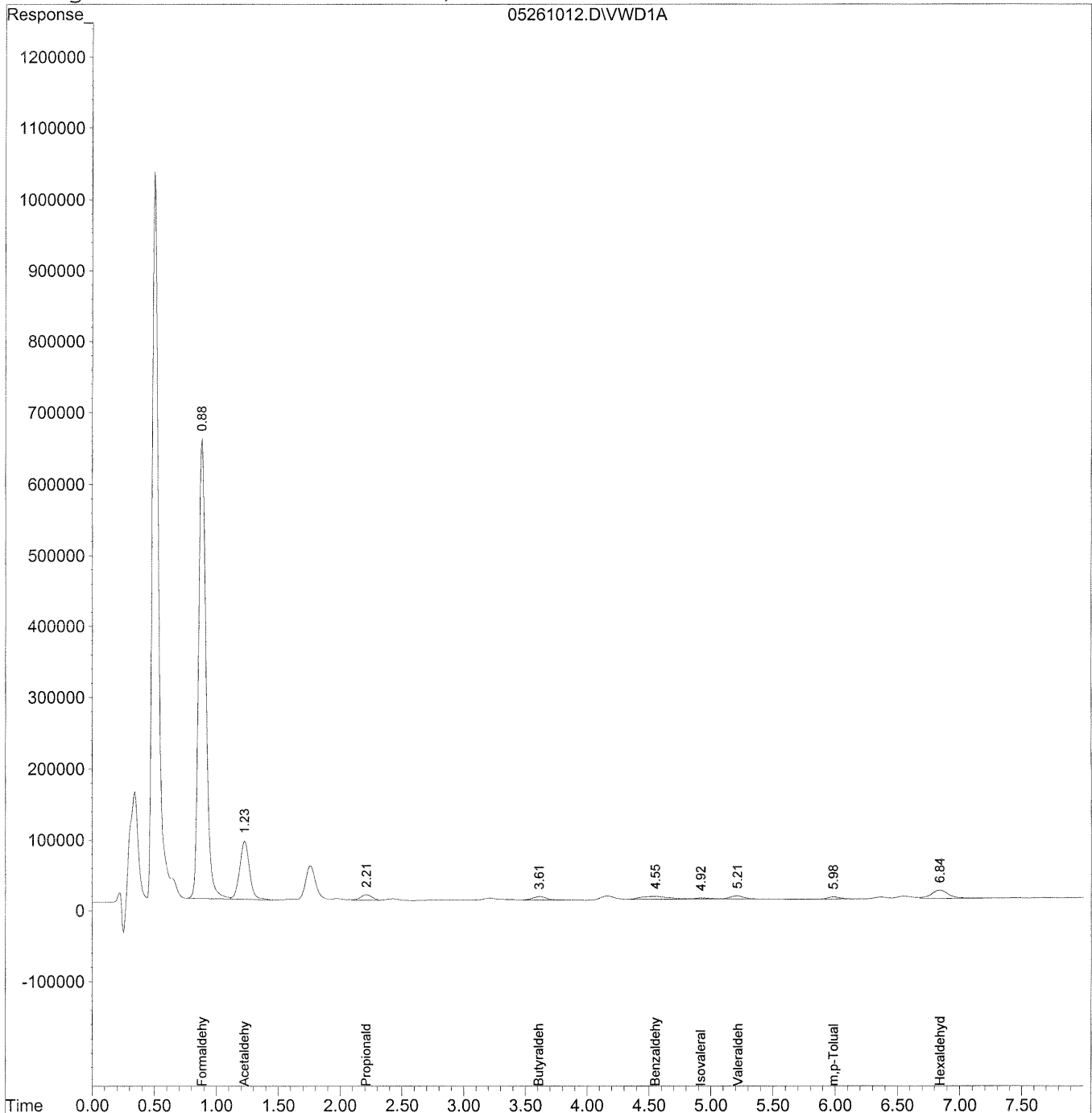
Fri Jun 04 11:36:12 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261012.D Vial: 109
Acq On : 26-May-2010, 13:20 Operator: MD
Sample : P1001793-027 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:38 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261012.D Vial: 109
Acq On : 26-May-2010, 13:20 Operator: MD
Sample : P1001793-027 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:38 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

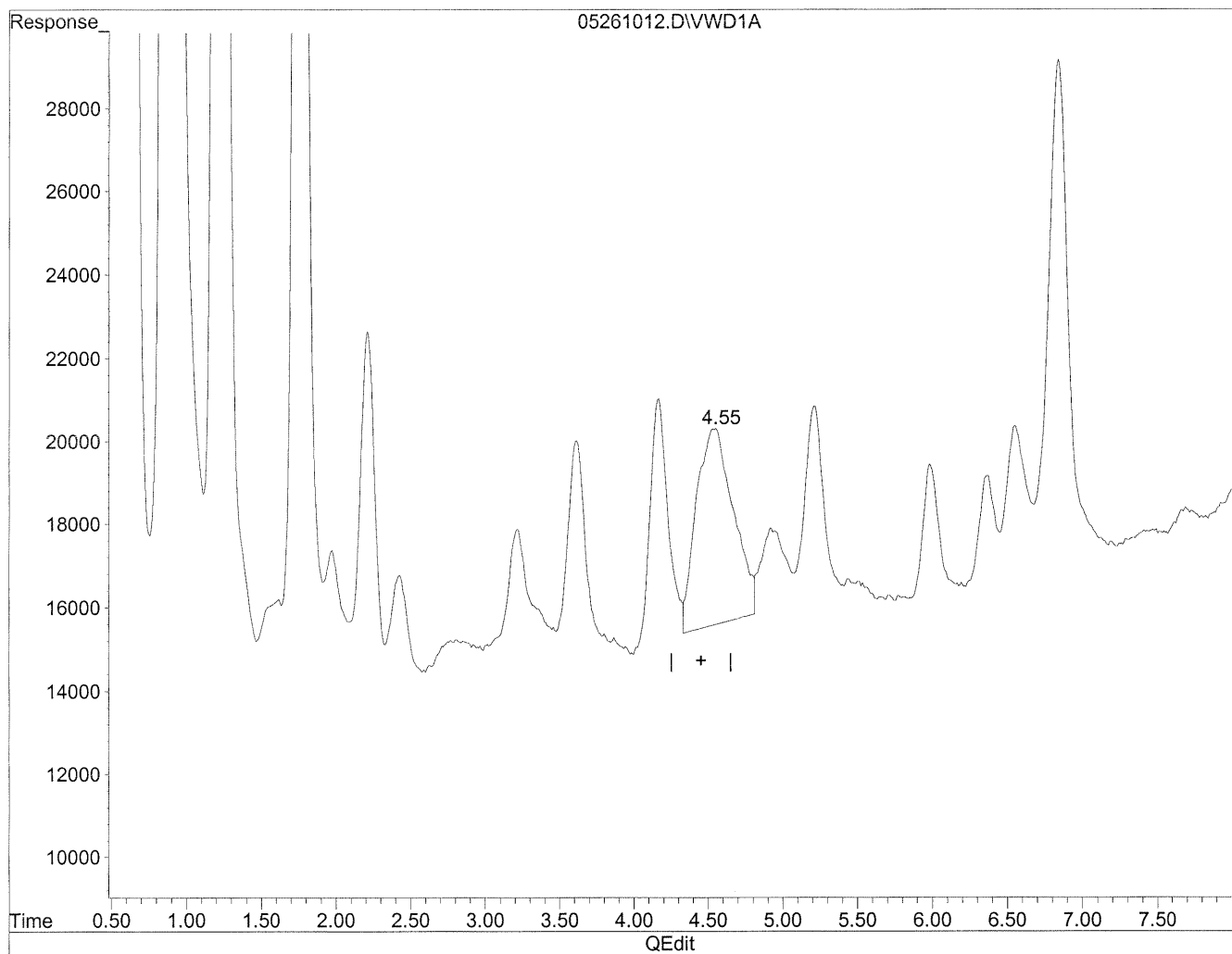
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	26957602	2888.456 ng/ml
2) Acetaldehyde	1.23	4590289	681.534 ng/ml
3) Propionaldehyde	2.21	530274	109.065 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.62	388636	96.452 ng/ml
6) Benzaldehyde	4.55	678785	250.777 ng/mlm
7) Isovaleraldehyde	4.92	99175	27.955 ng/mlm
8) Valeraldehyde	5.21	362483	108.055 ng/mlm
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	5.99f	218887	93.437 ng/ml
11) Hexaldehyde	6.84	1158939	403.057 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261012.D Vial: 109
Acq On : 26-May-2010, 13:20 Operator: MD
Sample : P1001793-027 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



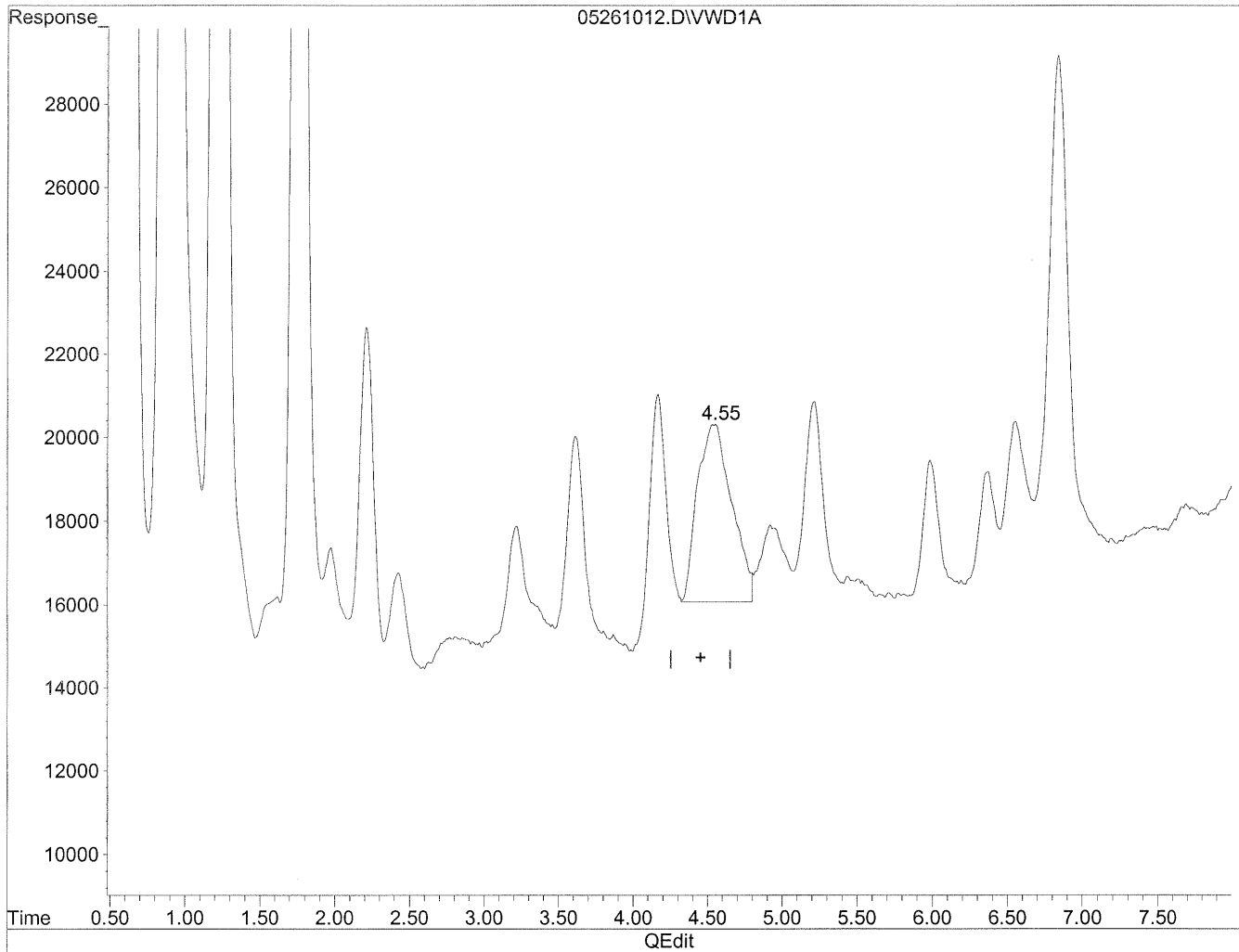
(6) Benzaldehyde
4.55min 301.089ng/ml
response 814964

(+) = Expected Retention Time
05261012.D TO110510.M Fri May 28 14:38:06 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261012.D Vial: 109
Acq On : 26-May-2010, 13:20 Operator: MD
Sample : P1001793-027 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.55min 250.777ng/ml m

response 678785

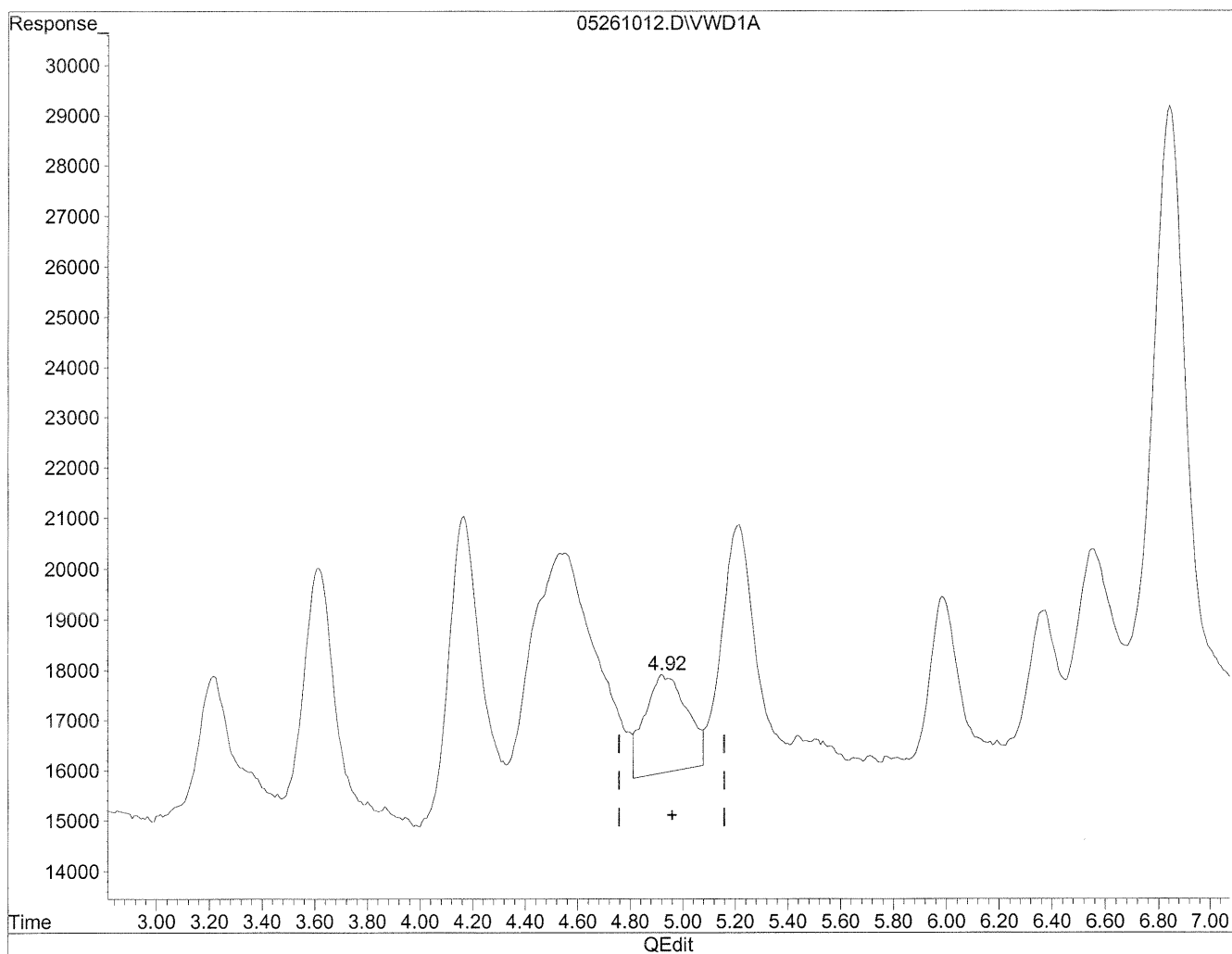
*use
direct
run to
report*
6/4/10
6/4/10

(+) = Expected Retention Time
05261012.D TO110510.M Fri May 28 14:38:11 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261012.D Vial: 109
Acq On : 26-May-2010, 13:20 Operator: MD
Sample : P1001793-027 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.92min 61.609ng/ml

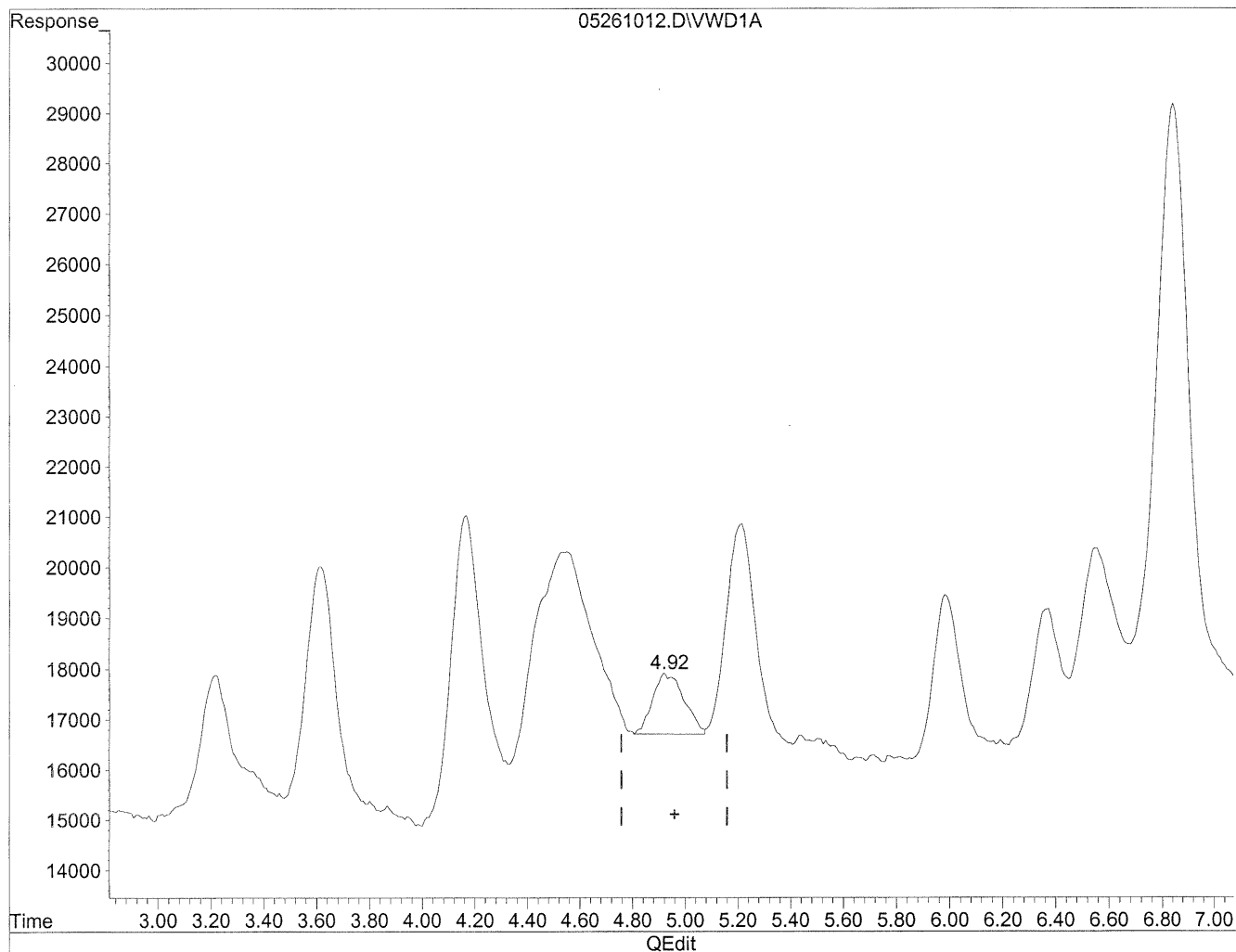
response 218572

(+) = Expected Retention Time
05261012.D TO110510.M Fri May 28 14:38:17 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261012.D Vial: 109
Acq On : 26-May-2010, 13:20 Operator: MD
Sample : P1001793-027 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.92min 27.955ng/ml m

response 99175

HC
6/4/10

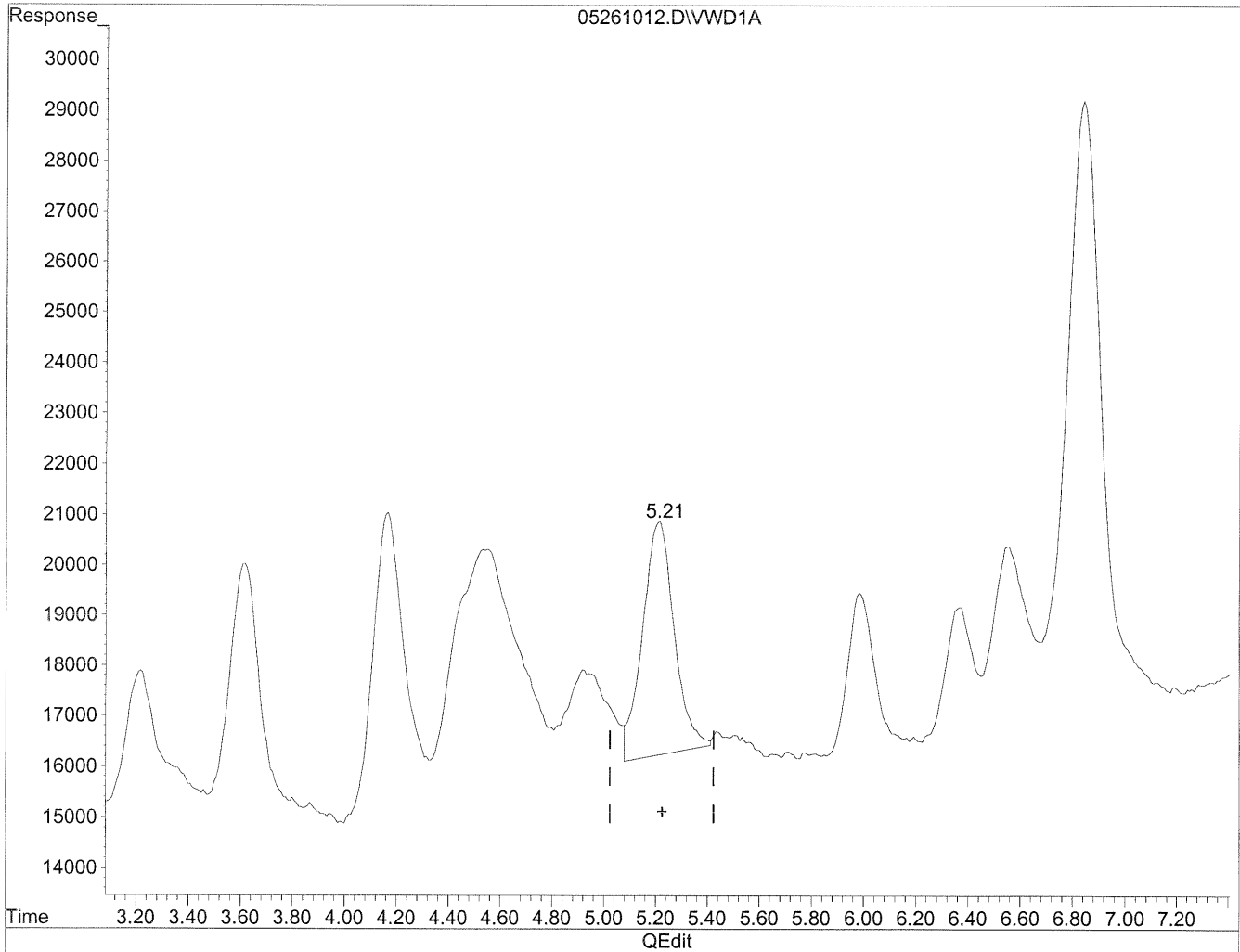
PL
6/4/10

(+) = Expected Retention Time
05261012.D TO110510.M Fri May 28 14:38:22 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261012.D Vial: 109
Acq On : 26-May-2010, 13:20 Operator: MD
Sample : P1001793-027 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

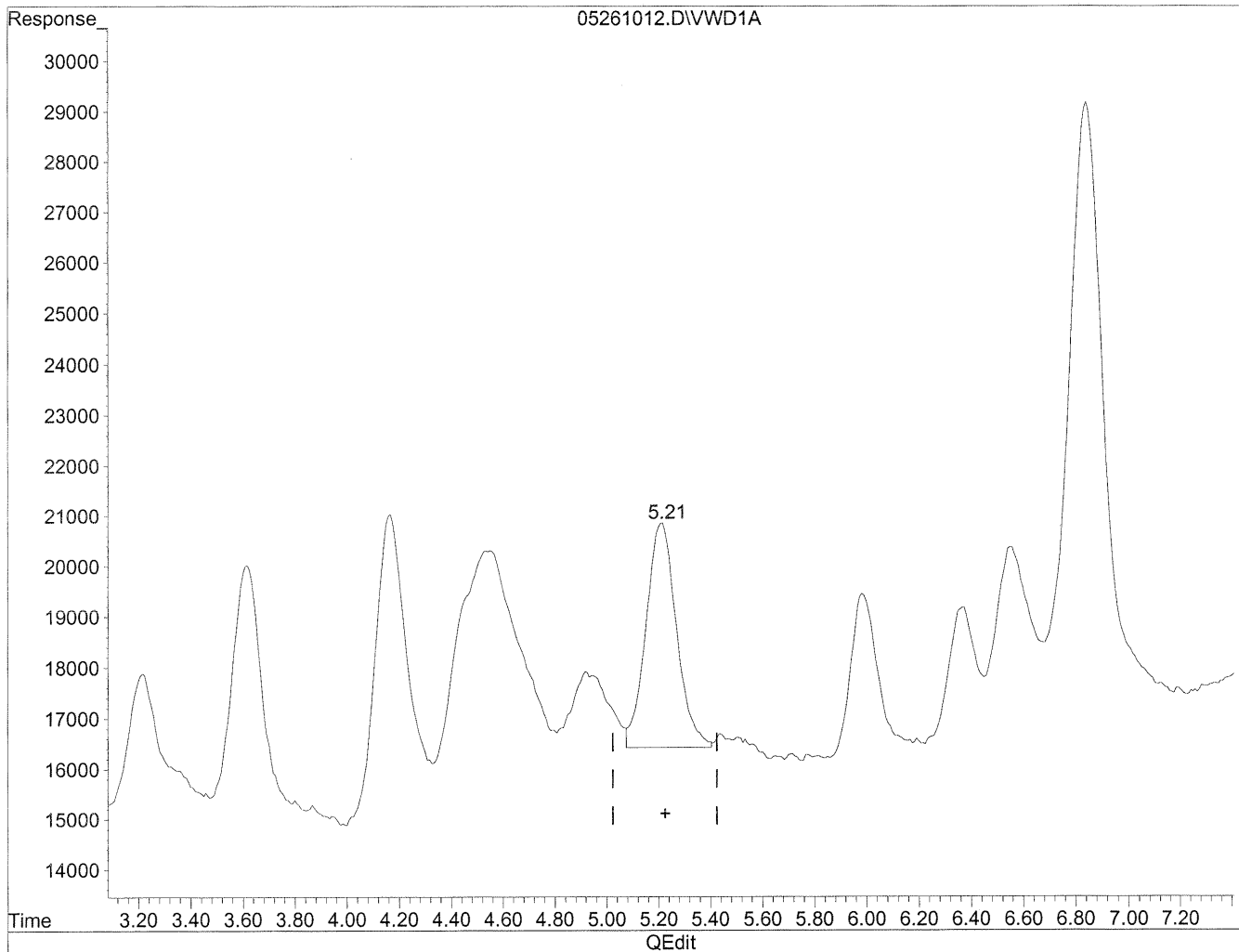
5.22min 117.792ng/ml

response 395146

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261012.D Vial: 109
Acq On : 26-May-2010, 13:20 Operator: MD
Sample : P1001793-027 2ml 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.21min 108.055ng/ml m

response 362483

HL
6/4/10

MD
6/4/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110498
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-028

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/26/10 & 5/28/10
Desorption Volume: 2.0 ml
Sampling Time: 20319 Minutes

CAS #	Compound	Result	Result	MRL	Result	MRL	Data Qualifier
		µg/Sample	µg/m ³	µg/m ³	ppbV	ppbV	
50-00-0	Formaldehyde	61	30	0.099	25	0.081	
75-07-0	Acetaldehyde	17	9.9	0.12	5.5	0.065	
123-38-6	Propionaldehyde	3.0	3.7	0.25	1.6	0.11	
123-72-8	Butyraldehyde	2.7	12	0.89	4.0	0.30	
100-52-7	Benzaldehyde	10	5.5	0.11	1.3	0.025	M
590-86-3	Isovaleraldehyde	0.97	0.79	0.16	0.22	0.046	
110-62-3	Valeraldehyde	2.6	4.7	0.36	1.3	0.10	
66-25-1	n-Hexaldehyde	8.3	23	0.55	5.5	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

M = Matrix interference; results may be biased .

NA = Not applicable.

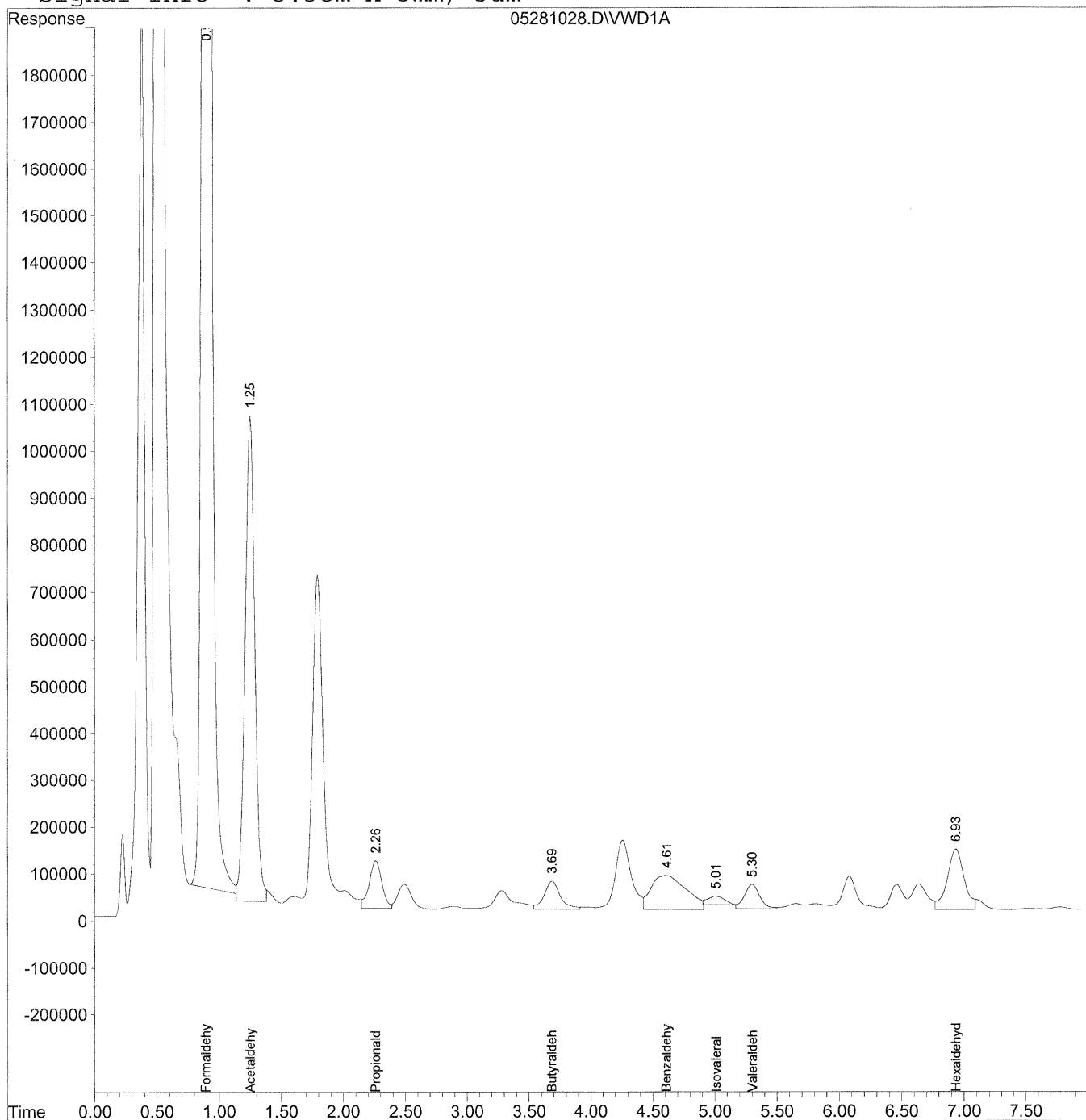
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
 Acq On : 28-May-2010, 17:52 Operator: MD
 Sample : P1001793-028 2.0ml Inst : VWD
 Misc : rerun Multiplr: 1.00
 IntFile : events.e
 Quant Time: Jun 4 11:39 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 15:52:42 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 4 11:39 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

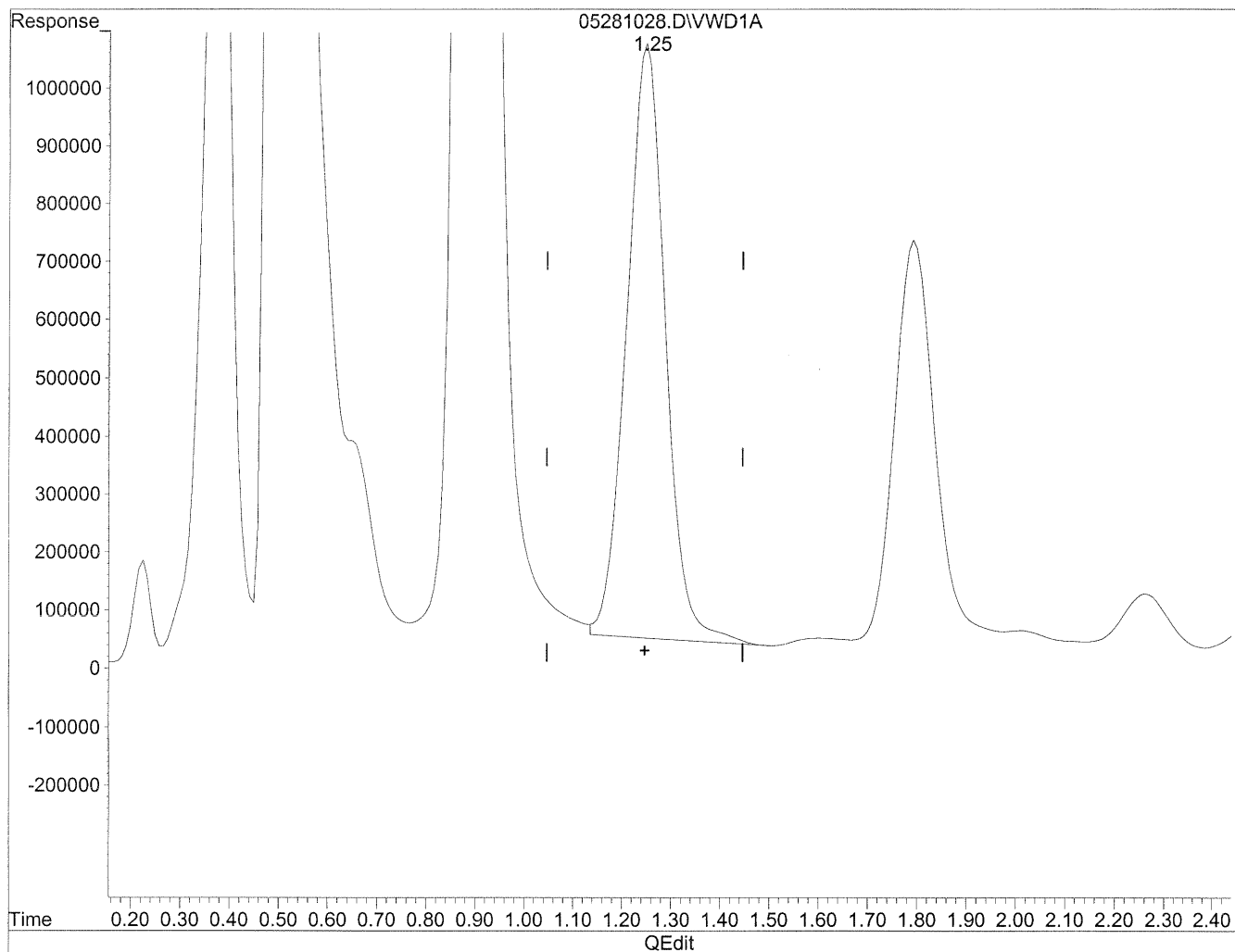
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.90	288373871	30898.719 ng/ml <i>ail</i>
2)	Acetaldehyde	1.25	56824222	8436.868 ng/mlm
3)	Propionaldehyde	2.26	7203043	1481.491 ng/mlm
4)	Crotonaldehyde	0.00	0	N.D. ng/ml
5)	Butyraldehyde	3.69	5364583	1331.392 ng/ml
6)	Benzaldehyde	4.61	13958529	5156.984 ng/ml
7)	Isovaleraldehyde	5.01	1728754	487.288 ng/mlm
8)	Valeraldehyde	5.30	4360593	1299.879 ng/mlm
9)	o-Tolualdehyde	0.00	0	N.D. ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D. ng/ml
11)	Hexaldehyde	6.93	11944116	4153.936 ng/mlm
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

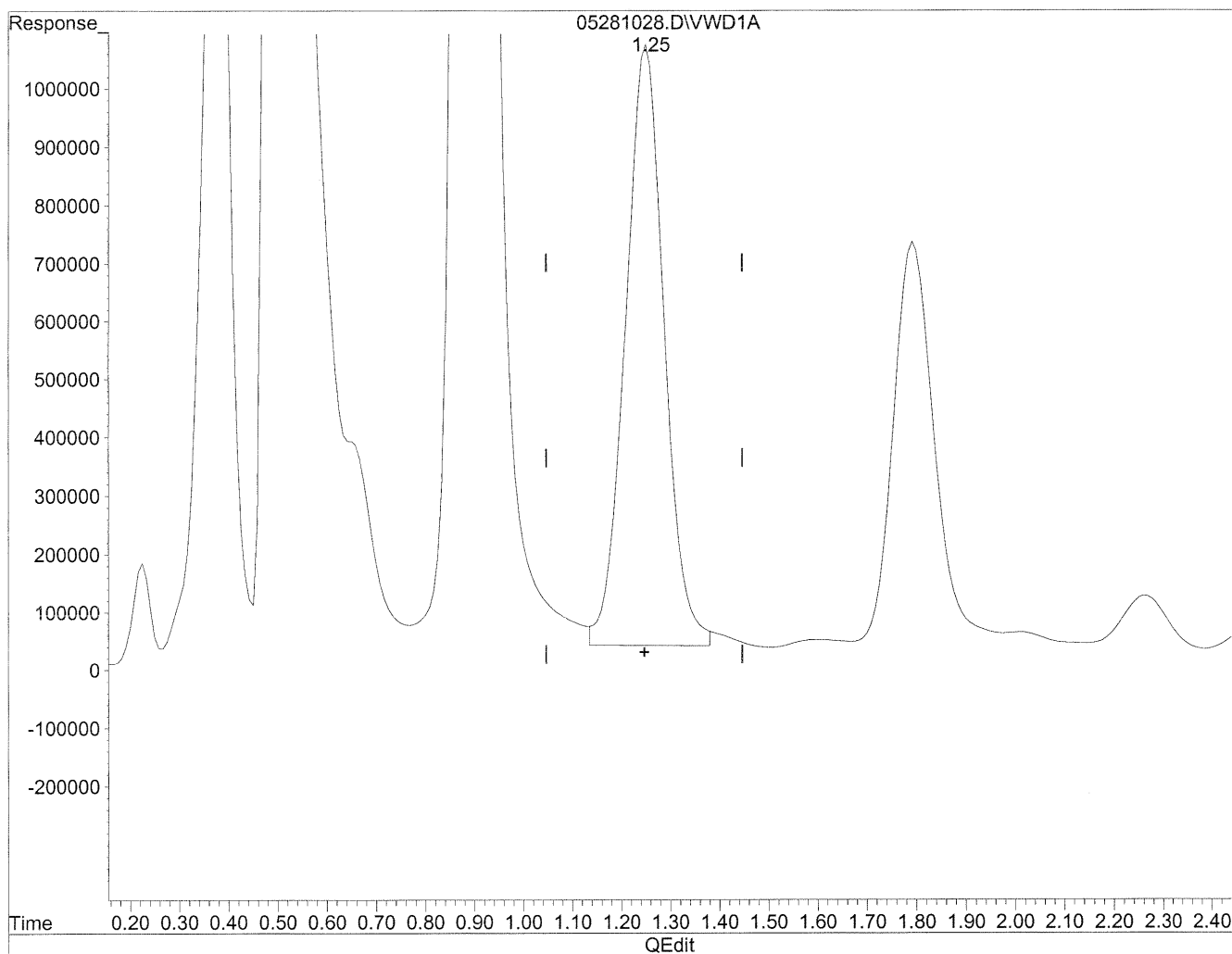
1.25min 8333.650ng/ml

response 56129026

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.25min 8436.868ng/ml m

response 56824222

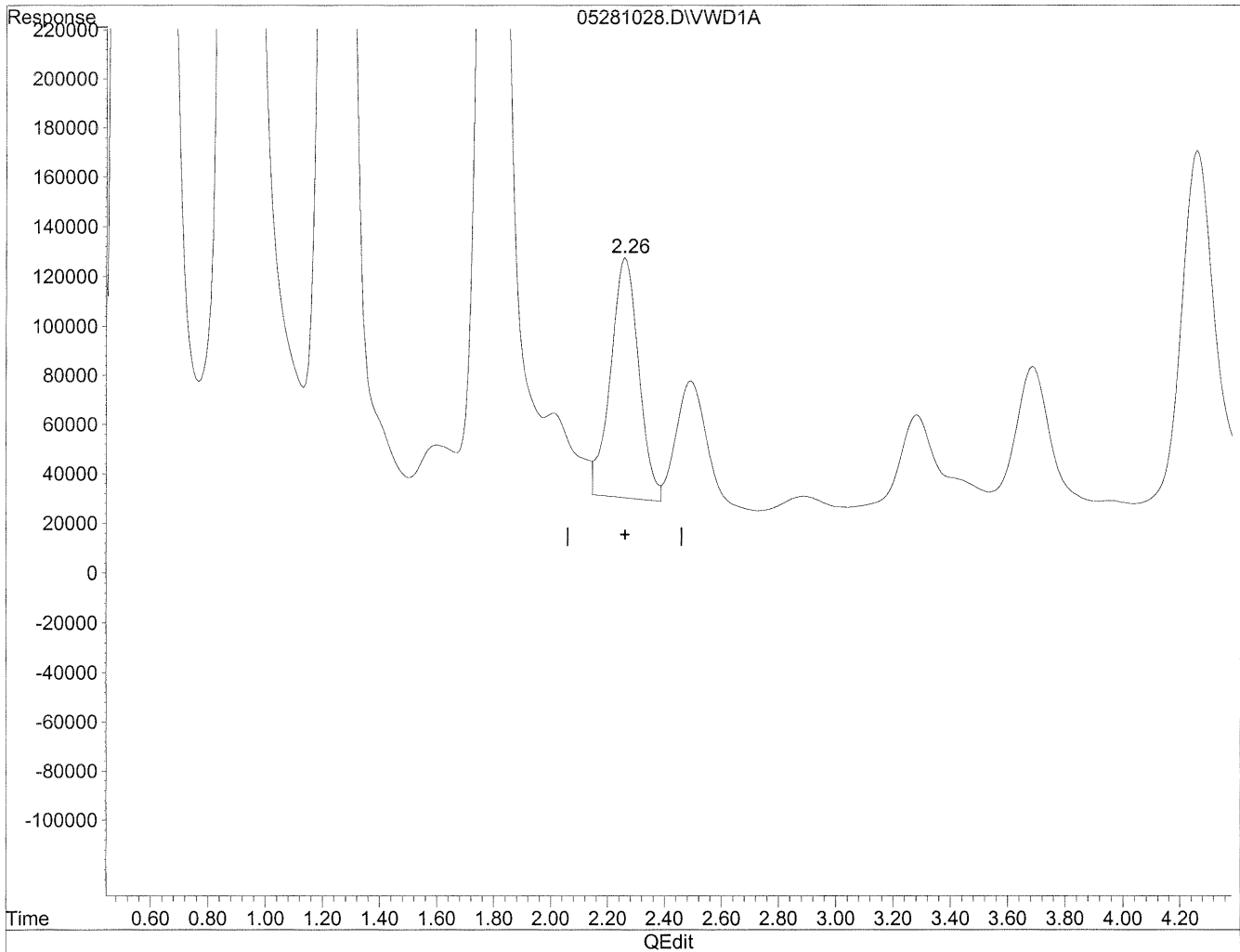
ALC
6/4/10

Sh
6/4/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.26min 1380.153ng/ml

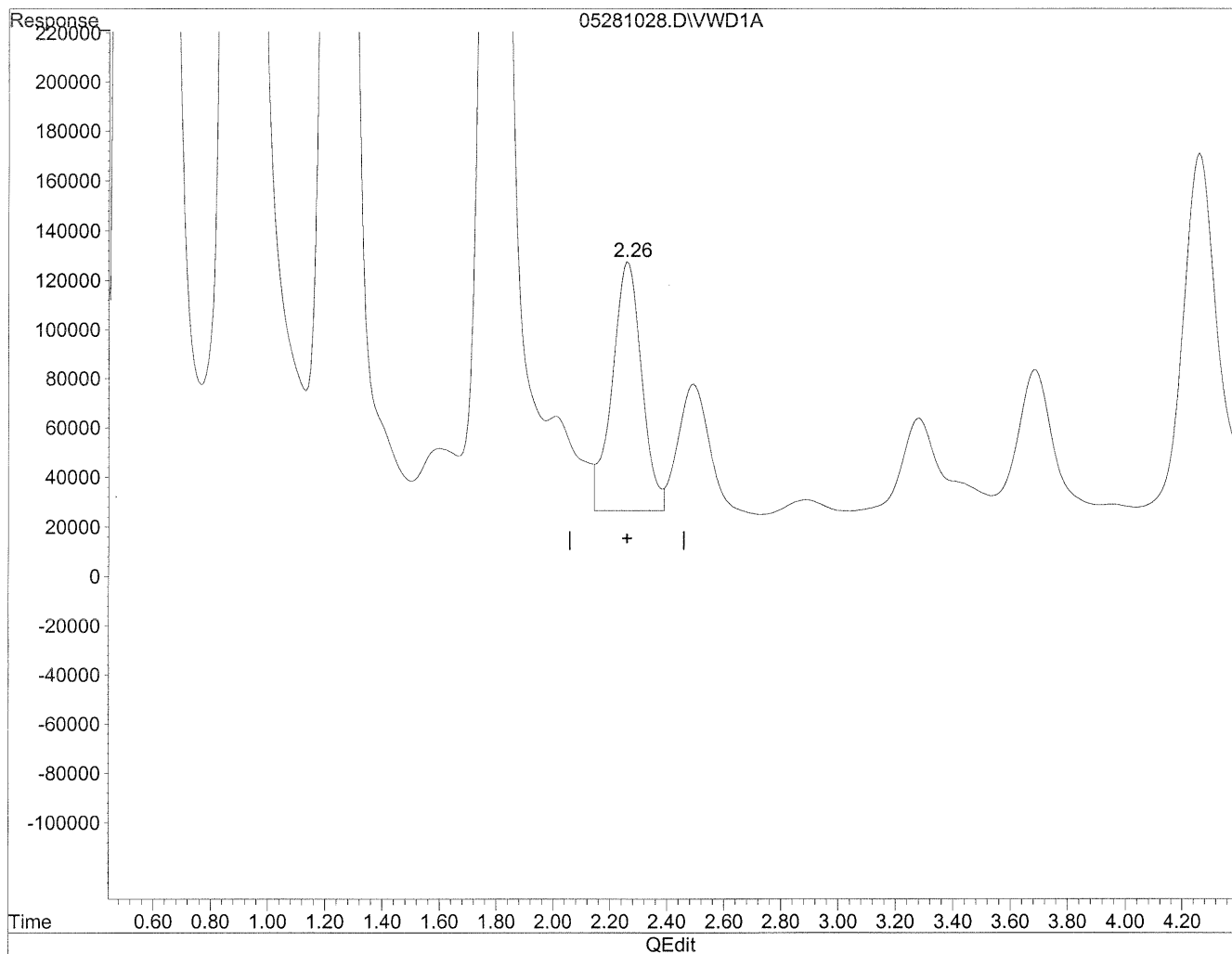
response 6710332

(+) = Expected Retention Time
05281028.D TO110510.M Fri Jun 04 11:37:18 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.26min 1481.491ng/ml m

response 7203043

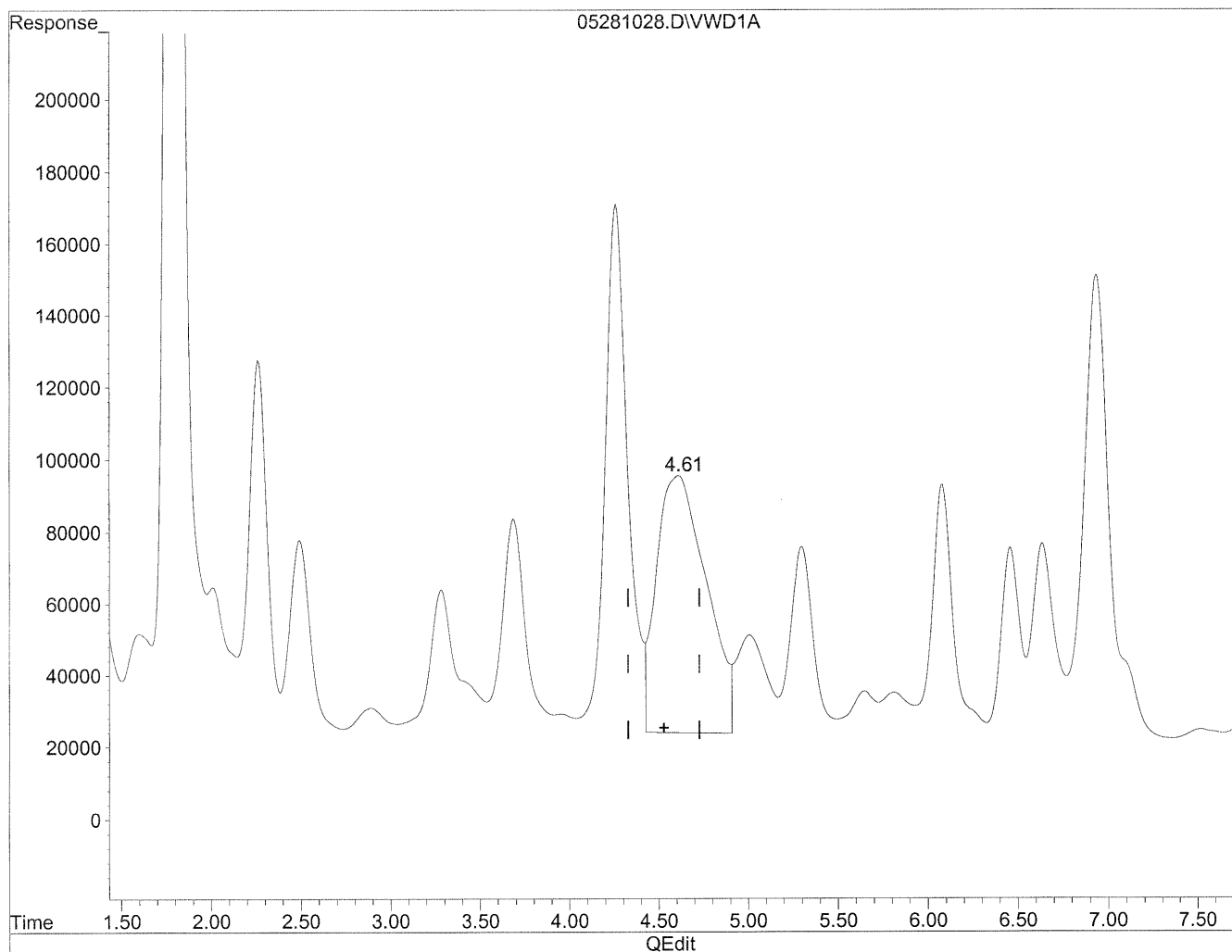
Handwritten signatures and dates:
4/4/10
6/4/10

(+) = Expected Retention Time
05281028.D TO110510.M Fri Jun 04 11:37:22 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

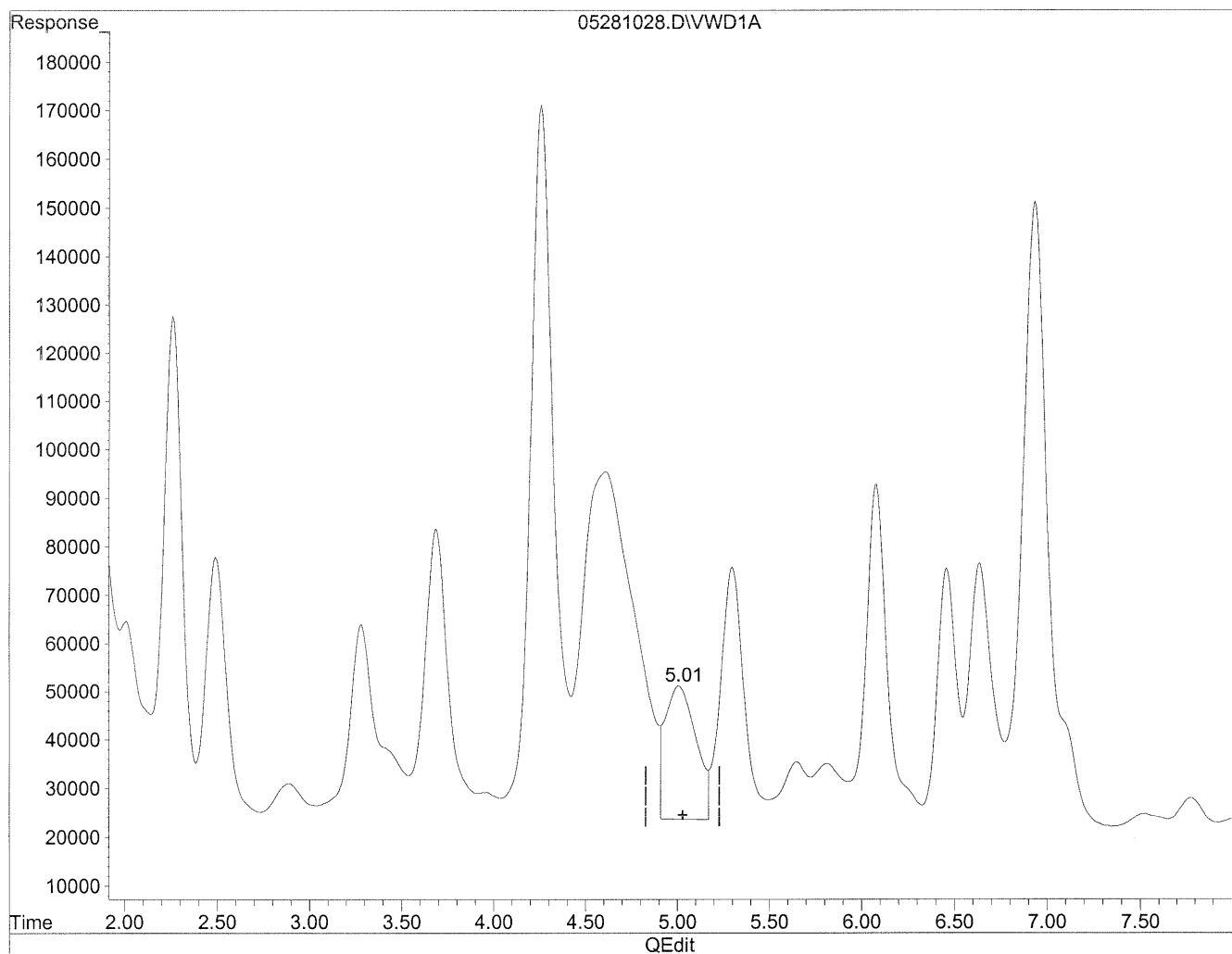
4.61min 5156.984ng/ml

response 13958529

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.01min 913.962ng/ml

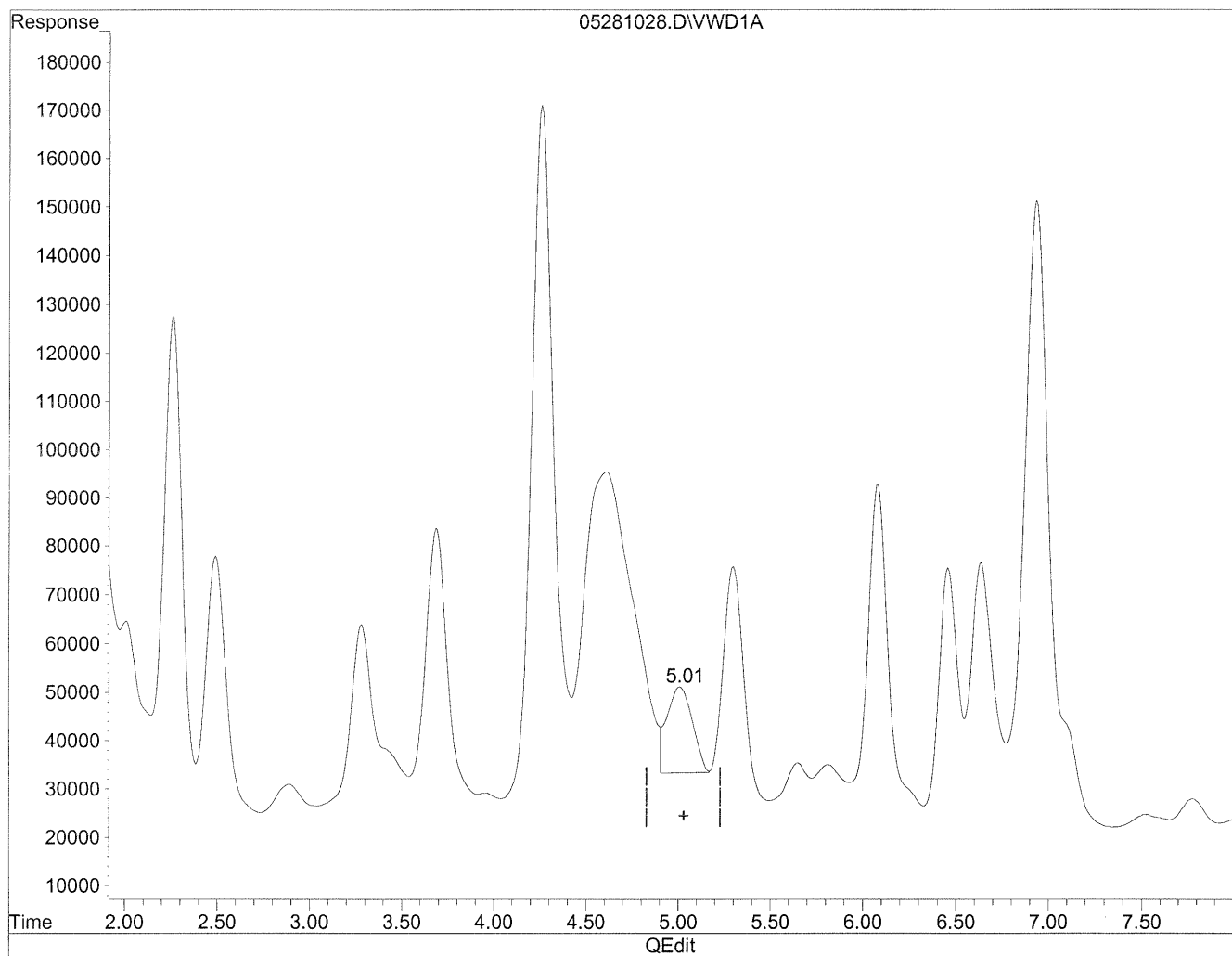
response 3242468

(+) = Expected Retention Time
05281028.D TO110510.M Fri Jun 04 11:37:53 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

5.01min 487.288ng/ml m

response 1728754

HC
6/4/10
R2
6/4/10

(+) = Expected Retention Time

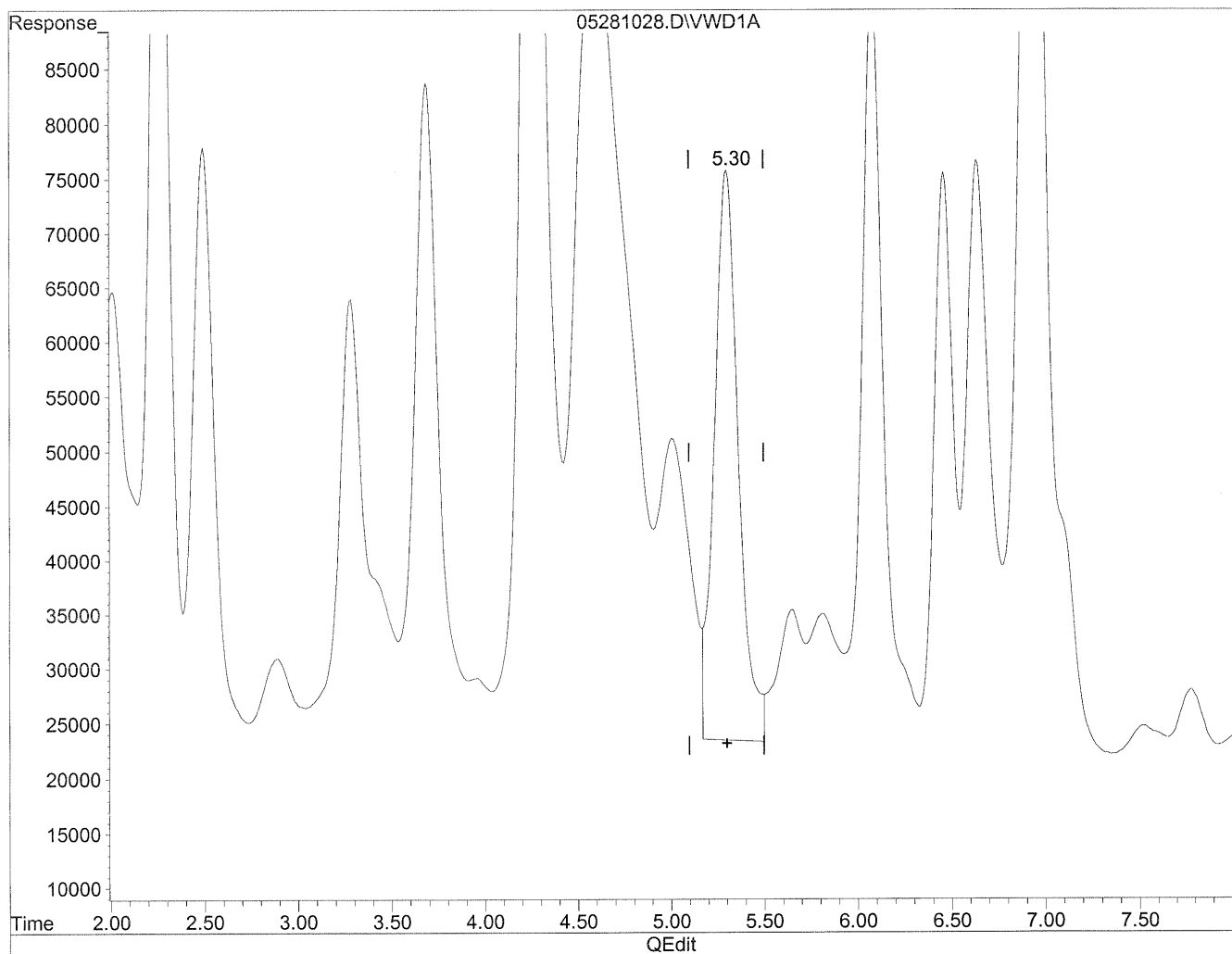
05281028.D TO110510.M

Fri Jun 04 11:38:05 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
 Acq On : 28-May-2010, 17:52 Operator: MD
 Sample : P1001793-028 2.0ml Inst : VWD
 Misc : rerun Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 15:52:42 2010
 Response via : Multiple Level Calibration



(8) Valeraldehyde

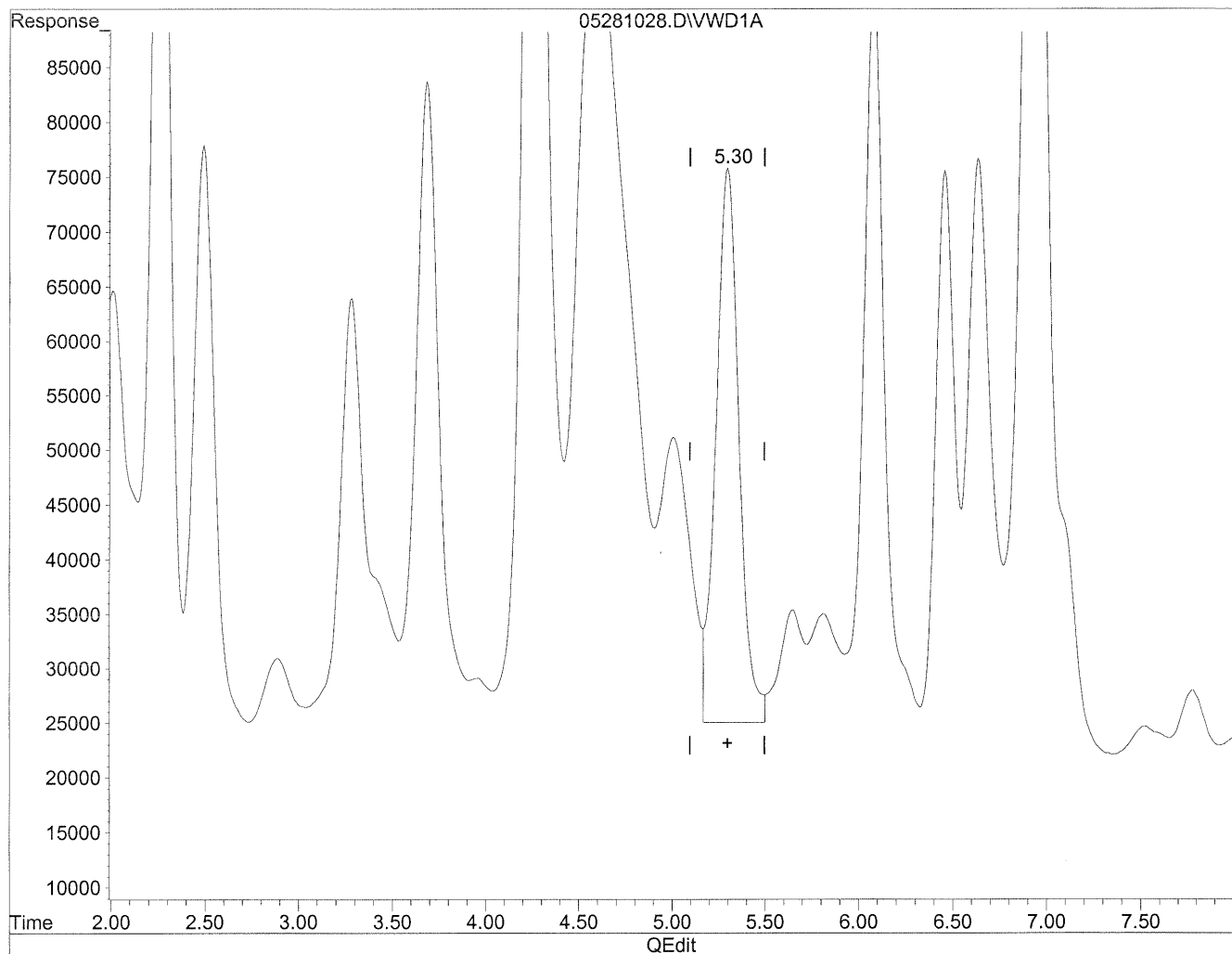
5.30min 1393.785ng/ml

response 4675613

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.30min 1299.879ng/ml m

response 4360593

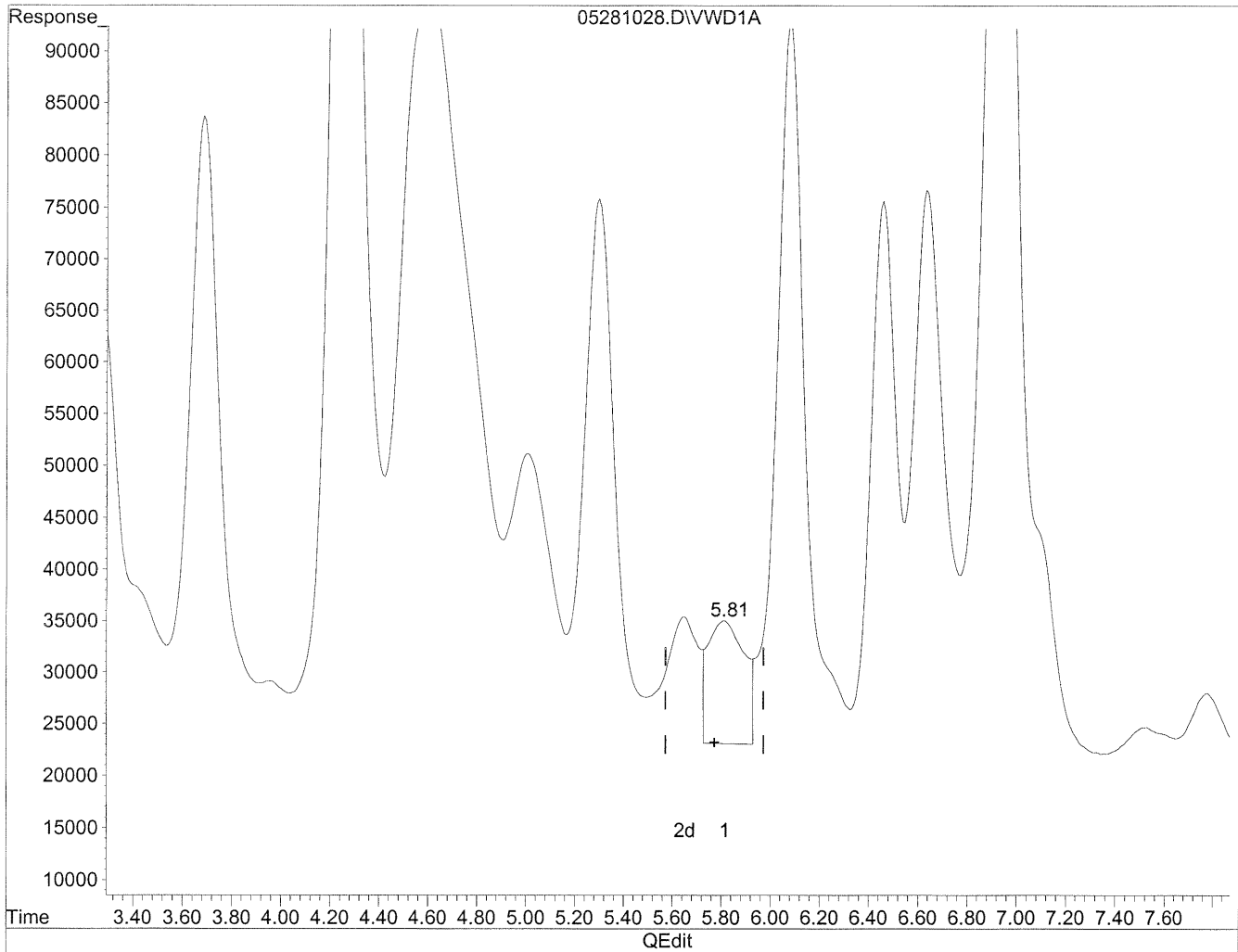
HC
6/4/10
PAC
(MD)
6/4/10

(+) = Expected Retention Time
05281028.D TO110510.M Fri Jun 04 11:38:29 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration

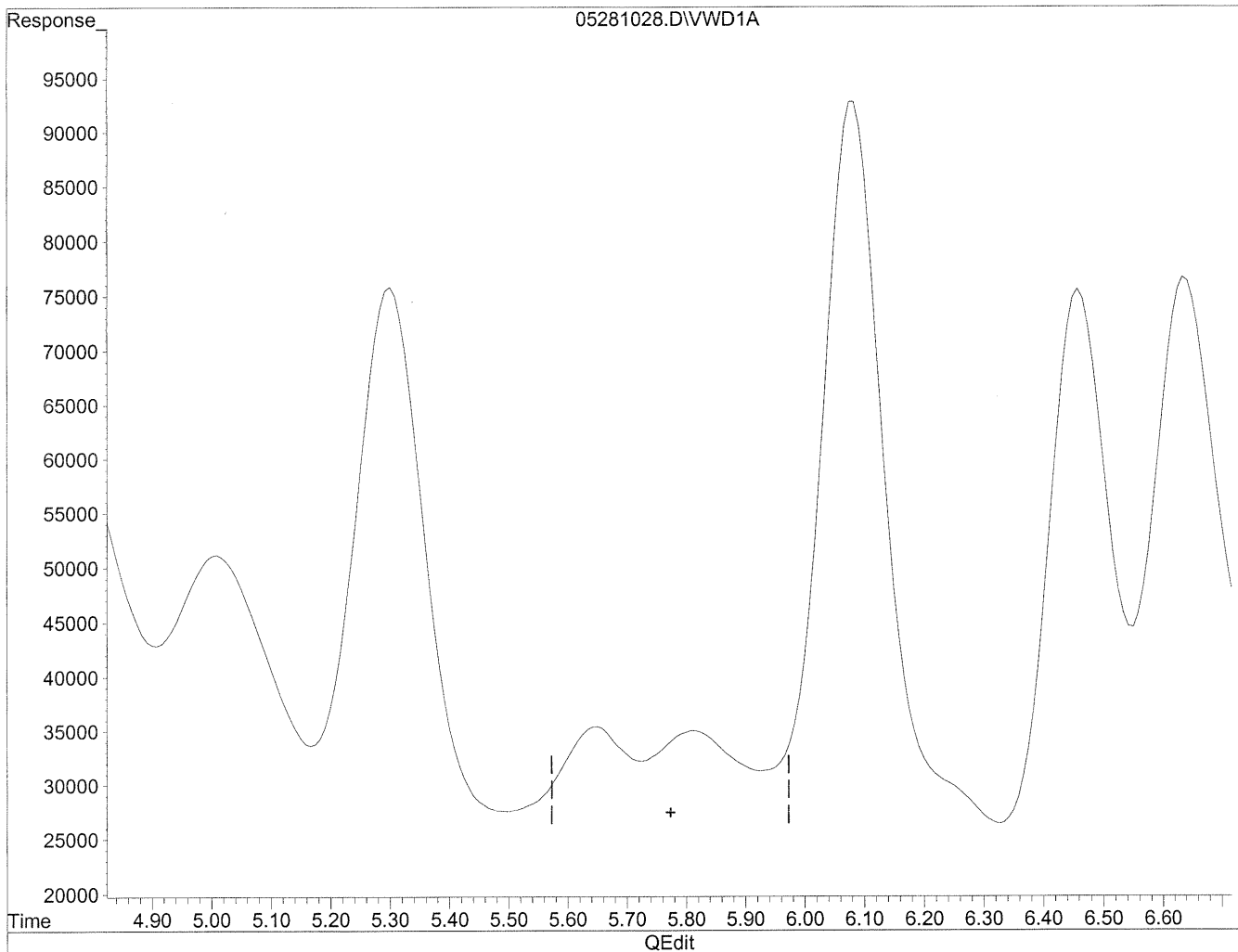


(9) o-Tolualdehyde
5.82min 610.453ng/ml
response 1242600

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



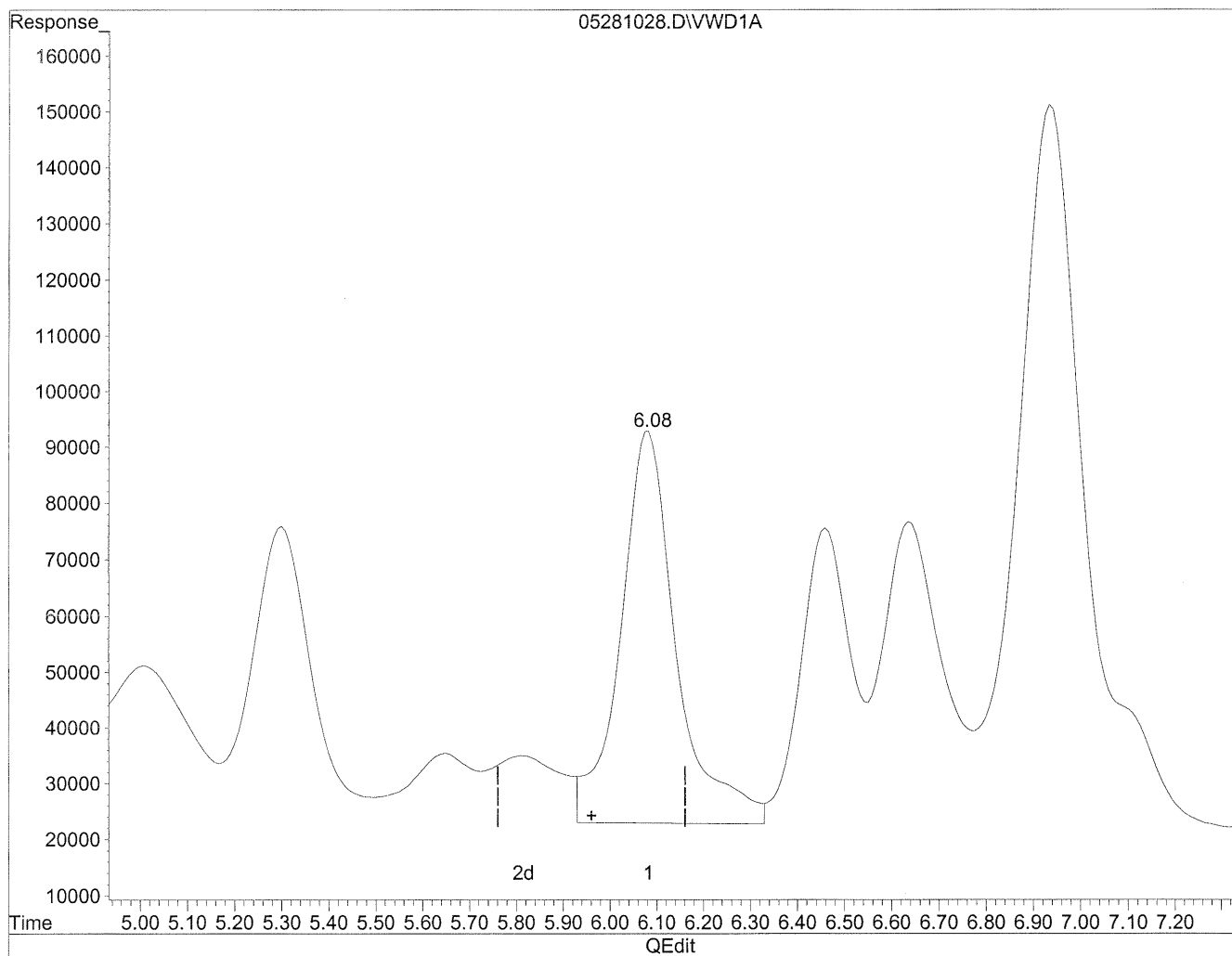
(9) o-Tolualdehyde
0.00min 0.000ng/ml d
response 0

*4c
6/4/10 not real
(M)
6/4/10*

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration

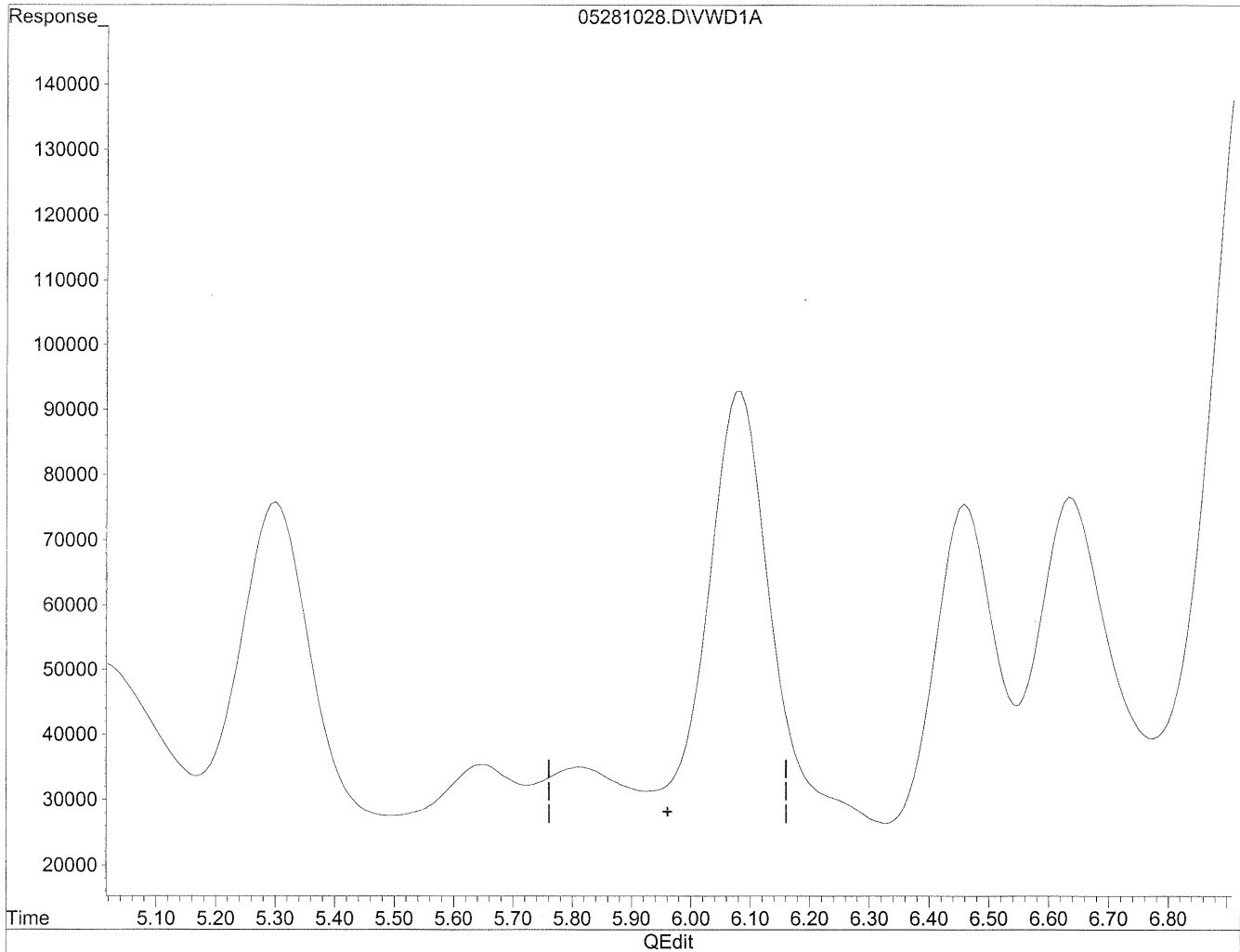


(10) m,p-Tolualdehyde
6.08min 2487.874ng/ml
response 5828115

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

0.00min 0.000ng/ml d

response 0

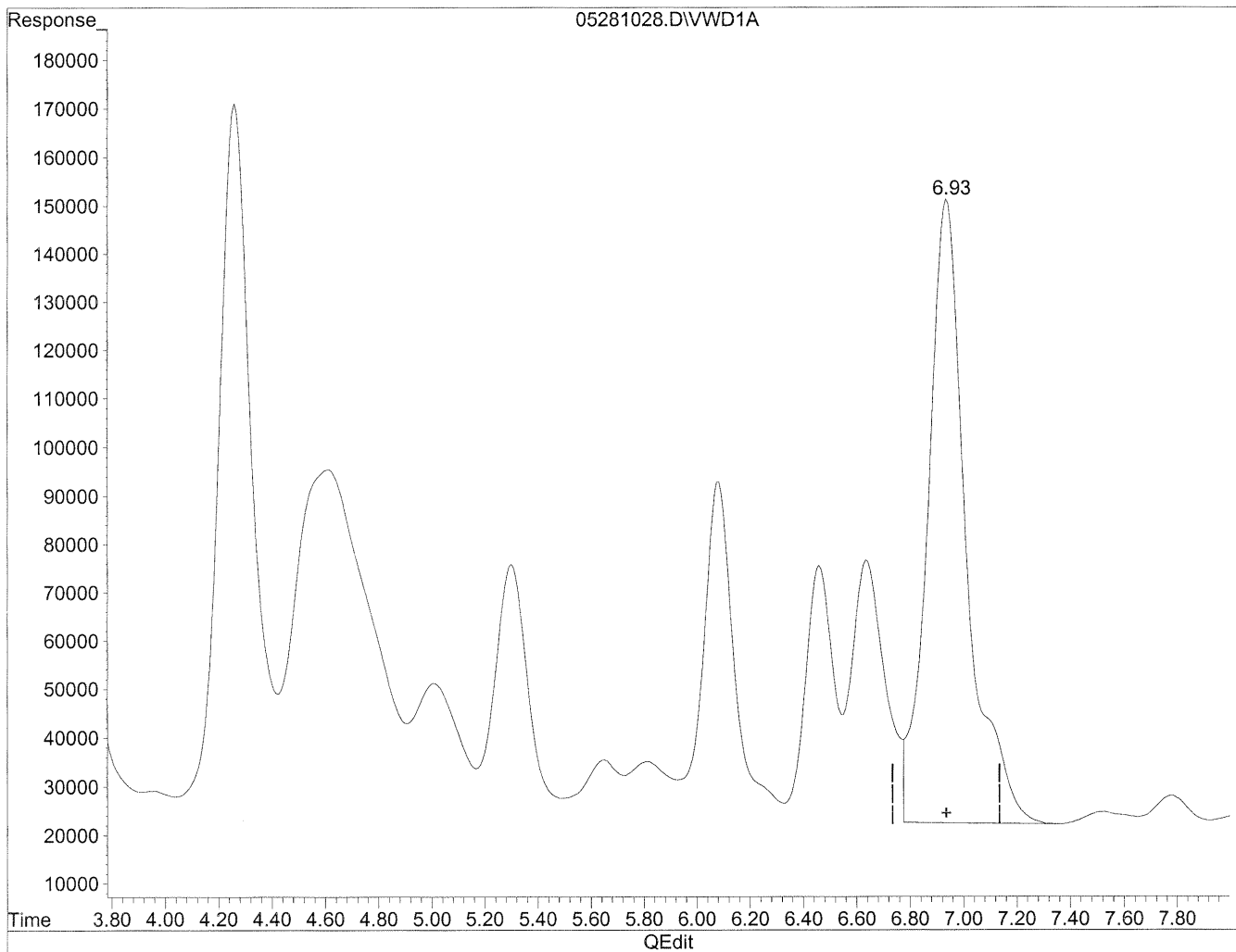
HC
6/4/10
MP
6/4/10

(+) = Expected Retention Time
05281028.D TO110510.M Fri Jun 04 11:39:12 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.94min 4505.123ng/ml

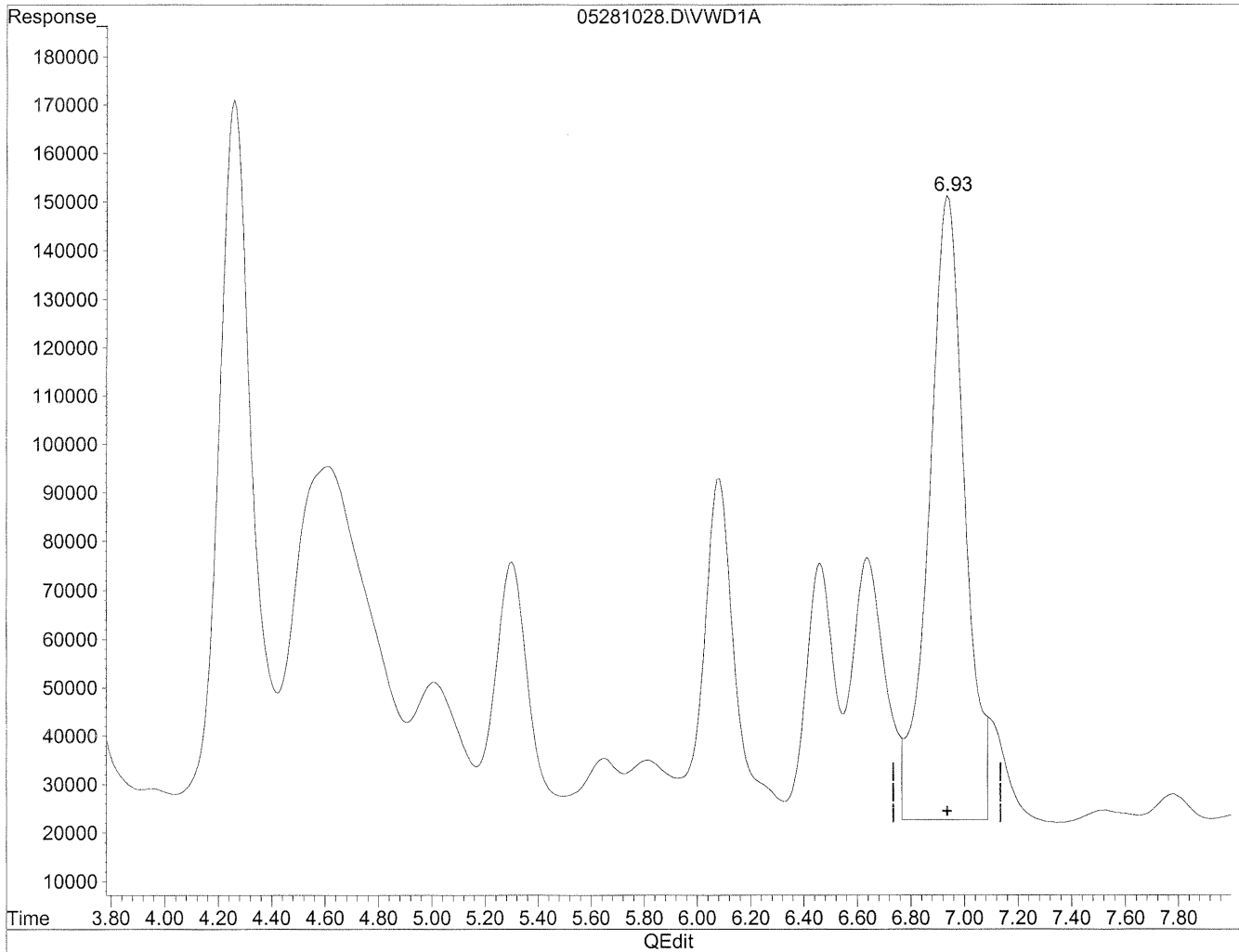
response 12953911

(+) = Expected Retention Time
05281028.D TO110510.M Fri Jun 04 11:39:17 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281028.D Vial: 123
Acq On : 28-May-2010, 17:52 Operator: MD
Sample : P1001793-028 2.0ml Inst : VWD
Misc : rerun Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.93min 4153.936ng/ml m

response 11944116

gh
(m)
6/4/10

see
6/4/10

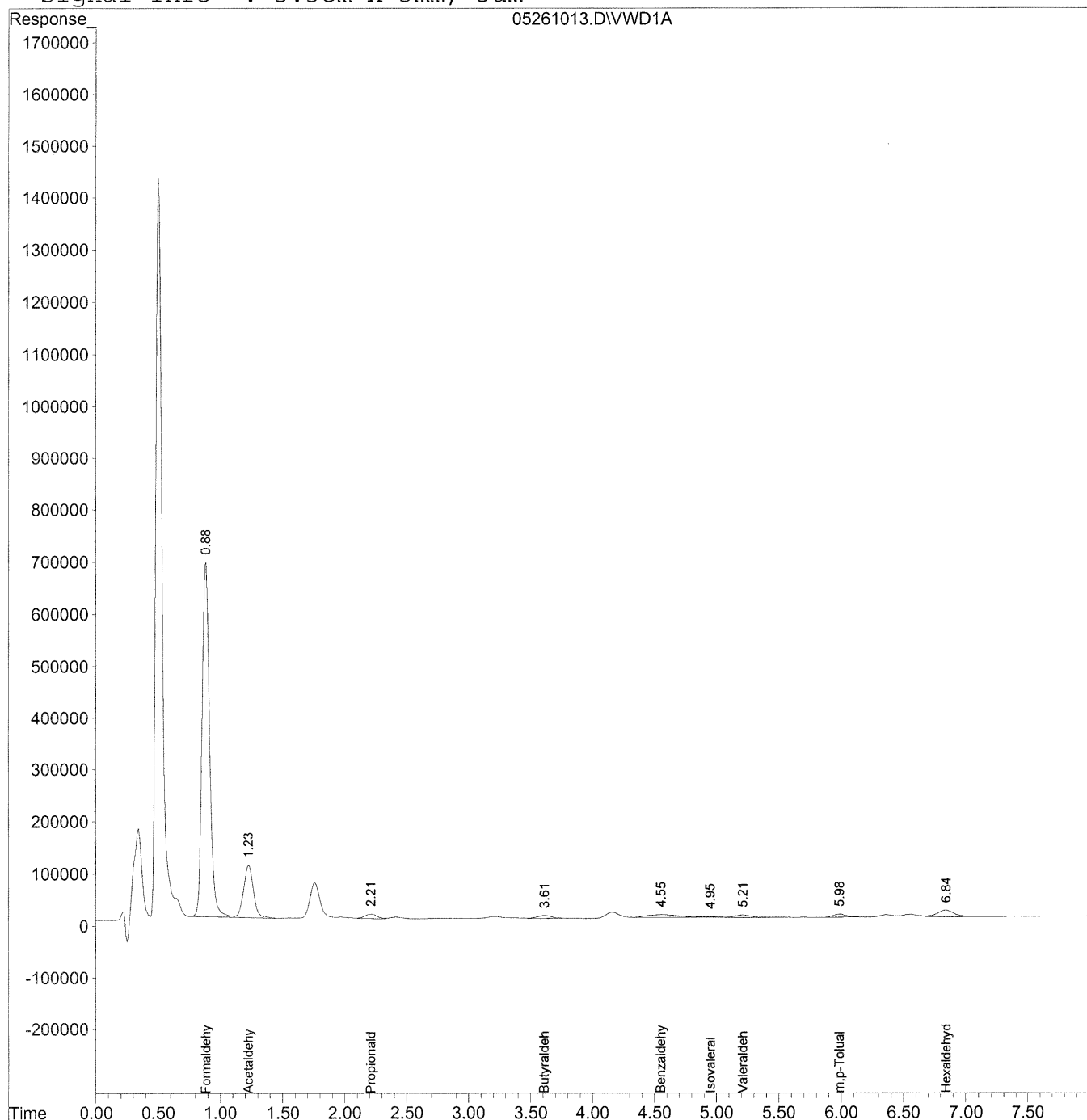
(+) = Expected Retention Time
05281028.D TO110510.M Fri Jun 04 11:39:28 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261013.D Vial: 110
Acq On : 26-May-2010, 13:30 Operator: MD
Sample : P1001793-028 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:39 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261013.D Vial: 110
Acq On : 26-May-2010, 13:30 Operator: MD
Sample : P1001793-028 2mL 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:39 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

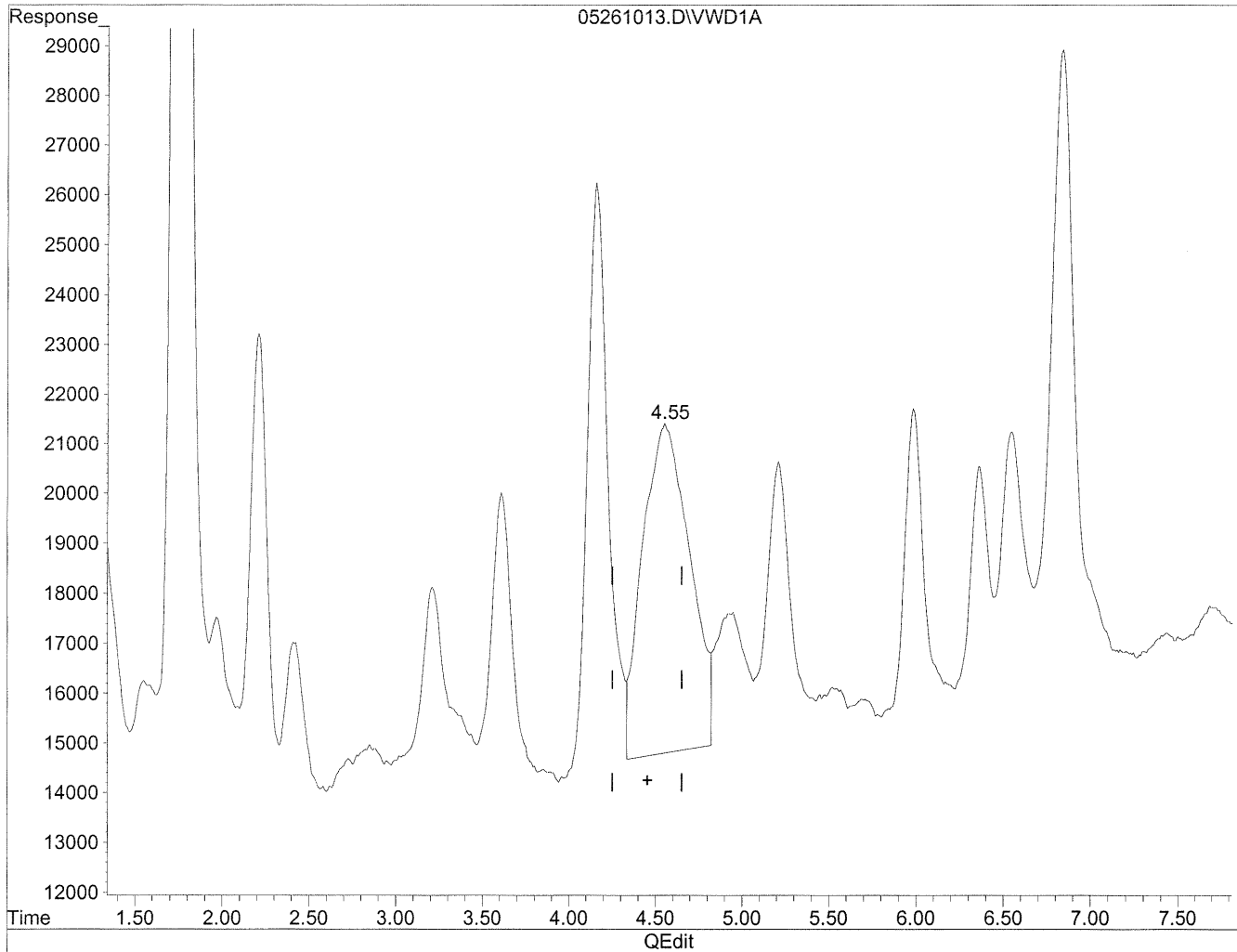
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	28428468	3046.057 ng/ml
2) Acetaldehyde	1.23	5473786	812.710 ng/ml
3) Propionaldehyde	2.21	585501	120.423 ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	3.61	464172	115.199 ng/ml
6) Benzaldehyde	4.55	838968	309.957 ng/mlm
7) Isovaleraldehyde	4.95	144572	40.751 ng/mlm
8) Valeraldehyde	5.21	398649	118.836 ng/mlm
9) o-Tolualdehyde	0.00	0	N.D. ng/ml
10) m,p-Tolualdehyde	5.99f	454557	194.039 ng/ml
11) Hexaldehyde	6.84	1267282	440.737 ng/ml
12) 2,5-Dimethylbenzaldehyde	0.00	0	N.D. ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261013.D Vial: 110
Acq On : 26-May-2010, 13:30 Operator: MD
Sample : P1001793-028 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration

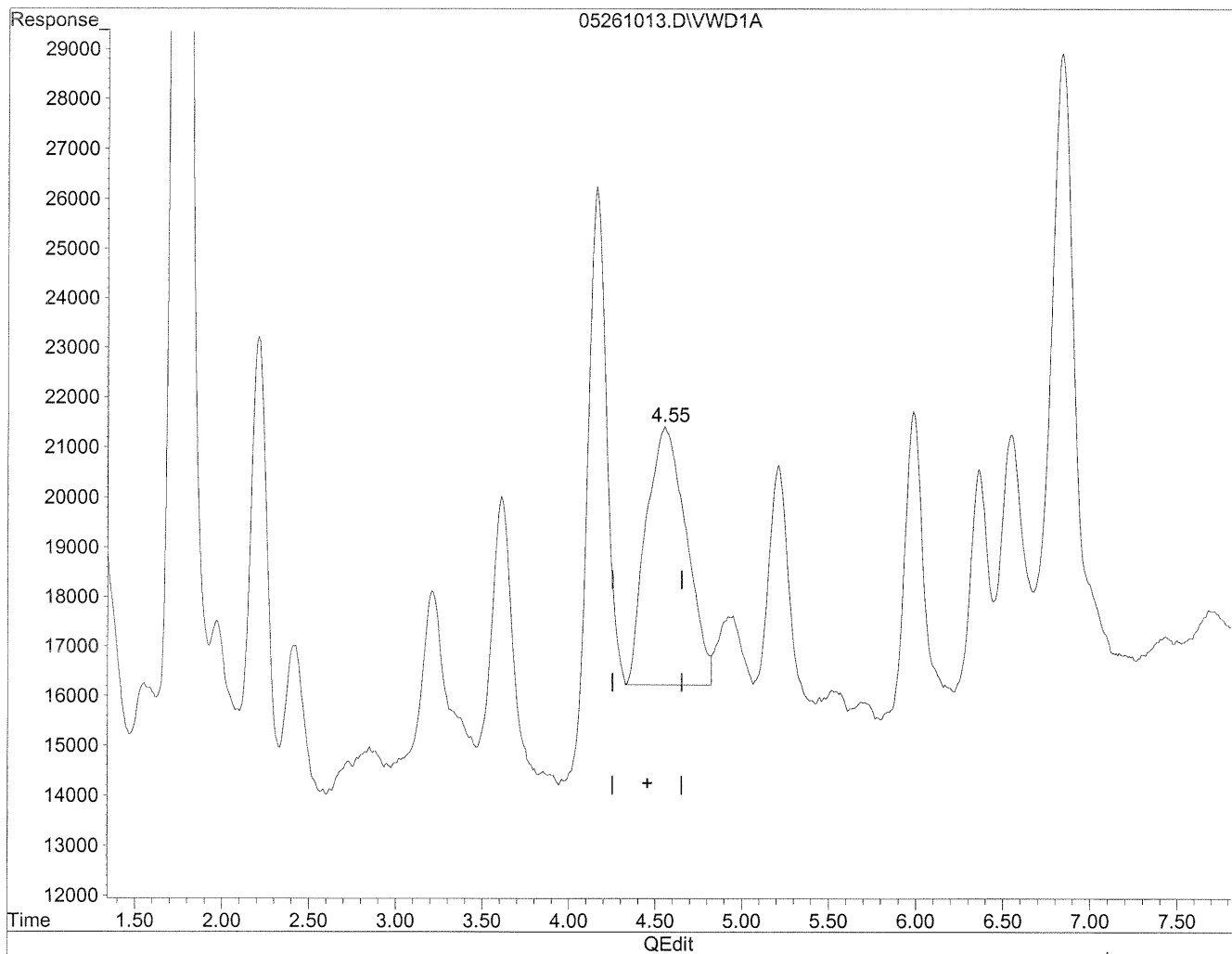


(6) Benzaldehyde
4.56min 463.000ng/ml
response 1253212

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261013.D Vial: 110
Acq On : 26-May-2010, 13:30 Operator: MD
Sample : P1001793-028 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.55min 309.957ng/ml m

response 838968

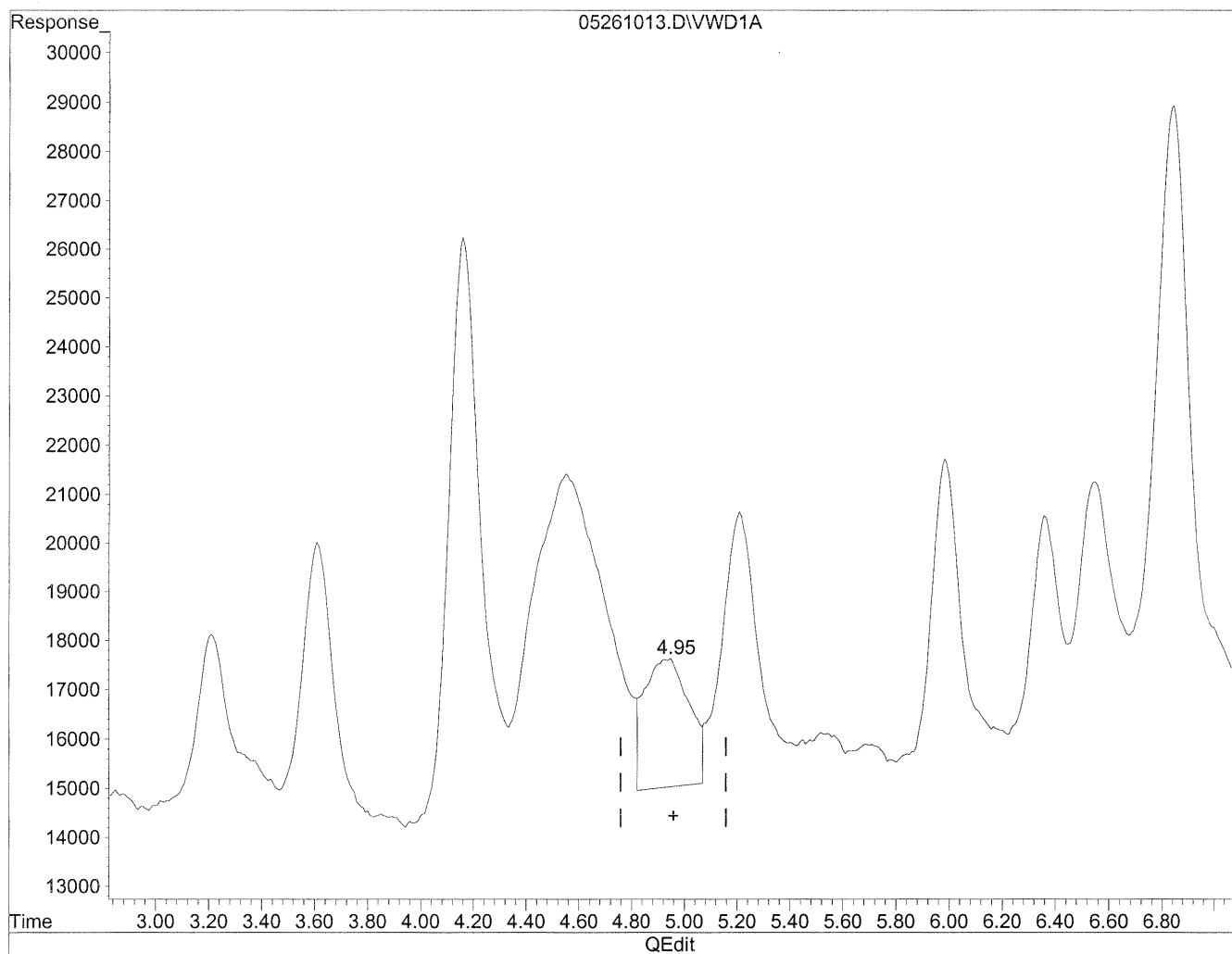
MD
6/4/10
use direct
mg to report
results
HL
6/4/10

(+) = Expected Retention Time
05261013.D TO110510.M Fri May 28 14:39:22 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261013.D Vial: 110
Acq On : 26-May-2010, 13:30 Operator: MD
Sample : P1001793-028 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.95min 86.771ng/ml

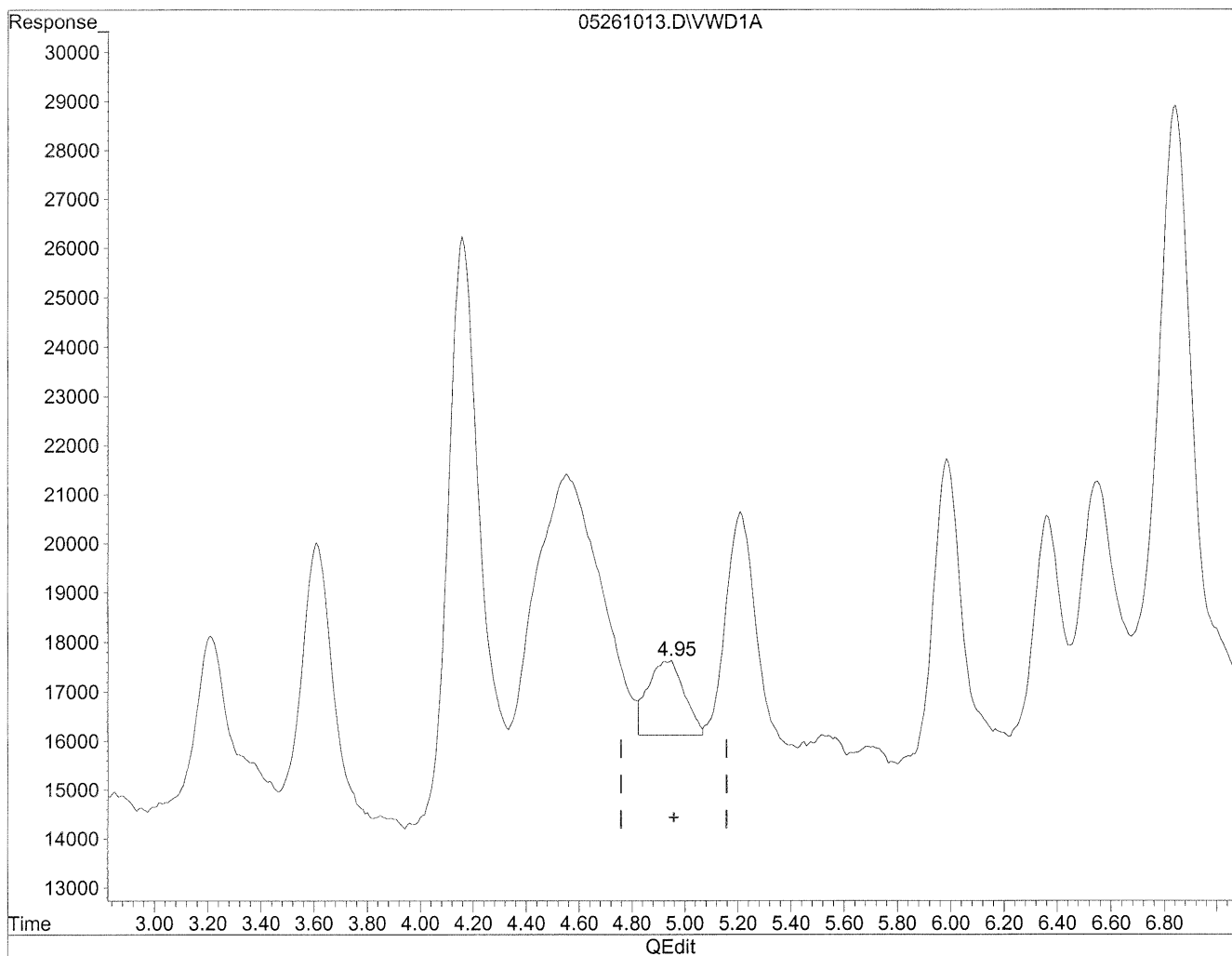
response 307837

(+) = Expected Retention Time
05261013.D TO110510.M Fri May 28 14:39:28 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261013.D Vial: 110
Acq On : 26-May-2010, 13:30 Operator: MD
Sample : P1001793-028 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.95min 40.751ng/ml m

response 144572

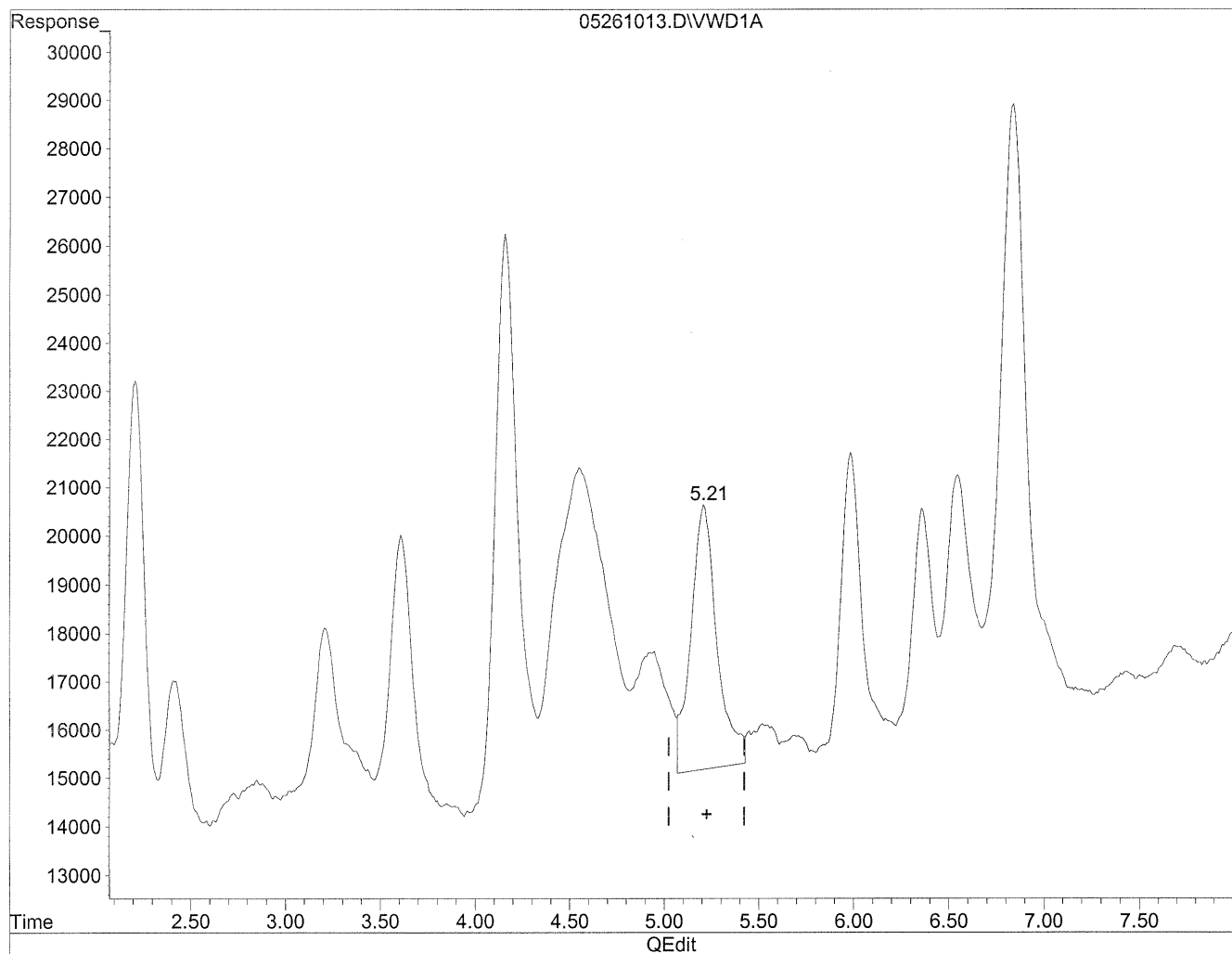
BC
6/4/10
HC
6/4/10

(+) = Expected Retention Time
05261013.D TO110510.M Fri May 28 14:39:32 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261013.D Vial: 110
Acq On : 26-May-2010, 13:30 Operator: MD
Sample : P1001793-028 2m 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.21min 156.432ng/ml

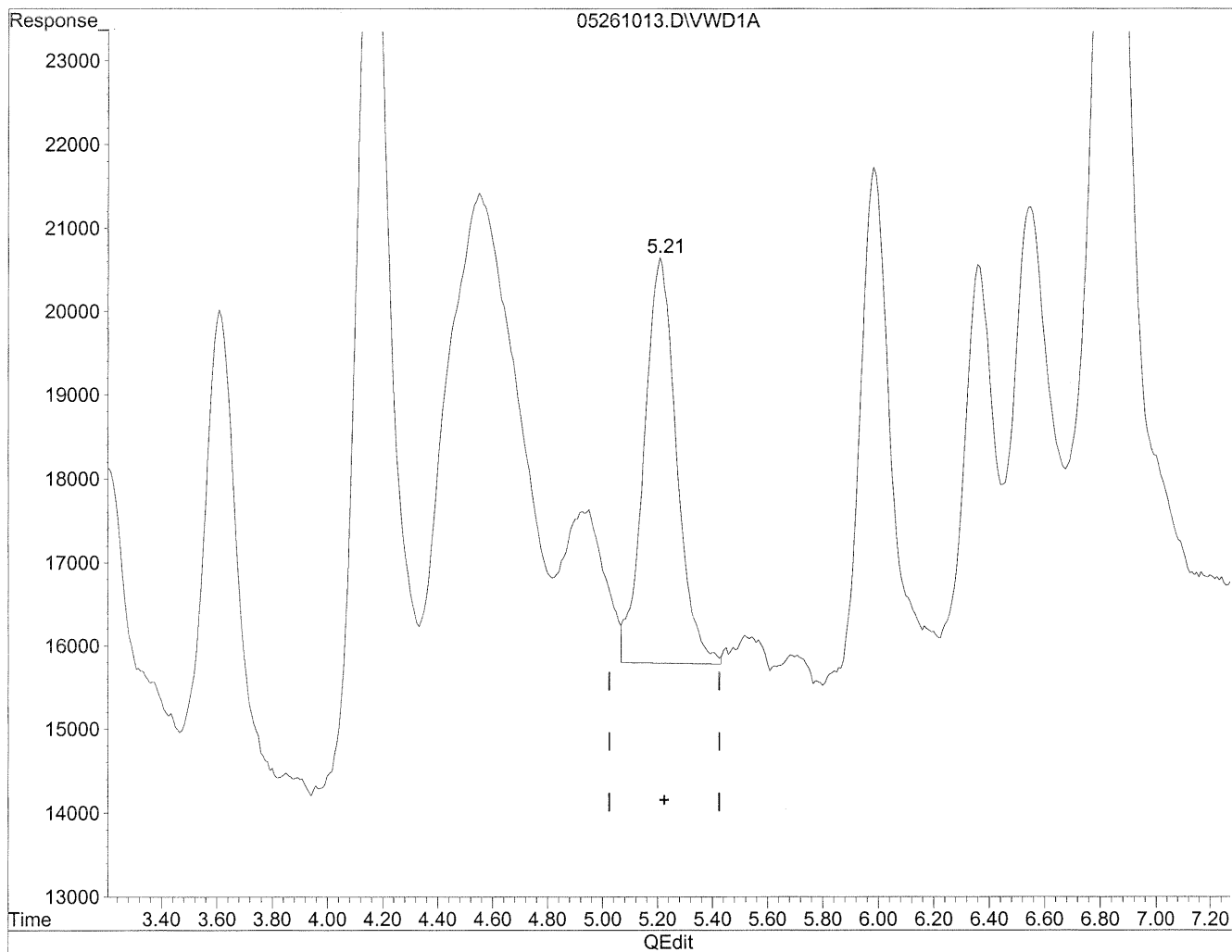
response 524769

(+) = Expected Retention Time
05261013.D TO110510.M Fri May 28 14:39:39 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261013.D Vial: 110
Acq On : 26-May-2010, 13:30 Operator: MD
Sample : P1001793-028 2mL 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.21min 118.836ng/ml m

response 398649

pr
6/4/10
6/4/10

(+) = Expected Retention Time
05261013.D TO110510.M Fri May 28 14:39:50 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110499
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-029

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/26/10
Desorption Volume: 2.0 ml
Sampling Time: 20319 Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	3.2	1.6	0.099	1.3	0.081	
75-07-0	Acetaldehyde	0.99	0.58	0.12	0.32	0.065	
123-38-6	Propionaldehyde	0.21	0.27	0.25	0.11	0.11	
123-72-8	Butyraldehyde	0.26	1.2	0.89	0.40	0.30	
100-52-7	Benzaldehyde	< 0.20	ND	0.11	ND	0.025	
590-86-3	Isovaleraldehyde	0.34	0.27	0.16	0.078	0.046	
110-62-3	Valeraldehyde	0.25	0.45	0.36	0.13	0.10	
66-25-1	n-Hexaldehyde	0.26	0.71	0.55	0.17	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

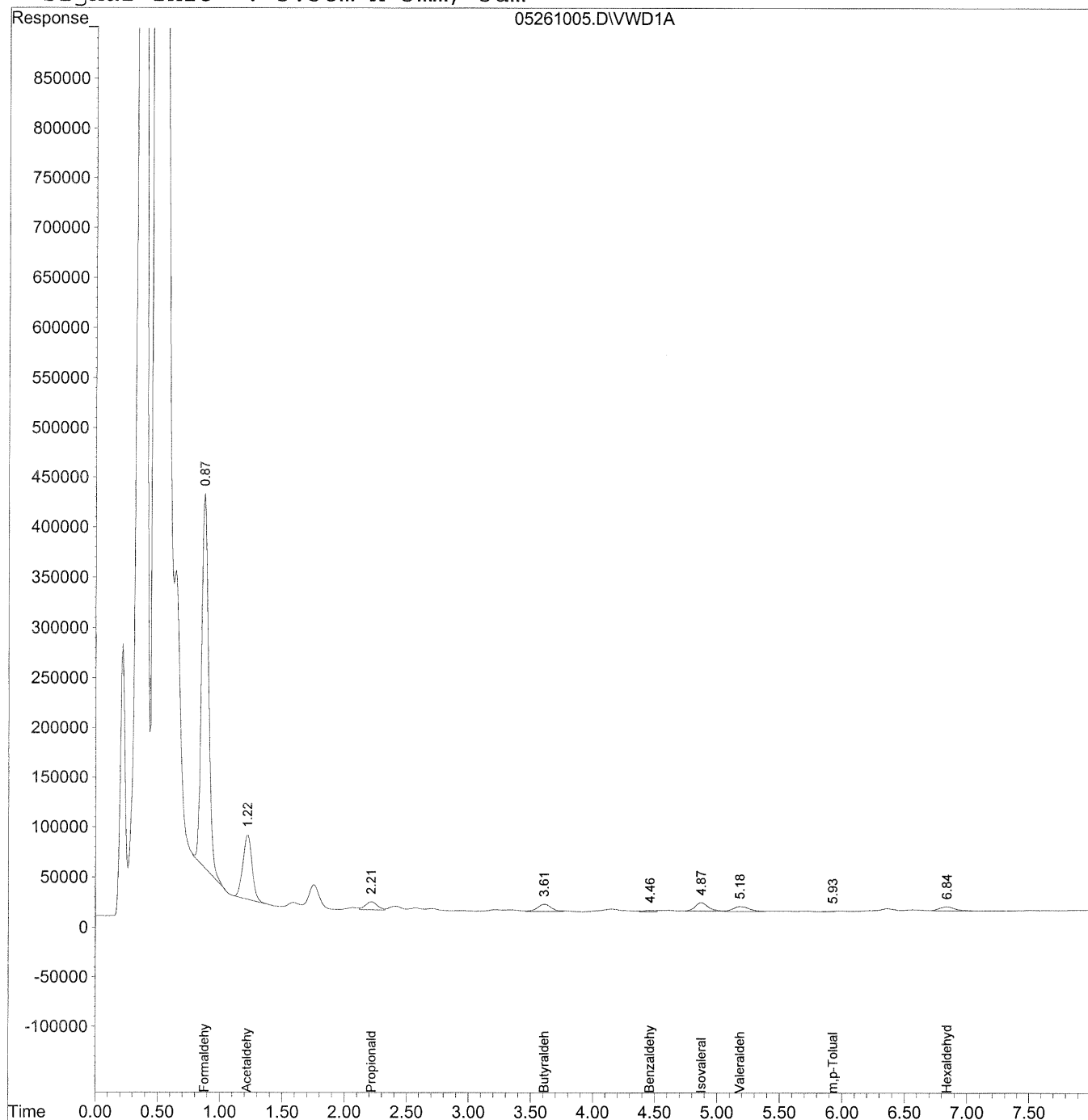
Verified By: RC Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
 Acq On : 26-May-2010, 12:06 Operator: MD
 Sample : P1001793-029 2ml Inst : VWD
 Misc : re-run Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 14:28 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 26 11:46:33 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:28 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

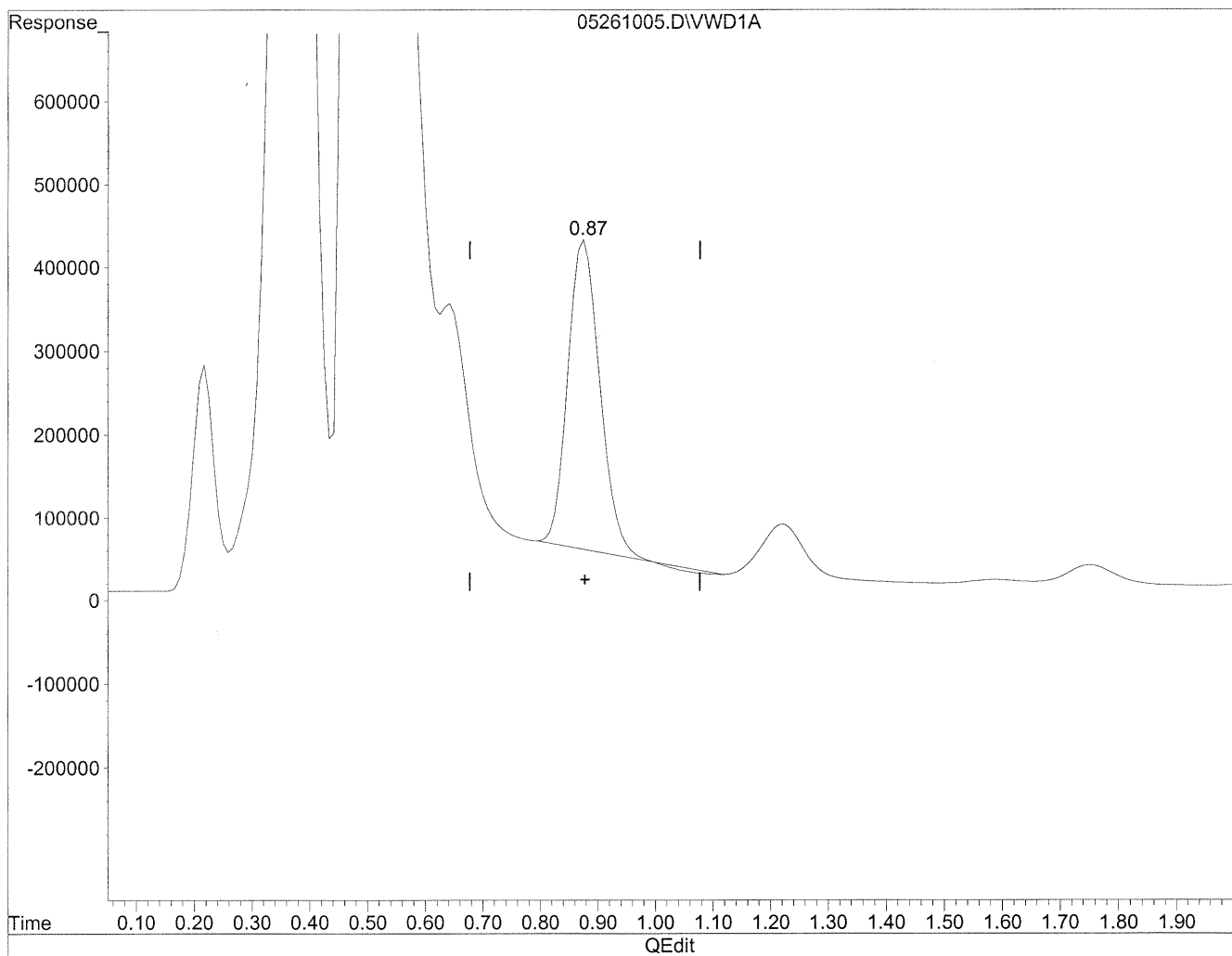
	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.87	14753095	1580.766	ng/mlm
2)	Acetaldehyde	1.22	3335632	495.252	ng/mlm
3)	Propionaldehyde	2.22	522102	107.384	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	3.61	532504	132.158	ng/mlm
6)	Benzaldehyde	4.46	94339	34.854	ng/ml
7)	Isovaleraldehyde	4.87	604073	170.271	ng/mlm
8)	Valeraldehyde	5.18	417860	124.563	ng/mlm
9)	o-Tolualdehyde	0.00	0	N.D.	ng/ml
10)	m,p-Tolualdehyde	5.93	11495	4.907	ng/ml
11)	Hexaldehyde	6.84	371874	129.331	ng/mlm
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 1529.776ng/ml

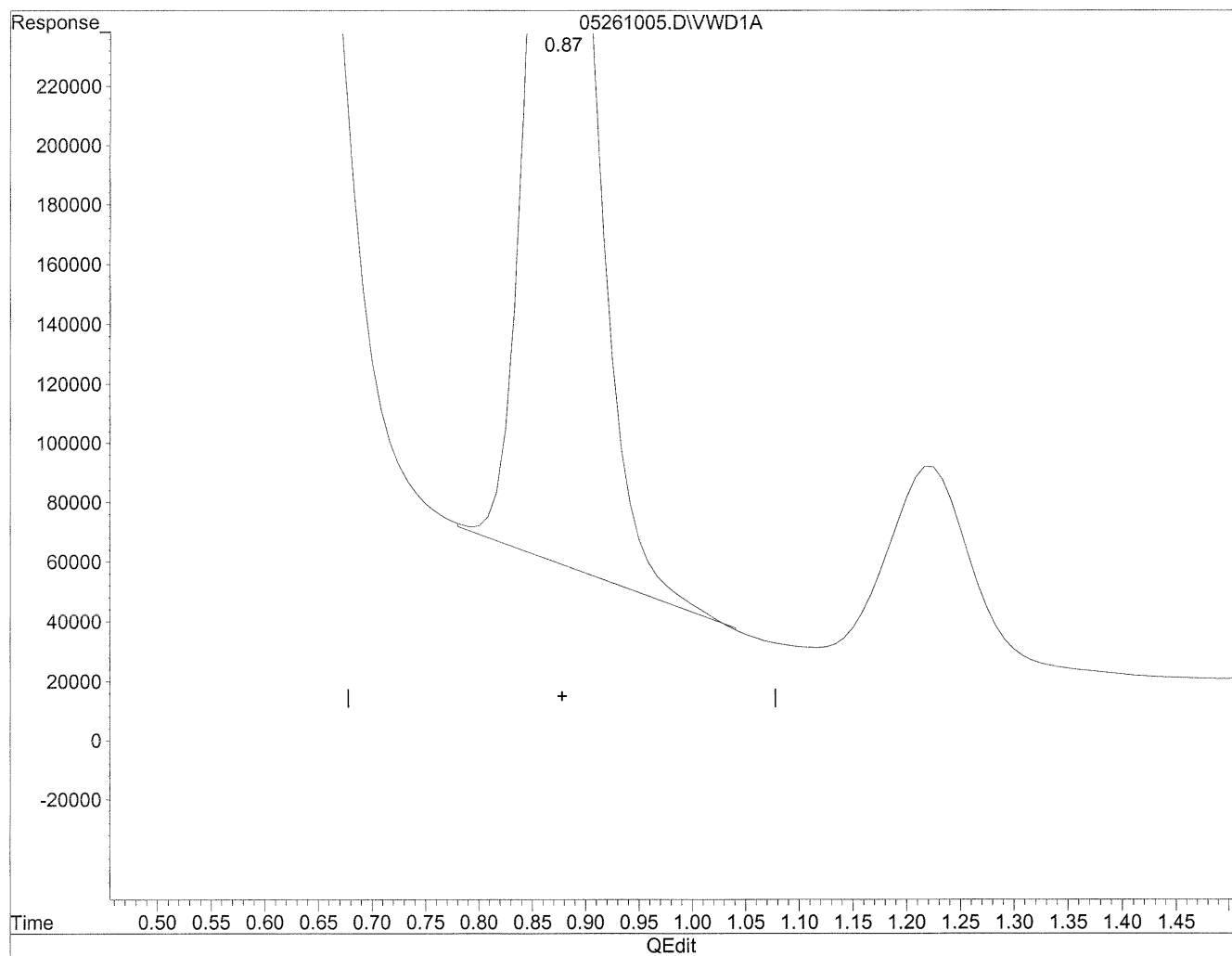
response 14277205

(+) = Expected Retention Time
05261005.D TO110510.M Fri May 28 14:26:35 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.87min 1580.766ng/ml m

response 14753095

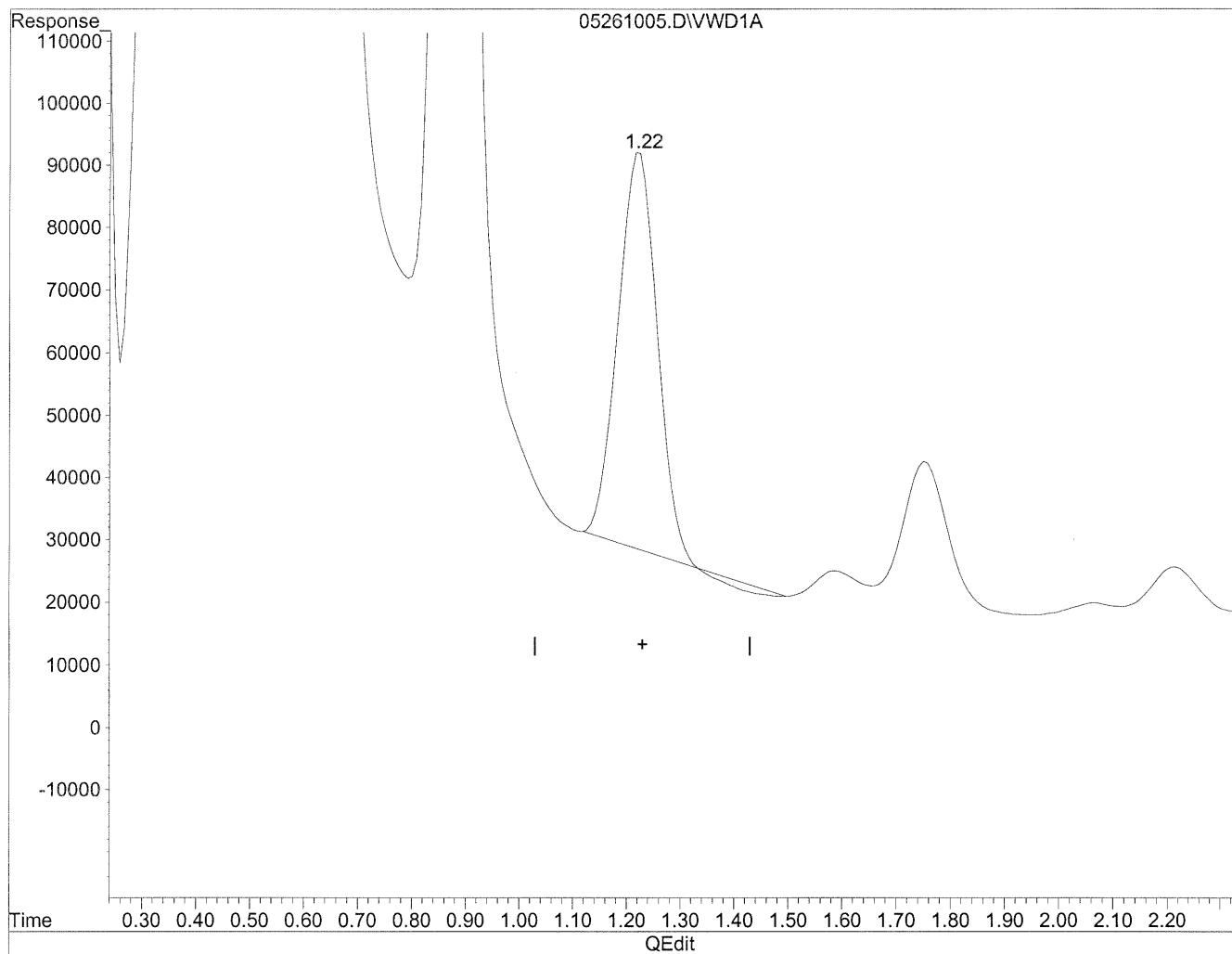
HC
6/4/10
MD
6/4/10

(+) = Expected Retention Time
05261005.D TO110510.M Fri May 28 14:27:01 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.22min 472.952ng/ml

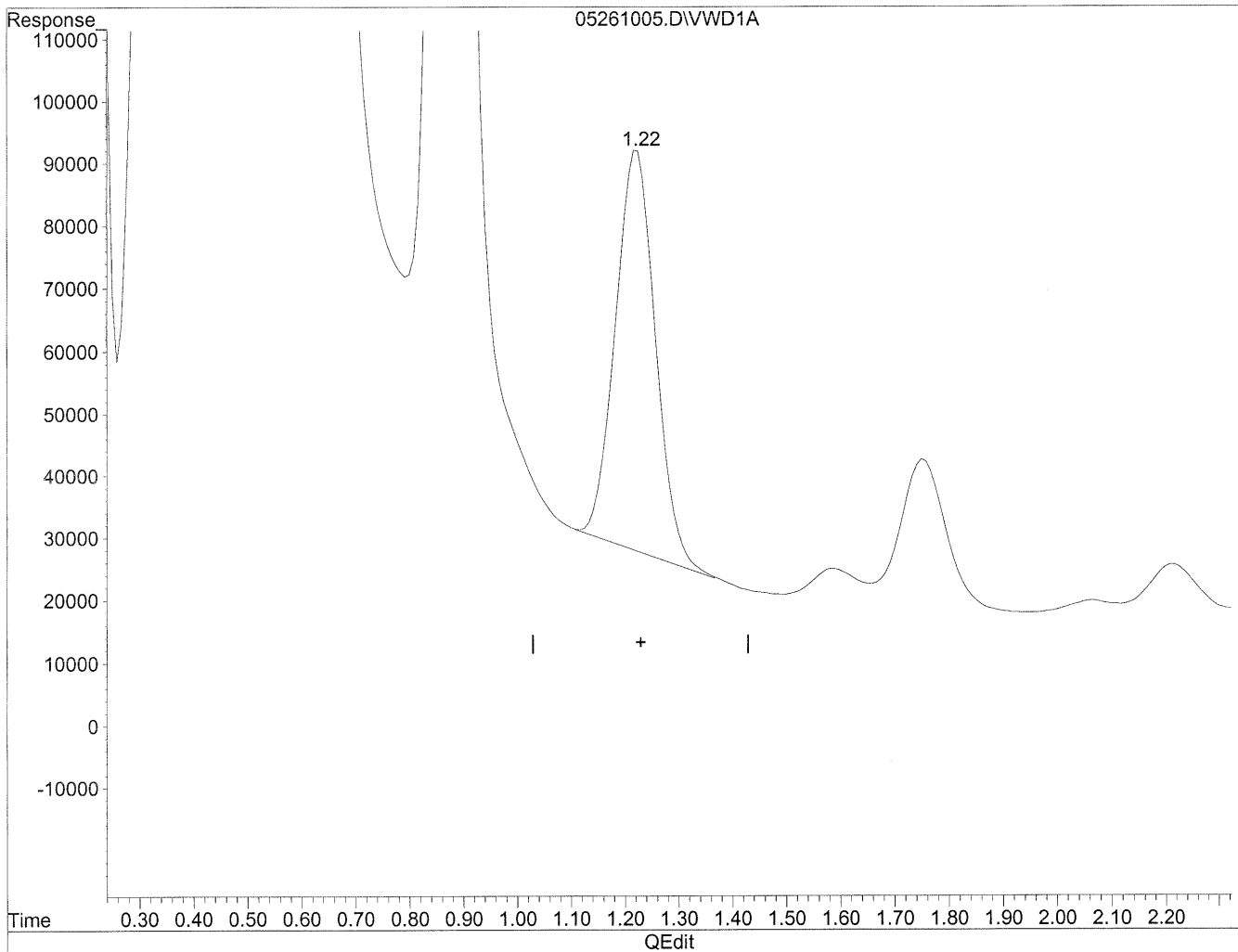
response 3185437

(+) = Expected Retention Time
05261005.D TO110510.M Fri May 28 14:27:08 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.22min 495.252ng/ml m

response 3335632

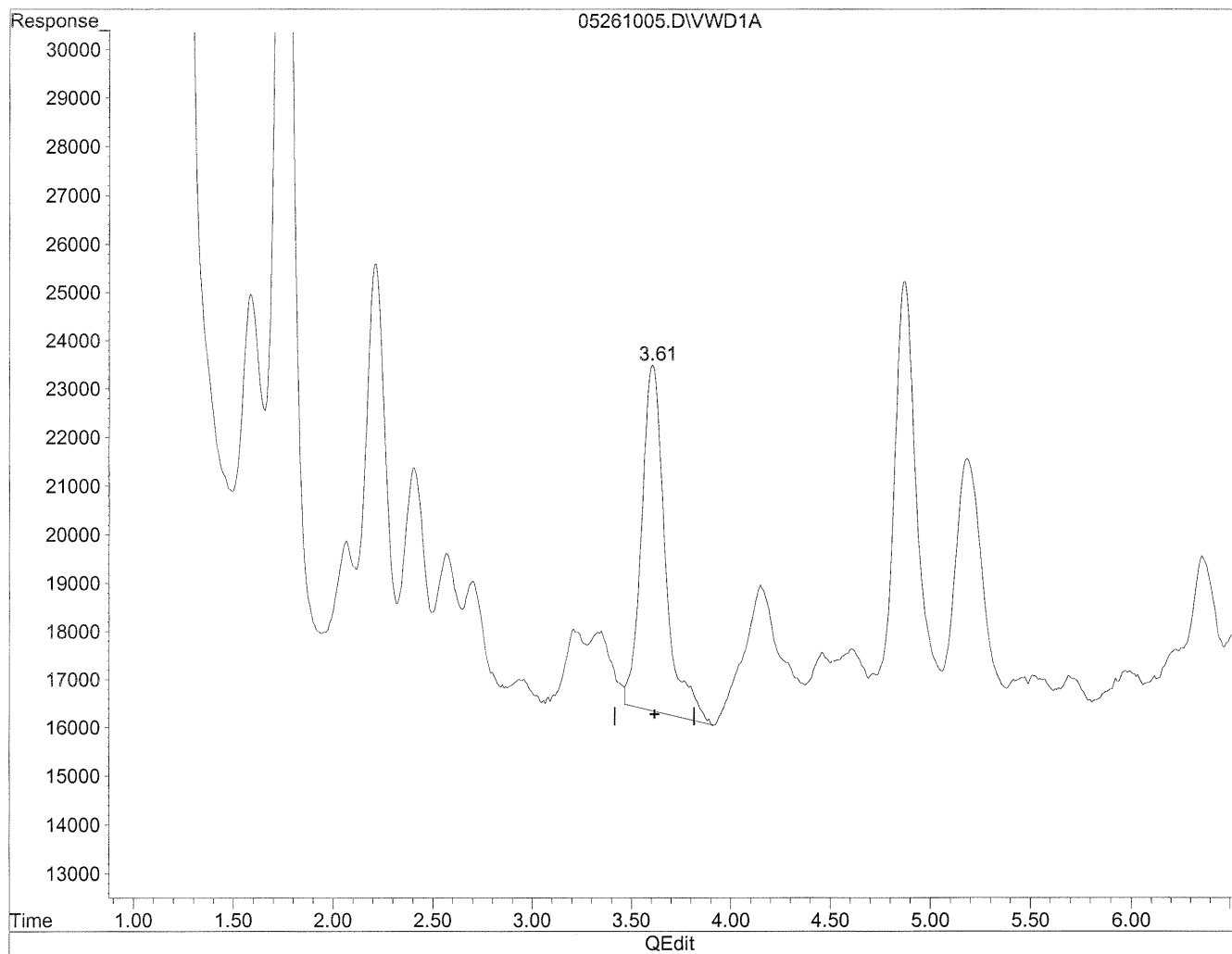
DC
MD
6/4/10
for
6/4/10

(+) = Expected Retention Time
05261005.D TO110510.M Fri May 28 14:27:13 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



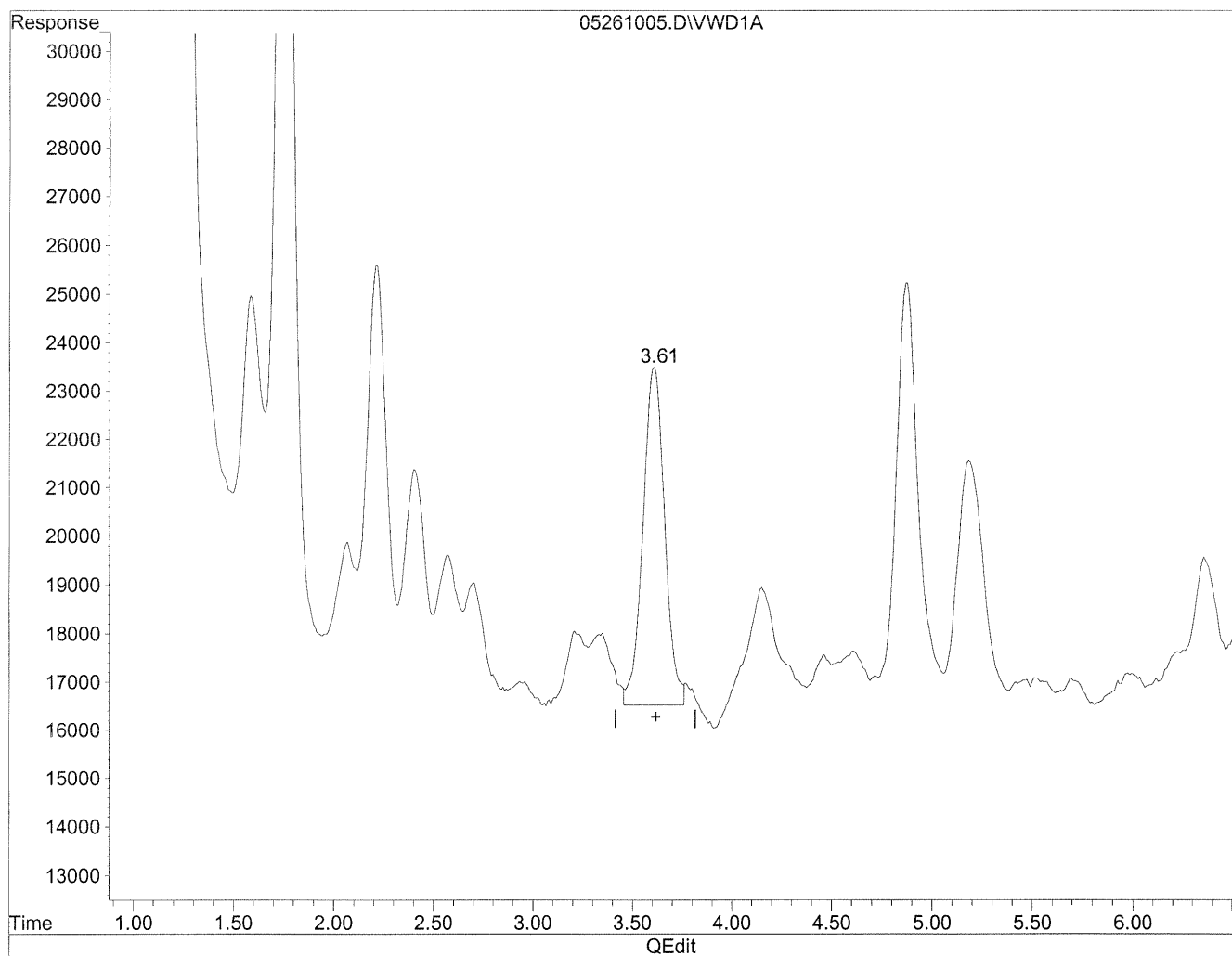
(5) Butyraldehyde
3.61min 148.454ng/ml
response 598164

(+) = Expected Retention Time
05261005.D TO110510.M Fri May 28 14:27:38 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.61min 132.158ng/ml m

response 532504

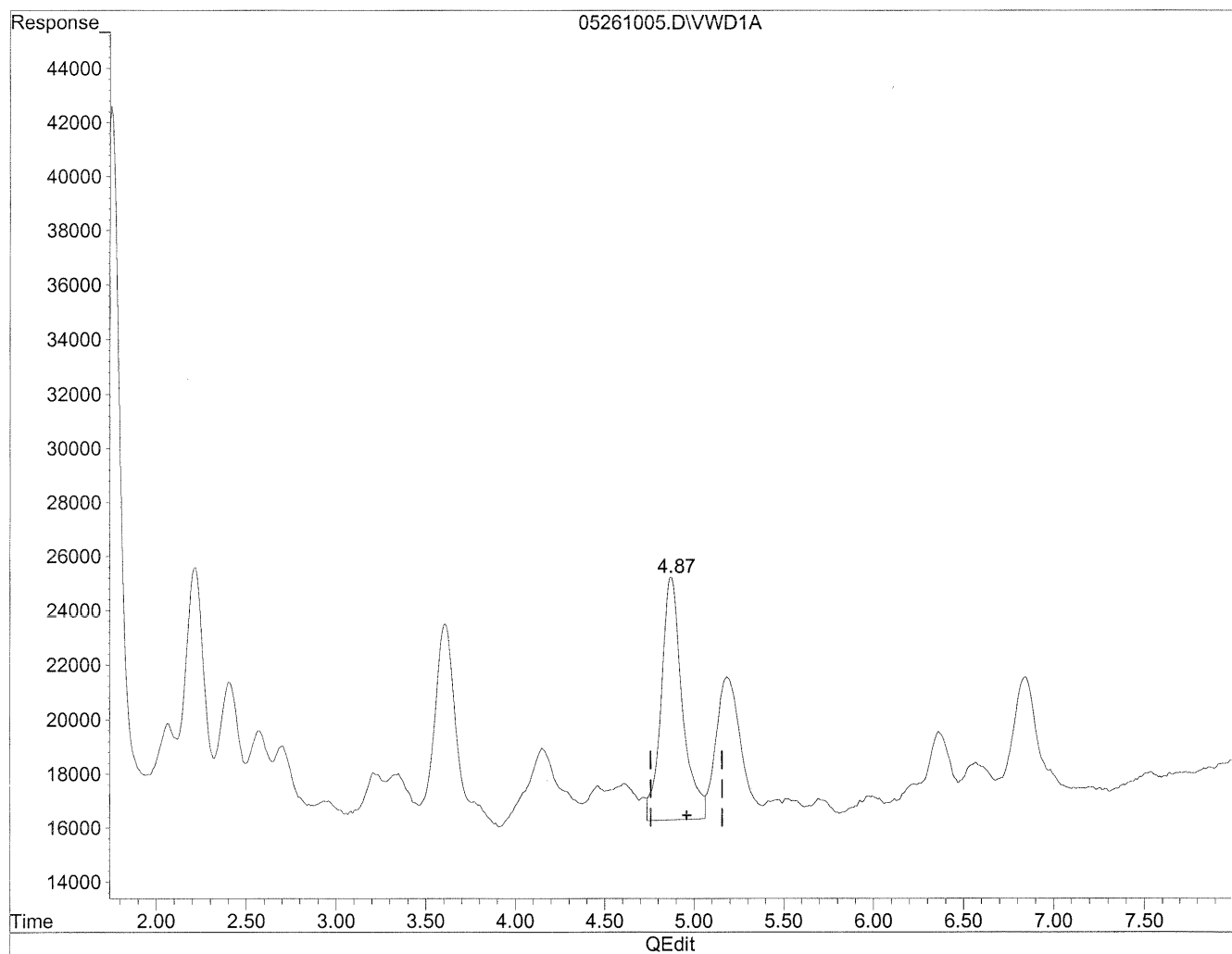
Sh
MD
6/4/10
HCE
6/4/10

(+) = Expected Retention Time
05261005.D TO110510.M Fri May 28 14:27:52 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration

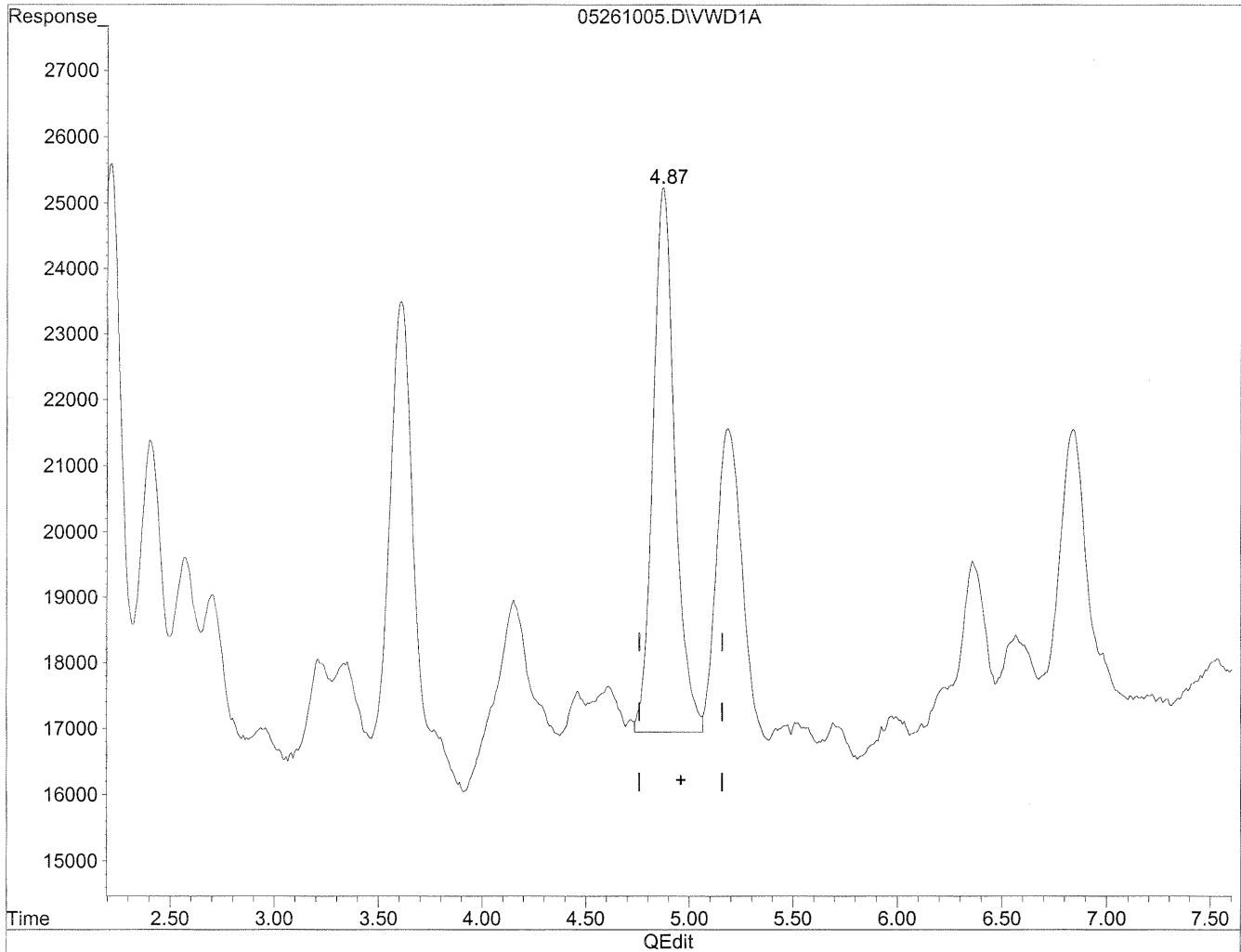


(7) Isovaleraldehyde
4.87min 205.279ng/ml
response 728271

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.87min 170.271ng/ml m

response 604073

DL
6/4/10
410
6/4/10

(+) = Expected Retention Time

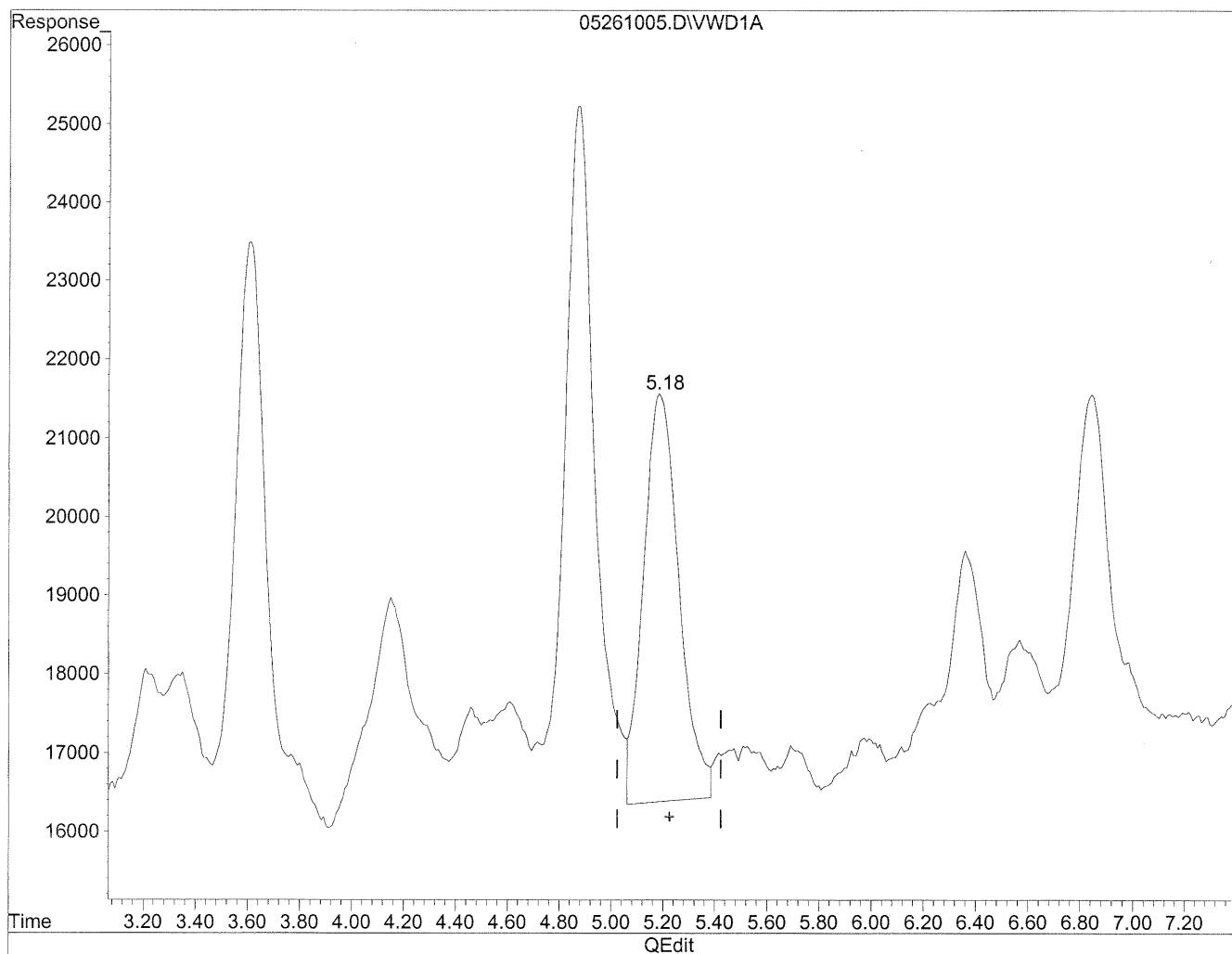
05261005.D TO110510.M

Fri May 28 14:28:14 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

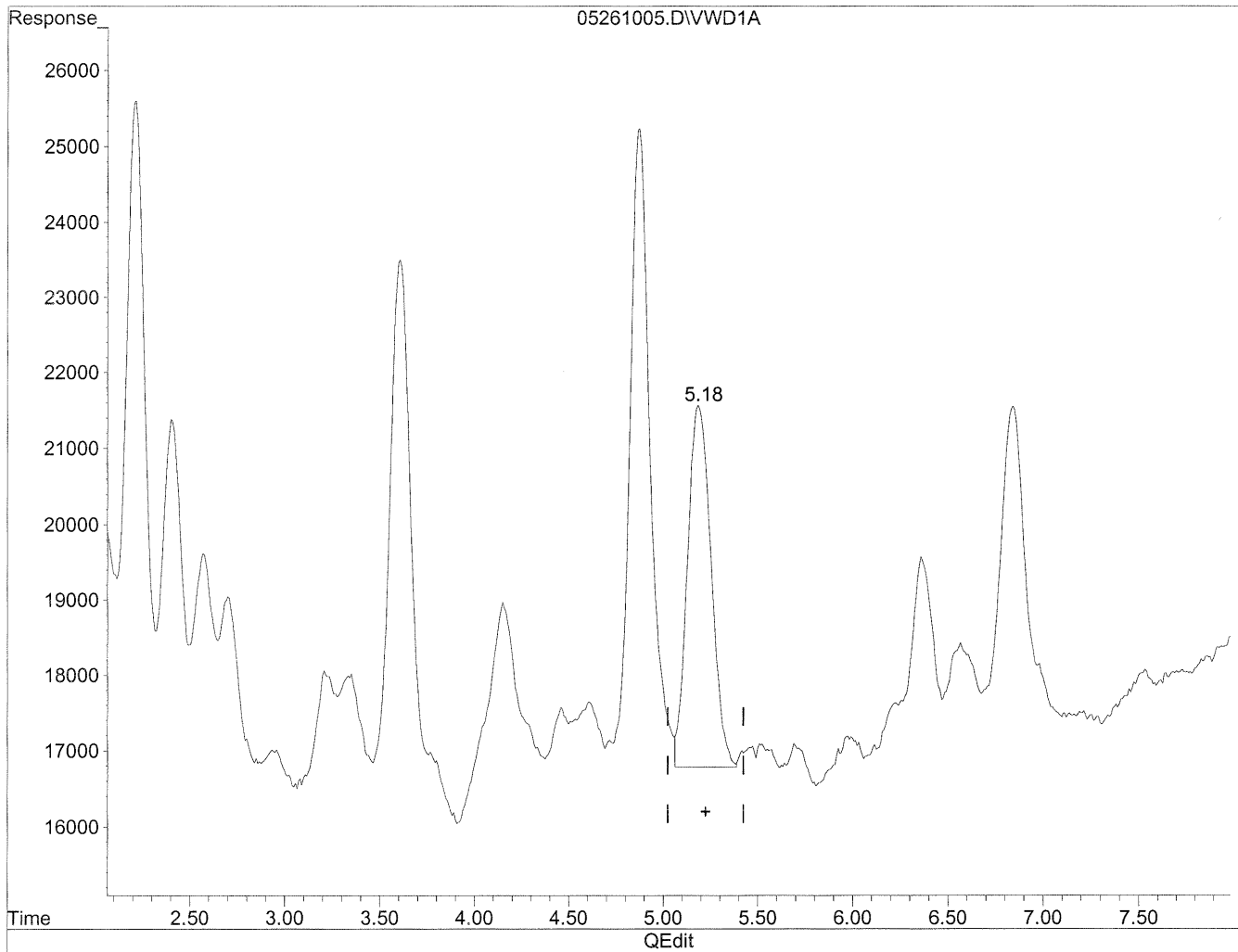
5.19min 147.448ng/ml

response 494632

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(8) Valeraldehyde

5.18min 124.563ng/ml m

response 417860

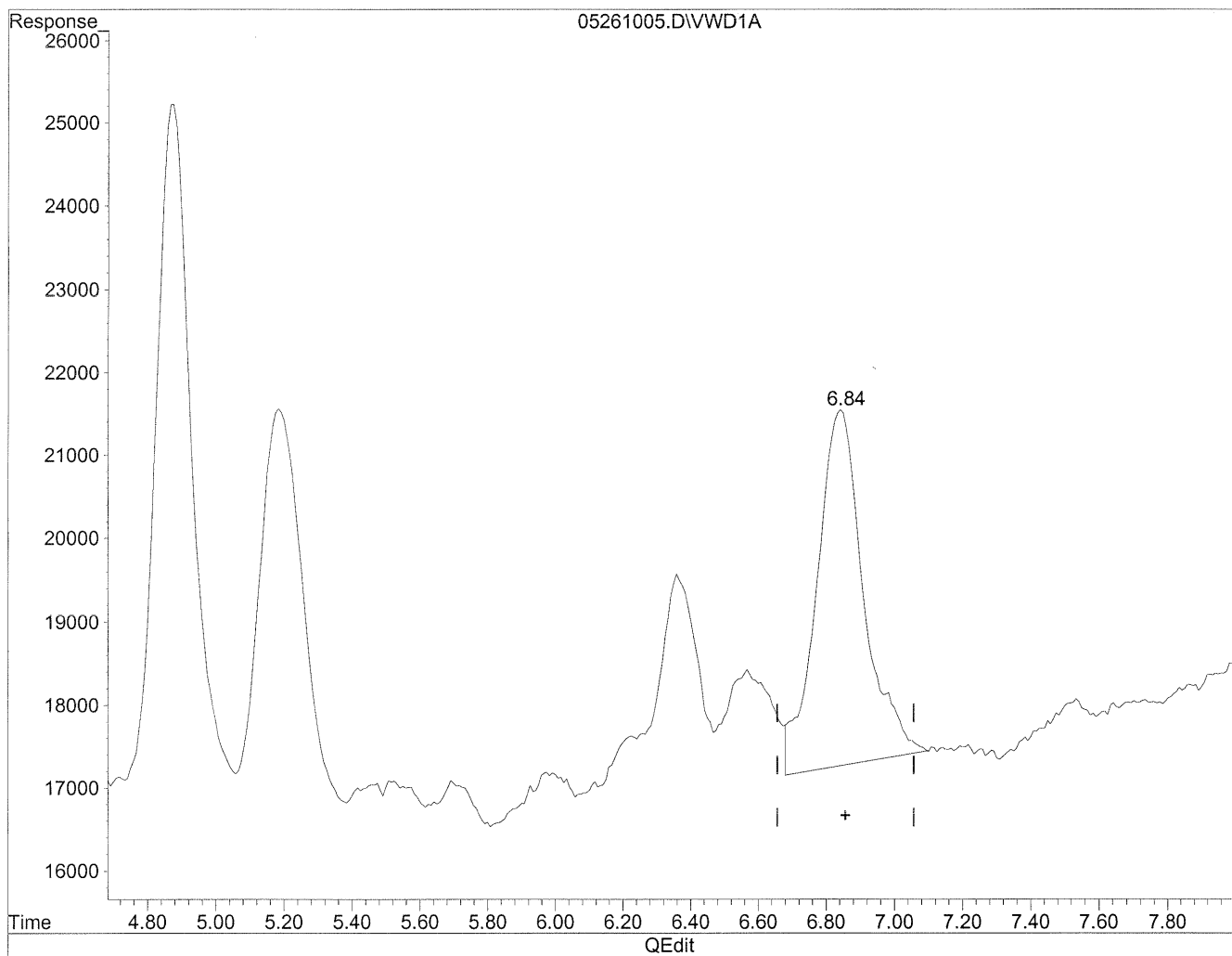
PL
6/4/10
HCC
6/4/10

(+) = Expected Retention Time
05261005.D TO110510.M Fri May 28 14:28:32 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
Acq On : 26-May-2010, 12:06 Operator: MD
Sample : P1001793-029 2ml Inst : VWD
Misc : re-run Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.85min 142.582ng/ml

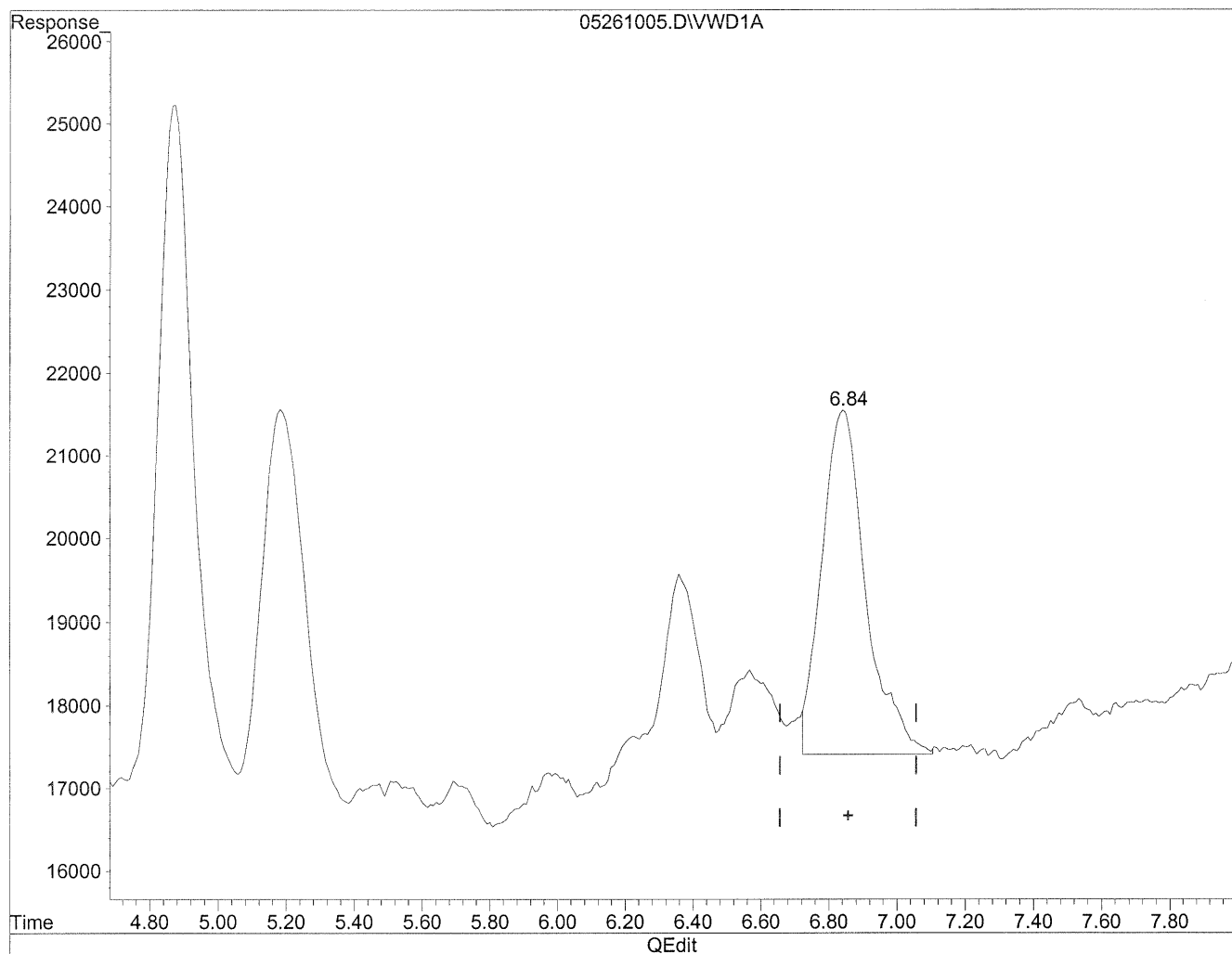
response 409976

(+) = Expected Retention Time
05261005.D TO110510.M Fri May 28 14:28:39 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261005.D Vial: 102
 Acq On : 26-May-2010, 12:06 Operator: MD
 Sample : P1001793-029 2ml Inst : VWD
 Misc : re-run Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 26 12:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 13:04:05 2010
 Response via : Multiple Level Calibration



(11) Hexaldehyde

6.84min 129.331ng/ml m

response 371874

12
 (m)
 6/4/10
 HC
 6/4/10

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: 110511
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P1001793-030

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: 5/21/10
Date Received: 5/22/10
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: NA Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	0.24	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

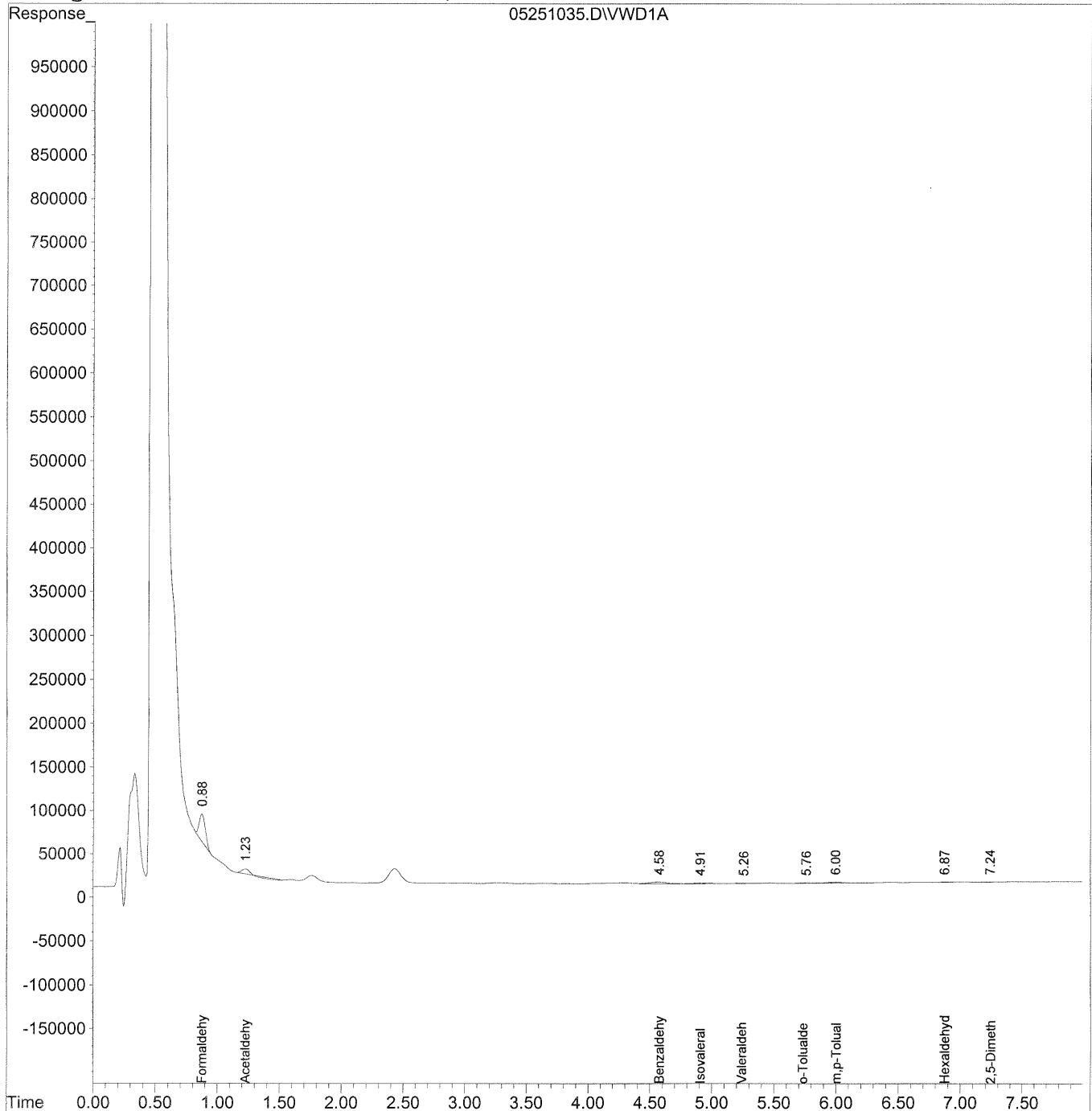
NA = Not applicable.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251035.D Vial: 122
Acq On : 25-May-2010, 17:23 Operator: MD
Sample : P1001793-030 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:05 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251035.D Vial: 122
Acq On : 25-May-2010, 17:23 Operator: MD
Sample : P1001793-030 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:05 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

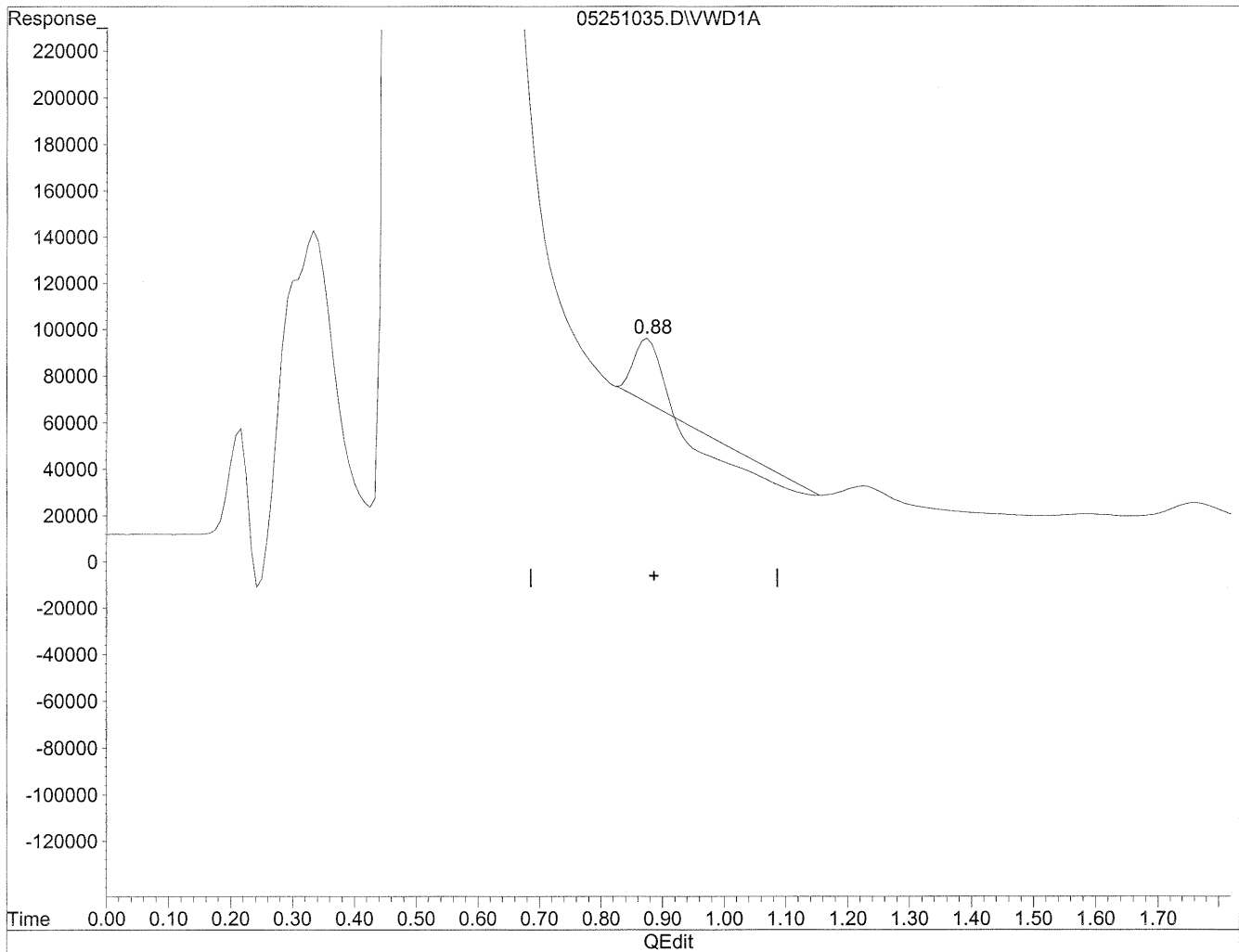
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	1101971	118.074 ng/mlm
2) Acetaldehyde	1.23	98366	14.605 ng/ml
3) Propionaldehyde	0.00	0	N.D. ng/ml
4) Crotonaldehyde	0.00	0	N.D. ng/ml
5) Butyraldehyde	0.00	0	N.D. ng/ml
6) Benzaldehyde	4.58	187880	69.412 ng/ml
7) Isovaleraldehyde	4.91f	76757	21.636 ng/ml
8) Valeraldehyde	5.24	18388	5.481 ng/ml
9) o-Tolualdehyde	5.74	27078	13.303 ng/ml
10) m,p-Tolualdehyde	6.00	103587	44.219 ng/ml
11) Hexaldehyde	6.88	14640	5.091 ng/ml
12) 2,5-Dimethylbenzaldehyde	7.24f	11490	5.972 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251035.D Vial: 122
Acq On : 25-May-2010, 17:23 Operator: MD
Sample : P1001793-030 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 17:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 13.035ng/ml

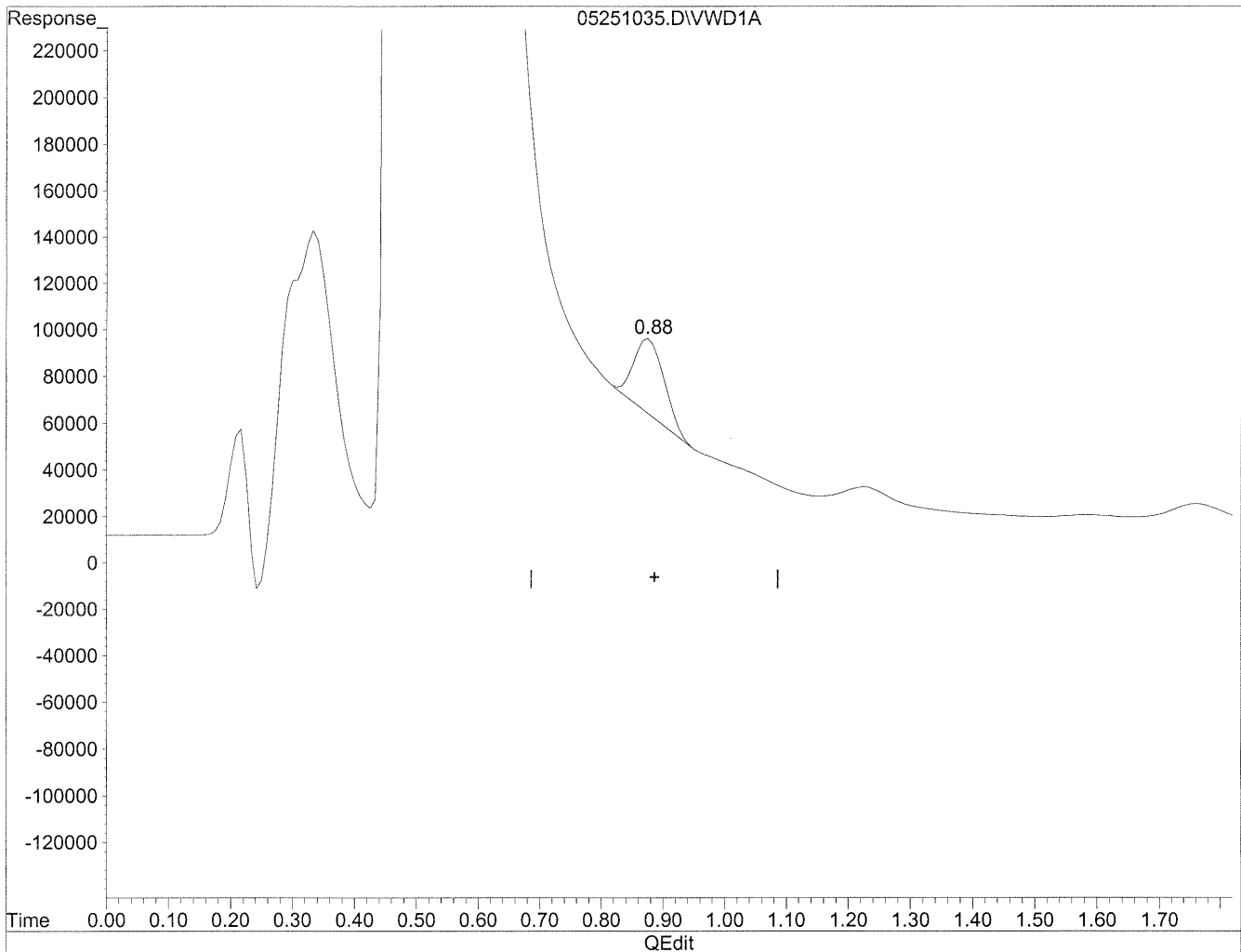
response 121654

(+) = Expected Retention Time
05251035.D TO110510.M Fri May 28 11:05:48 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251035.D Vial: 122
Acq On : 25-May-2010, 17:23 Operator: MD
Sample : P1001793-030 2ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 17:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration



(1) Formaldehyde

0.88min 118.074ng/ml m

response 1101971

12
MD
6/4/10
HC
6/4/10

(+) = Expected Retention Time
05251035.D TO110510.M Fri May 28 11:05:58 2010

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

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Client: Environmental Health & Engineering, Incorporated

Client Sample ID: Reagent Blank

Client Project ID: 17131

CAS Project ID: P1001793

CAS Sample ID: P100525-RB

Test Code: EPA TO-11A

Instrument ID: HP1050/UV_Vis 360/LC2

Analyst: Madeleine Dangazyan

Sampling Media: Radiello Tube

Test Notes: BC

Date Collected: NA

Date Received: NA

Date Analyzed: 5/25/10

Desorption Volume: 2.0 ml

Sampling Time: NA Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 0.20	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

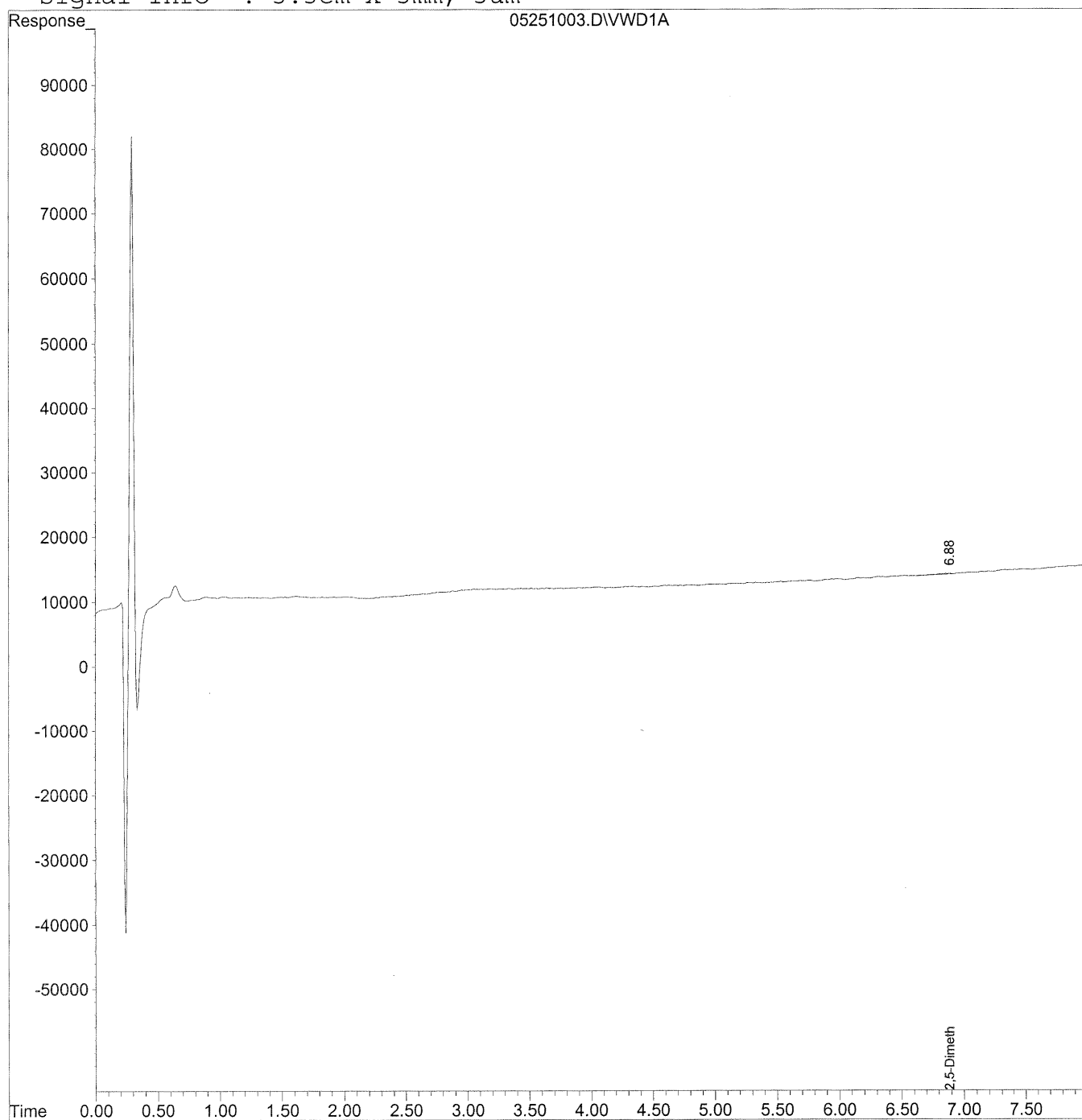
Verified By: Re Date: 6/11/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251003.D Vial: 11
Acq On : 25-May-2010, 11:45 Operator: MD
Sample : ACN blank lot CY331 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 10:24 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 08:07:45 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251003.D Vial: 11
Acq On : 25-May-2010, 11:45 Operator: MD
Sample : ACN blank lot CY331 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 10:24 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 08:07:45 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.00	0	N.D.	ng/ml
2)	Acetaldehyde	0.00	0	N.D.	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	0.00	0	N.D.	ng/ml
9)	o-Tolualdehyde	0.00	0	N.D.	ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D.	ng/ml
11)	Hexaldehyde	0.00	0	N.D.	ng/ml
12)	2,5-Dimethylbenzaldehyde	6.89	8809	4.578	ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: Reagent Blank
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P100525-RB

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: NA
Date Received: NA
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: NA Minutes

CAS #	Compound	Result µg/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 0.20	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

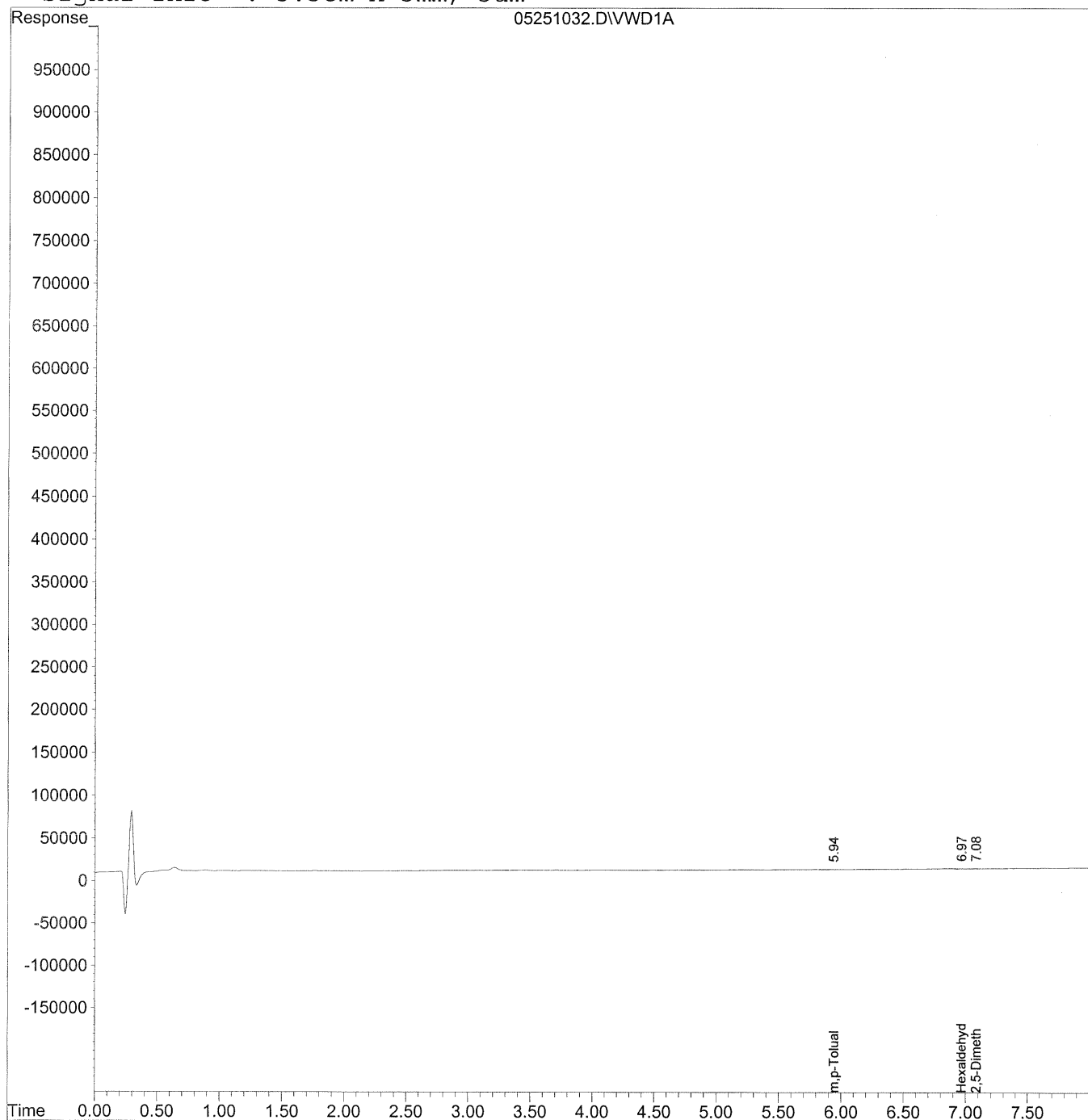
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251032.D Vial: 11
Acq On : 25-May-2010, 16:51 Operator: MD
Sample : ACN blank LOT CY331 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:04 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251032.D Vial: 11
Acq On : 25-May-2010, 16:51 Operator: MD
Sample : ACN blank LOT CY331 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 11:04 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:30:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound		R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.00	0	N.D.	ng/ml
2)	Acetaldehyde	0.00	0	N.D.	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	0.00	0	N.D.	ng/ml
9)	o-Tolualdehyde	0.00	0	N.D.	ng/ml
10)	m,p-Tolualdehyde	5.94	10424	4.450	ng/ml
11)	Hexaldehyde	6.97	8728	3.035	ng/ml
12)	2,5-Dimethylbenzaldehyde	7.09	7904	4.108	ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Environmental Health & Engineering, Incorporated
Client Sample ID: Reagent Blank
Client Project ID: 17131

CAS Project ID: P1001793
 CAS Sample ID: P100525-RB

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: NA
Date Received: NA
Date Analyzed: 5/25/10
Desorption Volume: 2.0 ml
Sampling Time: NA Minutes

CAS #	Compound	Result µg/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 0.20	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

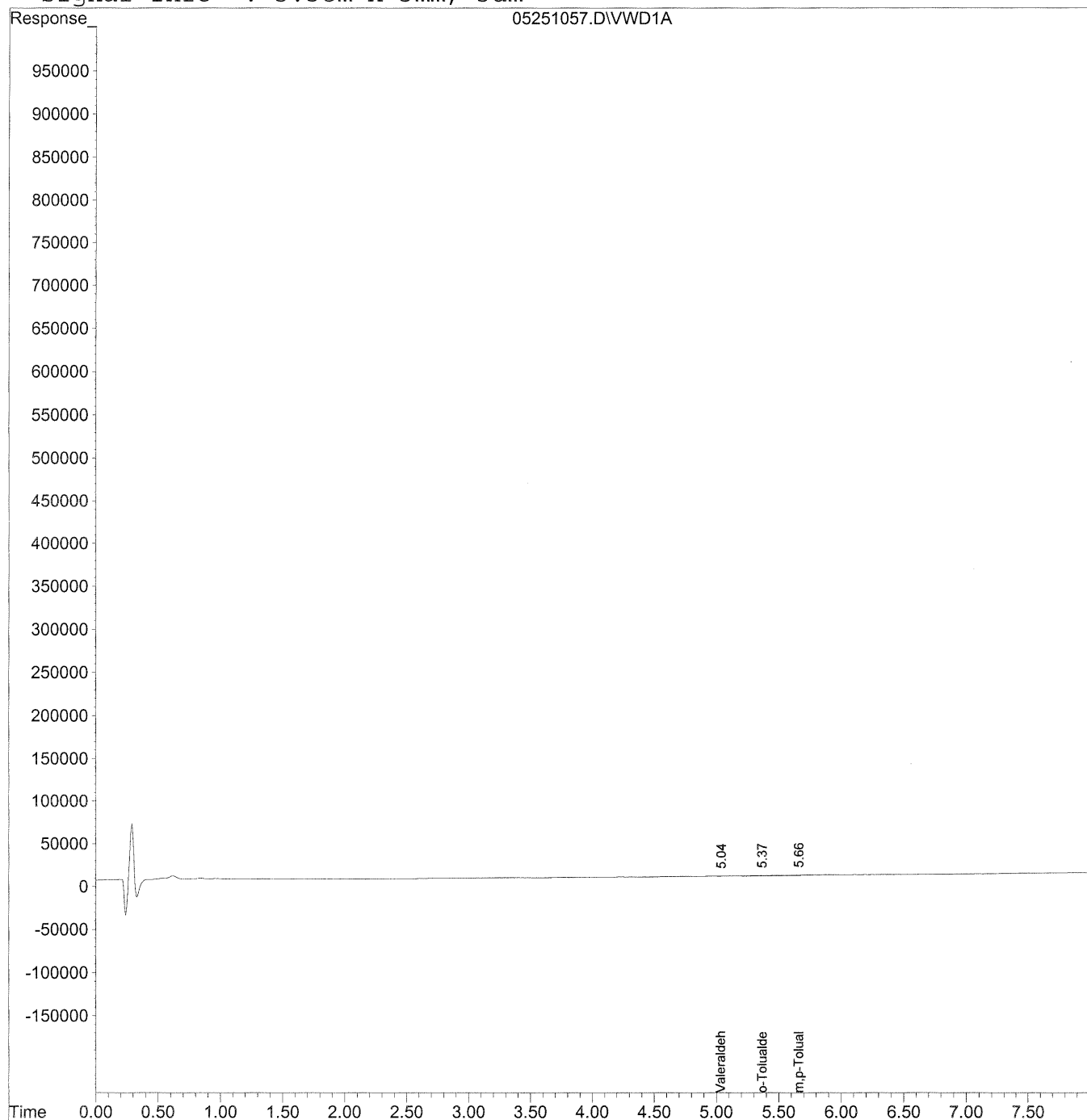
Verified By: Re Date: 6/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251057.D Vial: 11
Acq On : 25-May-2010, 21:12 Operator: MD
Sample : ACN blank lot cy331 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:55 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251057.D Vial: 11
Acq On : 25-May-2010, 21:12 Operator: MD
Sample : ACN blank lot cy331 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 12:55 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 11:37:19 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.00	0	N.D.	ng/ml
2)	Acetaldehyde	0.00	0	N.D.	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	5.04	5205	1.552	ng/ml
9)	o-Tolualdehyde	5.37 ^f	31744	15.595	ng/ml
10)	m,p-Tolualdehyde	5.66	67090	28.639	ng/ml
11)	Hexaldehyde	0.00	0	N.D.	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

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Client: Environmental Health & Engineering, Incorporated
Client Sample ID: Reagent Blank
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P100526-RB

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: NA
Date Received: NA
Date Analyzed: 5/26/10
Desorption Volume: 2.0 ml
Sampling Time: NA Minutes

CAS #	Compound	Result µg/Sample	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 0.20	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

NA = Not applicable.

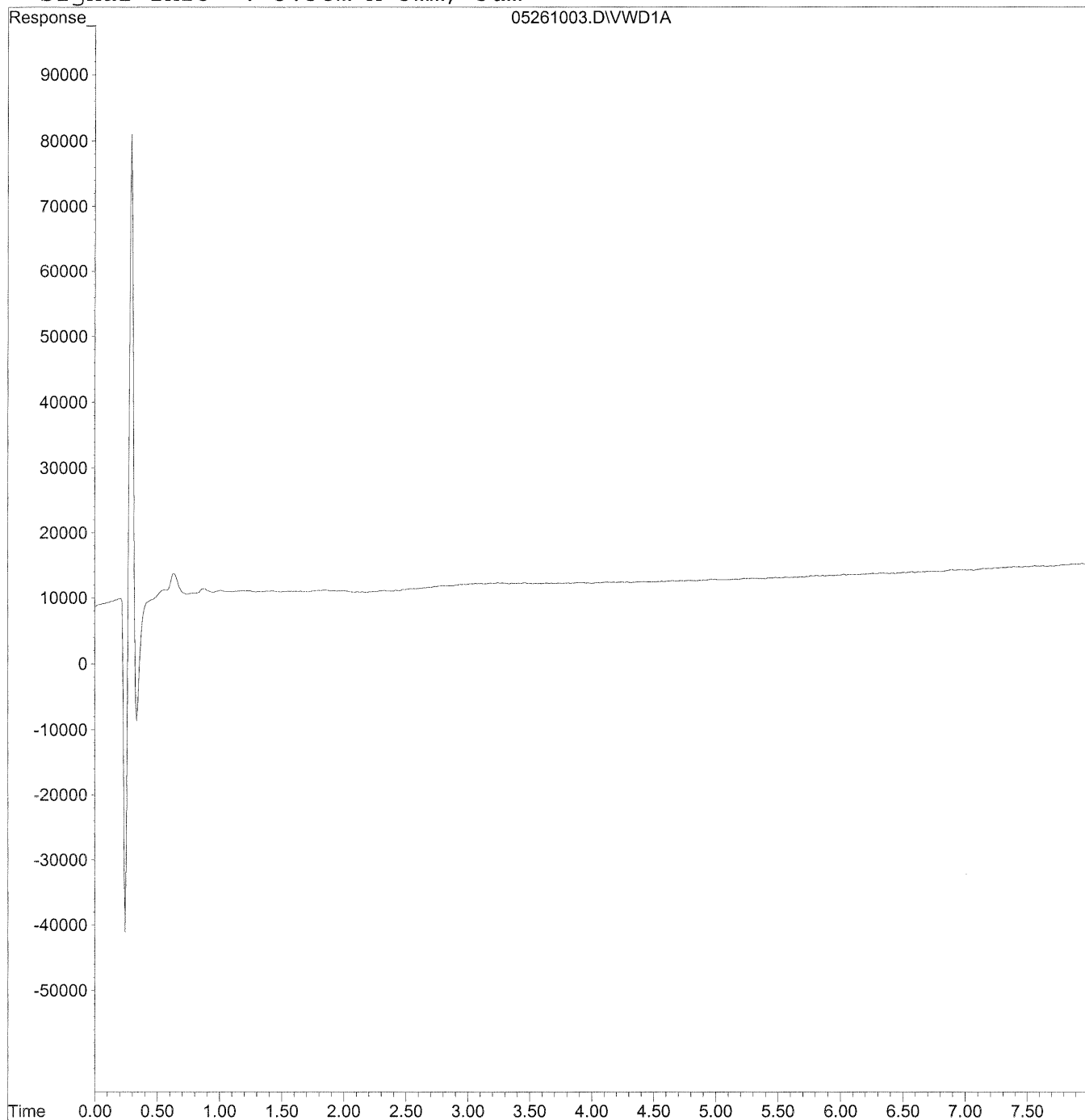
Verified By: Re Date: 4/7/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261003.D Vial: 11
Acq On : 26-May-2010, 11:44 Operator: MD
Sample : ACN blank Lot CY331 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:17 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261003.D Vial: 11
Acq On : 26-May-2010, 11:44 Operator: MD
Sample : ACN blank Lot CY331 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:17 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 13:04:05 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.00	0	N.D.	ng/ml
2)	Acetaldehyde	0.00	0	N.D.	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	0.00	0	N.D.	ng/ml
9)	o-Tolualdehyde	0.00	0	N.D.	ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D.	ng/ml
11)	Hexaldehyde	0.00	0	N.D.	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

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Client: Environmental Health & Engineering, Incorporated
Client Sample ID: Reagent Blank
Client Project ID: 17131

CAS Project ID: P1001793
CAS Sample ID: P100528-RB

Test Code: EPA TO-11A
Instrument ID: HP1050/UV_Vis 360/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Radiello Tube
Test Notes: BC

Date Collected: NA
Date Received: NA
Date Analyzed: 5/28/10
Desorption Volume: 2.0 ml
Sampling Time: NA Minutes

CAS #	Compound	Result µg/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 0.20	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 0.20	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 0.20	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 0.20	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 0.20	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 0.20	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 0.20	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 0.20	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

BC = Results reported are not blank corrected.

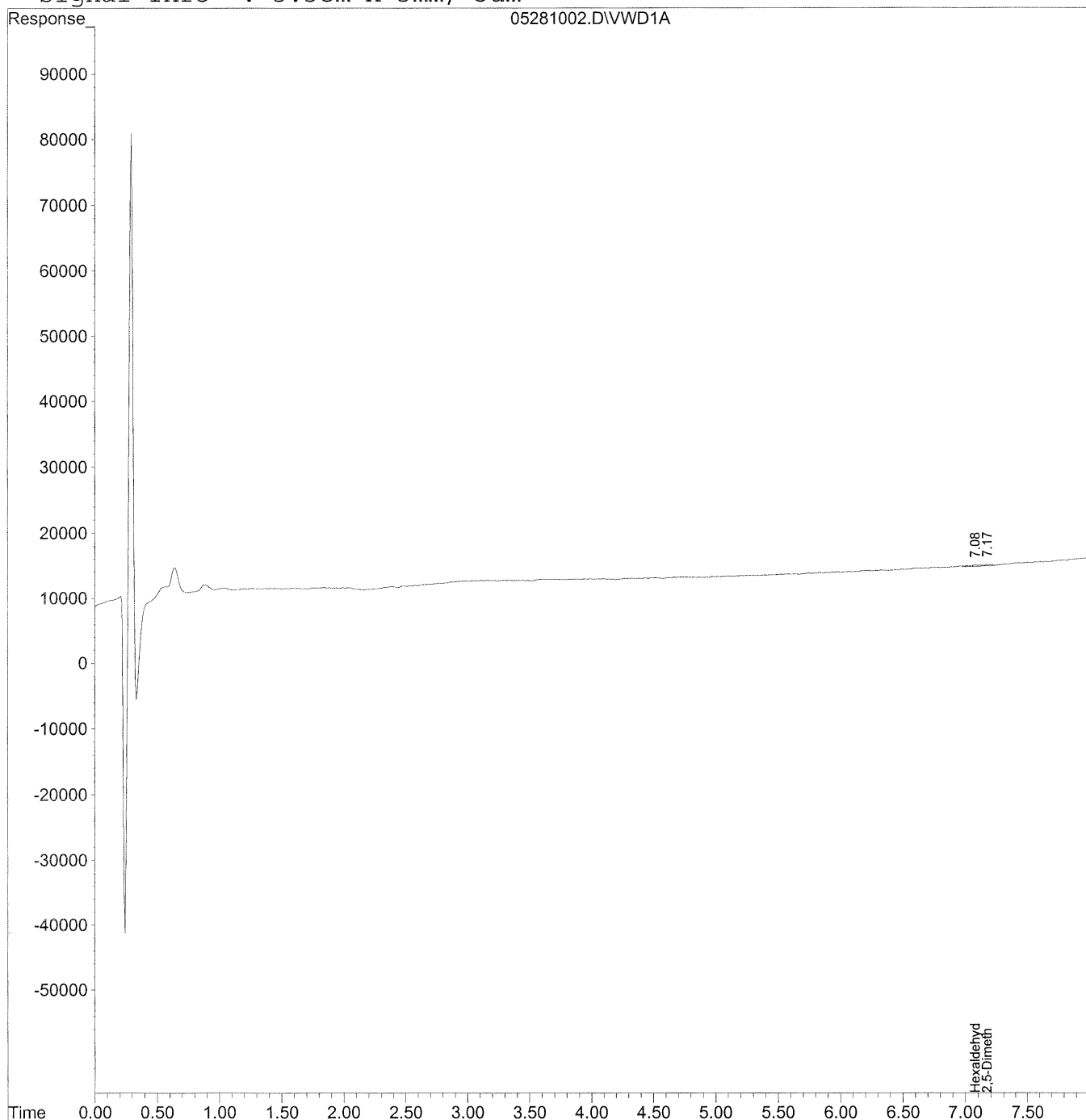
NA = Not applicable.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281002.D Vial: 11
Acq On : 28-May-2010, 13:18 Operator: MD
Sample : ACN blank Lot CY331 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:55 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 14:54:52 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\28\05281002.D Vial: 11
Acq On : 28-May-2010, 13:18 Operator: MD
Sample : ACN blank Lot CY331 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:55 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 14:54:52 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.00	0	N.D.	ng/ml
2)	Acetaldehyde	0.00	0	N.D.	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	0.00	0	N.D.	ng/ml
9)	o-Tolualdehyde	0.00	0	N.D.	ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D.	ng/ml
11)	Hexaldehyde	7.08f	11036	3.838	ng/ml
12)	2,5-Dimethylbenzaldehyde	7.17	9603	4.991	ng/ml

INITIAL CALIBRATION STANDARDS

Response Factor Report VWD

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)

Title : LC-1050 TO-11A ICAL

Last Update : Thu May 13 11:47:19 2010

Calibration Files

50	=05121008.D	100	=05121011.D	500	=05121014.D
1500	=05121017.D	5000	=05121020.D	10	=05121023.D

Compound		50	100	500	1500	5000	10	Avg	%RSD	
1)	Formaldehyde	0.927	0.934	0.894	0.929	1.004	0.911	0.933	E4	4.03
2)	Acetaldehyde	6.435	6.593	6.461	6.799	7.405	6.718	6.735	E3	5.30
3)	Propionaldehyde	4.089	4.507	4.760	4.870	5.706	5.241	4.862	E3	11.60
4)	Crotonaldehyde	3.729	3.953	3.975	4.144	4.520	4.135	4.076	E3	6.51
5)	Butyraldehyde	3.693	3.867	4.012	3.946	4.495	4.163	4.029	E3	6.85
6)	Benzaldehyde	2.617	2.492	2.541	2.657	3.116	2.817	2.707	E3	8.49
7)	Isovaleraldehyde	3.241	3.467	3.402	3.685	3.927	3.565	3.548	E3	6.72
8)	Valeraldehyde	3.149	3.271	3.252	3.258	3.731	3.466	3.355	E3	6.30
9)	o-Tolualdehyde	1.652	1.866	1.917	2.116	2.416	2.245	2.036	E3	13.62
10)	m,p-Tolualdehyde	2.206	2.124	2.206	2.401	2.663	2.456	2.343	E3	8.62
11)	Hexaldehyde	2.790	2.711	2.848	2.774	3.180	2.950	2.875	E3	5.90
12)	2,5-Dimethylbenzald	1.602	1.745	1.826	2.026	2.244	2.100	1.924	E3	12.50

H
5/13/10MP
5/13/10

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:47:19 2010
Response via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	50	50.00	0.00	J:\LC02\DATA\TO11A\2010_05\12\05121008.D
2	100	100.00	0.00	J:\LC02\DATA\TO11A\2010_05\12\05121011.D
3	500	500.00	0.00	J:\LC02\DATA\TO11A\2010_05\12\05121014.D
4	1500	1500.00	0.00	J:\LC02\DATA\TO11A\2010_05\12\05121017.D
5	5000	5000.00	0.00	J:\LC02\DATA\TO11A\2010_05\12\05121020.D
6	10	10000.00	0.00	J:\LC02\DATA\TO11A\2010_05\12\05121023.D

#	ID	Update Time	Quant Time	Acquisition Time
1	50	May 13 11:15 2010	May 13 11:14 19110	12-May-2010, 13:29
2	100	May 13 11:19 2010	May 13 10:38 19110	12-May-2010, 14:01
3	500	May 13 11:24 2010	May 13 11:23 19110	12-May-2010, 14:33
4	1500	May 13 11:26 2010	May 13 11:25 19110	12-May-2010, 15:04
5	5000	May 13 11:27 2010	May 13 11:27 19110	12-May-2010, 16:05
6	10	May 13 11:30 2010	May 13 11:29 19110	12-May-2010, 16:37

TO110510.M

Thu May 13 11:57:16 2010

Edit Integration Events [X]

POSSIBLE EVENTS: []

EVENT:	VALUE	TIME:
Initial Area Reject	5000	Initial
Initial Area Reject	5000	Initial ▲
Initial Peak Width	0.010	Initial
Shoulder Detection	OFF	Initial
Initial Threshold	12.0	Initial
Integrator OFF		0.001
Integrator ON		0.600 ▼

Edit Integration Events [X]

POSSIBLE EVENTS: []

EVENT:	VALUE	TIME:
Initial Area Reject	5000	Initial
Shoulder Detection	OFF	Initial ▲
Initial Threshold	12.0	Initial
Integrator OFF		0.001
Integrator ON		0.600
Threshold	10.0	4.400
Baseline Now		7.700 ▼

TO-11A Aldehyde-DNPH Stock Solution Standard S21-06300801

Source: AccuStandard Inc.

Catalog No: M-8315-R2-DNPH

Lot: B8060121

Solvent: ACN

Expiration Date: 06/12/11

	MW	Aldehyde-DNPH MW*	Manufacturer Prepared Concentration as Aldehyde-DNPH (ug/mL)	Calculated Concentration as Aldehyde (ug/mL)	ICV S21-03091003 (nominal ng/mL)	ICV S21-03091003 (Actual, ng/mL)	% Diff
Formaldehyde	30.03	210.03	100	14.30	1430	1534.13	7.28%
Acetaldehyde	44.05	224.05	100.2	19.70	1970	2142.41	8.75%
Acetone	58.08	238.08	100.2	24.44	2444	not reported	
Acrolein	56.06	236.06	103.1	24.48	2448	not reported	
Propionaldehyde	58.08	238.08	100.2	24.44	2444	2766.34	13.19%
Crotonaldehyde	70.09	250.09	100.2	28.08	2808	3109.26	10.73%
Butyraldehyde	72.11	252.11	100	28.60	2860	3196.04	11.75%
Benzaldehyde	106.12	286.12	100	37.09	3709	4051.75	9.24%
Isovaleraldehyde	86.13	266.13	100.2	32.43	3243	3526.45	8.74%
Valeraldehyde	86.13	266.13	100.1	32.40	3240	3650.81	12.68%
o-Tolualdehyde	120.15	300.15	100.1	40.07	4007	4522.39	12.86%
m,p-Tolualdehyde	120.15	300.15	100.3	80.30	8030	9008.37	12.18%
Hexaldehyde	100.16	280.16	100.3	35.86	3586	3748.57	4.53%
2,5-Dimethylbenzaldehyde	134.18	314.18	100.3	42.84	4284	4895.63	14.28%

(* MW of DNPH is 198g/mol. The result of a nucleophilic reaction of aldehyde & DNPH is a hydrazone derivative with the loss of H₂O, 18g/mol)

COMPOUND	50	100	500	1500	5000	10000	AVERAGE	SD	%RSD
Formaldehyde	9274.72	9.34E+03	8.94E+03	9.29E+03	1.00E+04	9.11E+03	9.33E+03	3.76E+02	4.03%
Acetaldehyde	6435.486667	6.59E+03	6.46E+03	6.80E+03	7.40E+03	6.72E+03	6.74E+03	3.57E+02	5.30%
Propionaldehyde	4089.186667	4.51E+03	4.76E+03	4.87E+03	5.71E+03	5.24E+03	4.86E+03	5.64E+02	11.60%
Crotonaldehyde	3728.786667	3.95E+03	3.98E+03	4.14E+03	4.52E+03	4.14E+03	4.08E+03	2.65E+02	6.51%
Butyraldehyde	3693.113333	3.87E+03	4.01E+03	3.95E+03	4.49E+03	4.16E+03	4.03E+03	2.76E+02	6.85%
Benzaldehyde	2617.433333	2.49E+03	2.54E+03	2.66E+03	3.12E+03	2.82E+03	2.71E+03	2.30E+02	8.49%
Isovaleraldehyde	3241.306667	3.47E+03	3.40E+03	3.68E+03	3.93E+03	3.56E+03	3.55E+03	2.39E+02	6.72%
Valeraldehyde	3148.94	3.27E+03	3.25E+03	3.26E+03	3.73E+03	3.47E+03	3.35E+03	2.11E+02	6.30%
o-Tolualdehyde	1652.453333	1.87E+03	1.92E+03	2.12E+03	2.42E+03	2.24E+03	2.04E+03	2.77E+02	13.62%
m,p-Tolualdehyde	2206.243333	2.12E+03	2.21E+03	2.40E+03	2.66E+03	2.46E+03	2.34E+03	2.02E+02	8.62%
Hexaldehyde	2789.513333	2.71E+03	2.85E+03	2.77E+03	3.18E+03	2.95E+03	2.88E+03	1.70E+02	5.90%
2,5-Dimethylbenzaldehyde	1602.286667	1.75E+03	1.83E+03	2.03E+03	2.24E+03	2.10E+03	1.92E+03	2.40E+02	12.50%

COLUMBIA ANALYTICAL SERVICES, INC.

Method: TO-11A

Analyst: MD

Printed : 05/13/10

Instrument : LC#02

Date Analysis : 05/12/10

Detector : UV-VIS 360

Sample Amount : 3ul

CALIBRATION RESPONSE FACTOR SUMMARY

Calibration Level	Form-Aldehyde	Acet-Aldehyde	Propion-Aldehyde	Croton-Aldehyde	Butyr-Aldehyde	Benz-Aldehyde	% rpd
50ng/ml TO-11A S2	469519	331942	206402	182213	188187	132575	1.30%
50ng/ml TO-11A S2	455638	314805	210977	184135	181534	129097	1.36%
50ng/ml TO-11A S2	466051	318576	195999	192970	184246	130943	0.05%
100ng/ml TO-11A S	932611	659740	447517	408188	398668	261667	5.00%
100ng/ml TO-11A S	917821	647445	451764	401686	372831	242805	2.57%
100ng/ml TO-11A S	951325	670834	452686	375949	388508	243134	2.43%
500ng/ml TO-11A S	4495617	3259809	2404725	2002003	2023401	1278175	0.62%
500ng/ml TO-11A S	4417710	3209279	2333955	1948793	1961887	1268692	0.13%
500ng/ml TO-11A S	4500287	3222875	2400632	2011898	2033218	1264097	0.49%
1500ng/ml TO-11A	13999341	10223963	7284521	6216075	5951623	4014948	0.74%
1500ng/ml TO-11A	13920129	10226975	7416669	6289446	5960039	3993221	0.19%
1500ng/ml TO-11A	13880198	10143044	7213023	6140533	5843556	3948746	0.93%
5000ng/ml TO-11A	49980790	36771790	28171144	22456169	22281068	15502410	0.50%
5000ng/ml TO-11A	50223054	37132798	28599753	22549780	22489469	15578511	0.01%
5000ng/ml TO-11A	50395021	37166980	28819385	22800716	22650396	15658234	0.50%
10000ng/ml TO-11	90709672	66890029	52244063	41174859	41459691	28054819	0.42%
10000ng/ml TO-11	91183852	67226101	52545859	41390037	41669737	28191466	0.07%
10000ng/ml TO-11	91472042	67416123	52440027	41499442	41771054	28269761	0.35%

COLUMBIA ANALYTICAL SERVICES, INC.

Method: TO-11A

Analyst:

Printed : 05/13/10

Instrument : LC#02

Date Analysis : 05/12/10

Detector : UV-VIS 360

Sample Amount : 3ul

CALIBRATION RESPONSE FACTOR SUMMARY

Calibration Level	Isovaler-Aldehyde	Valer-Aldehyde	o-Tolu-Aldehyde	m,p-Tolu-Aldehyde	Hex-Aldehyde	2,5-Dimethyl benz-Aldehyde	% rpd
50ng/ml TO-11A S2	155641	150293	87129	234231	154688	83574	4.32%
50ng/ml TO-11A S2	163123	159085	79874	197795	135007	79484	0.79%
50ng/ml TO-11A S2	167432	162963	80865	229847	128732	77285	3.53%
100ng/ml TO-11A S	350261	328444	187057	435423	275782	172979	0.88%
100ng/ml TO-11A S	341552	328463	186724	413632	272471	179109	2.64%
100ng/ml TO-11A S	348203	324388	186168	425466	265000	171438	1.76%
500ng/ml TO-11A S	1711547	1638320	938923	2231369	1388874	900771	1.35%
500ng/ml TO-11A S	1654372	1590849	924147	2119427	1443384	923075	1.10%
500ng/ml TO-11A S	1737363	1649238	1012766	2266322	1439322	915366	0.25%
1500ng/ml TO-11A	5545667	4908691	3190358	7206275	4163357	3013354	0.87%
1500ng/ml TO-11A	5523160	4897059	3181168	7222715	4177519	3110373	2.32%
1500ng/ml TO-11A	5511869	4855903	3151083	7177715	4141107	2995490	1.46%
5000ng/ml TO-11A	19526448	18553441	11996880	26379068	15727653	11069374	1.36%
5000ng/ml TO-11A	19643023	18591208	12054706	26529991	15876497	11117624	0.93%
5000ng/ml TO-11A	19734320	18822519	12188940	26974841	16102054	11477886	2.28%
10000ng/ml TO-11	35490040	34502996	22342247	48892935	29145211	20767473	1.10%
10000ng/ml TO-11	35675923	34690610	22468352	49151608	29280568	20997209	0.01%
10000ng/ml TO-11	35769102	34792517	22555528	49312981	30073334	21232541	1.11%

AVERAGE RESPONSE FACTOR

5/19/10 *HE*

QMR 5/12/10

	Form- Aldehyde	Acet- Aldehyde	Propion- Aldehyde	Croton- Aldehyde	Butyr- Aldehyde	Benz- Aldehyde
50ng/ml TO-11A S:	463736	321774	204459	186439	184656	130872
100ng/ml TO-11A:	933919	659340	450656	395274	386669	249202
500ng/ml TO-11A:	4471205	3230654	2379771	1987565	2006169	1270321
1500ng/ml TO-11A	13933223	10197994	7304738	6215351	5918406	3985638
5000ng/ml TO-11A	50199622	37023856	28530094	22602222	22473644	15579718
10000ng/ml TO-11	91121855	67177418	52409983	41354779	41633494	28172015

5/19/10
HLC
5/13/10

AVERAGE RESPONSE FACTOR

	Isovaler- Aldehyde	Valer- Aldehyde	o-Tolu- Aldehyde	m,p-Tolu- Aldehyde	Hex- Aldehyde	2,5-Dimethyl benz- Aldehyde
50ng/ml TO-11A S:	162065	157447	82623	220624	139476	80114
100ng/ml TO-11A:	346672	327098	186650	424840	271084	174509
500ng/ml TO-11A:	1701094	1626136	958612	2205706	1423860	913071
1500ng/ml TO-11A	5526899	4887218	3174203	7202235	4160661	3039739
5000ng/ml TO-11A	19634597	18655723	12080175	26627967	15902068	11221628
10000ng/ml TO-11	35645022	34662041	22448709	49119175	29499704	20999074

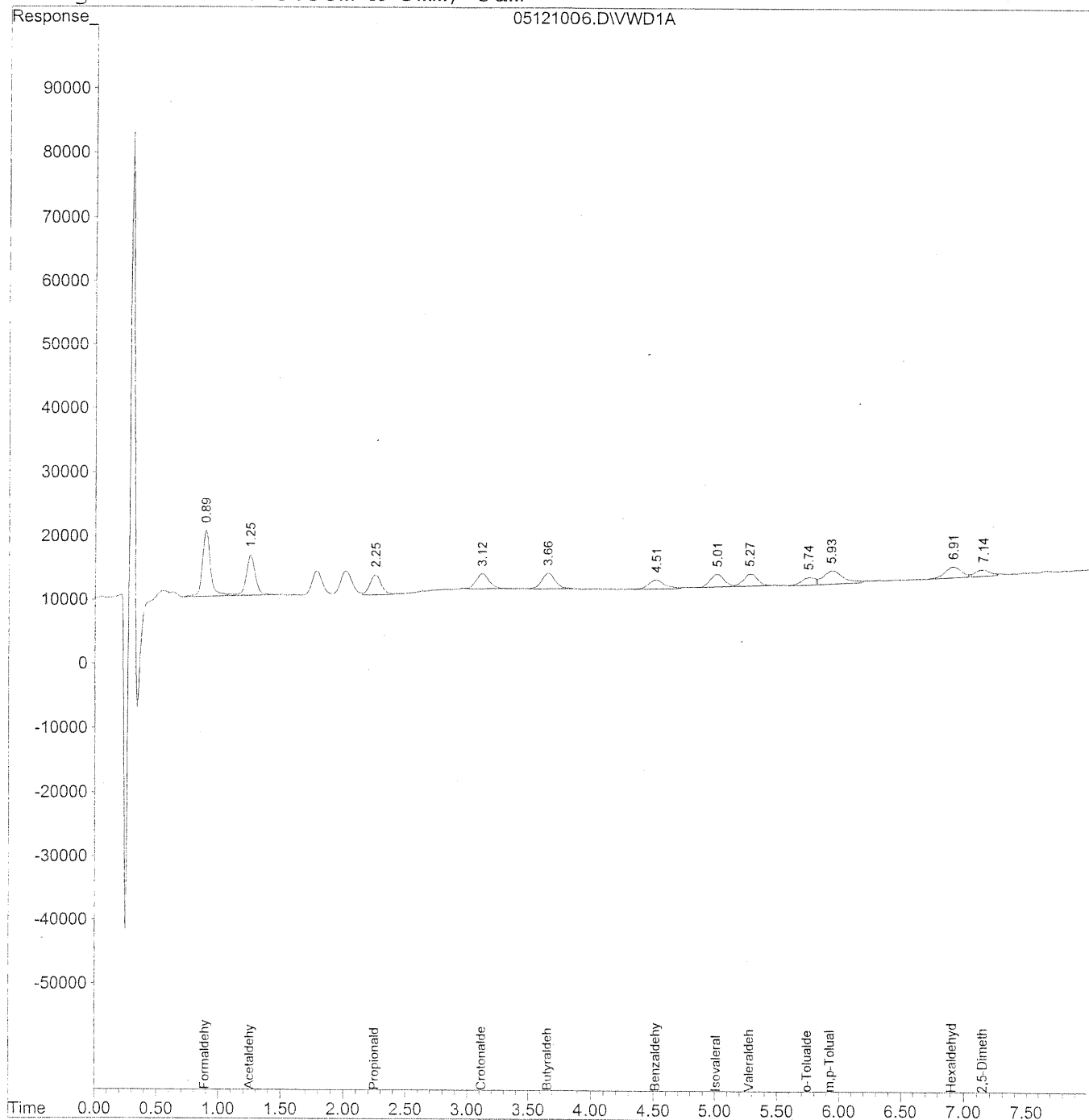
TO-11A CALIBRATION STANDARDS LIST							
50ng/ml TO-11A S21-03091012							
100ng/ml TO-11A S21-03091009							
500ng/ml TO-11A S21-03091008							
1500ng/ml TO-11A S21-04211003							
5000ng/ml TO-11A S21-03091001							
10000ng/ml TO-11 S21-03091007							

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
 Acq On : 12-May-2010, 13:08 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:45 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:45 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

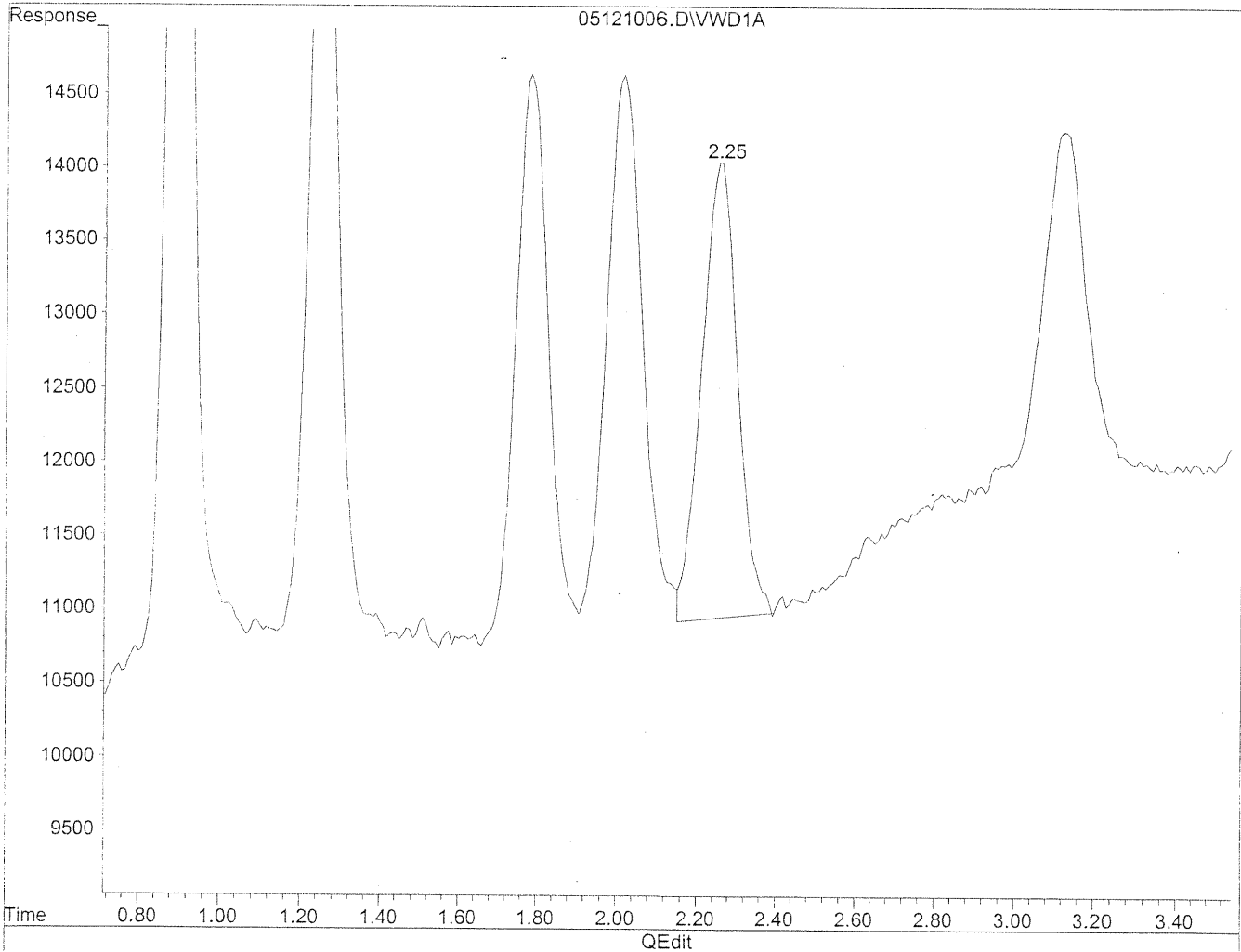
	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.90	469519	52.400 ng/ml
2)	Acetaldehyde	1.25	331942	51.562 ng/ml
3)	Propionaldehyde	2.25	206402	42.501 ng/mlm
4)	Crotonaldehyde	3.12	182213	46.328 ng/mlm
5)	Butyraldehyde	3.66	188187	47.461 ng/mlm
6)	Benzaldehyde	4.51	132575	50.443 ng/mlm
7)	Isovaleraldehyde	5.01	155641	43.571 ng/ml
8)	Valeraldehyde	5.28	150293	50.052 ng/ml
9)	o-Tolualdehyde	5.74	87129	32.945 ng/mlm
10)	m,p-Tolualdehyde	5.93	234231	111.551 ng/mlm
11)	Hexaldehyde	6.91	154688	49.469 ng/mlm
12)	2,5-Dimethylbenzaldehyde	7.14	83574	46.830 ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:31 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:01:33 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.26min 40.354ng/ml

response 195976

(+) = Expected Retention Time

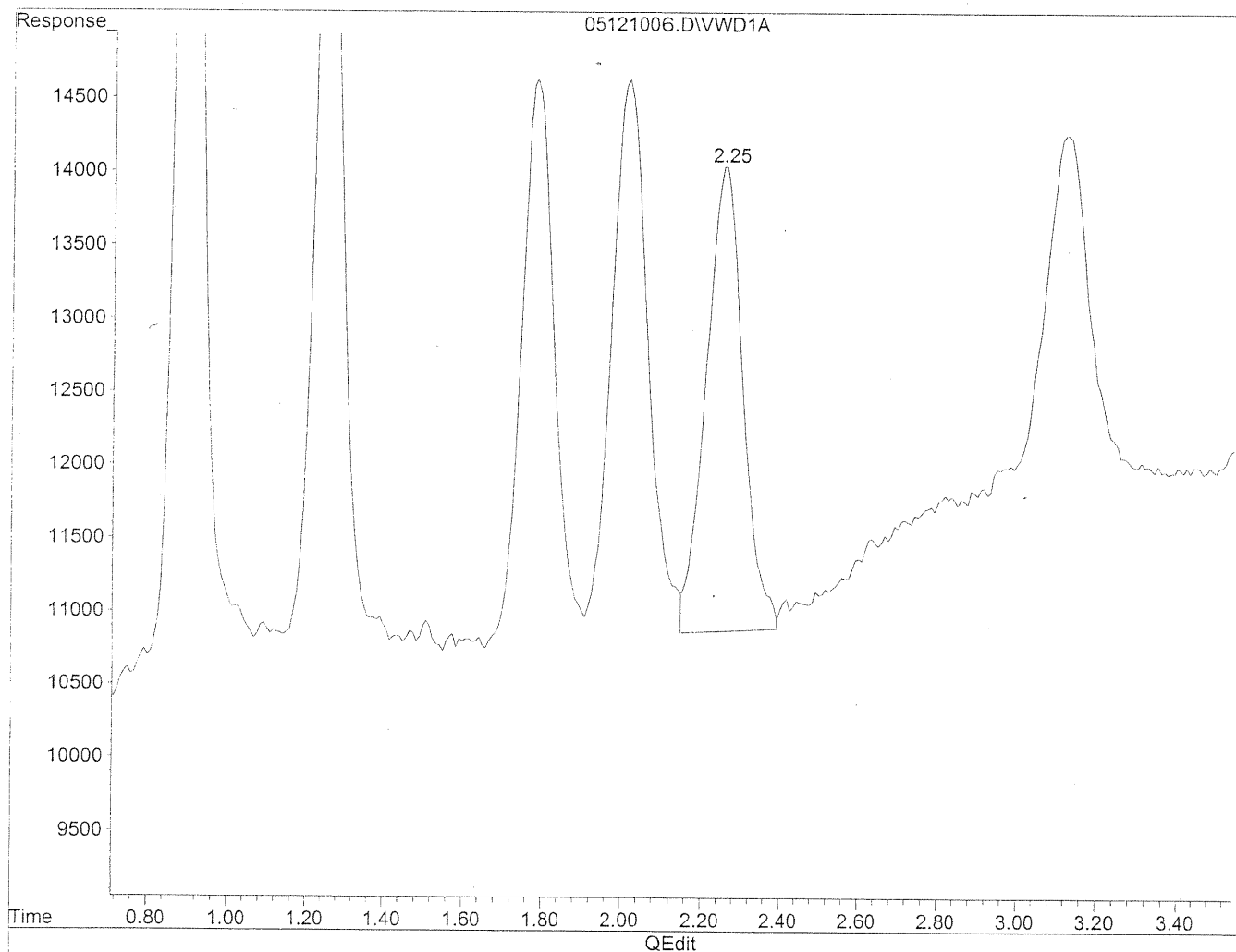
05121006.D TO110510.M

Thu May 13 11:07:05 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:31 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:01:33 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.25min 42.501ng/ml m

response 206402

HL
5/10/10

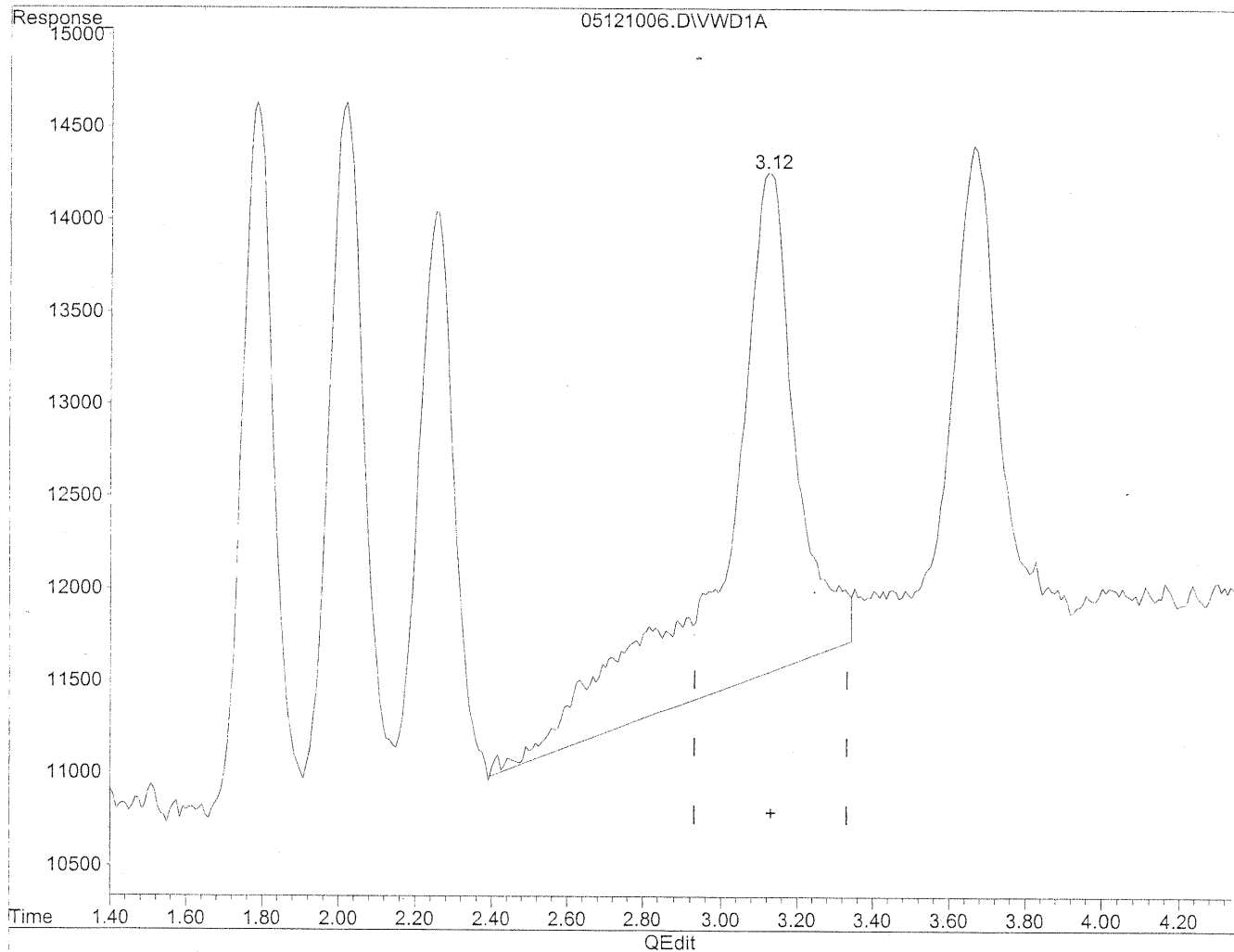
MD
5/13/10
PR

(+) = Expected Retention Time
05121006.D TO110510.M Thu May 13 11:07:15 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(4) Crotonaldehyde

3.12min 90.205ng/ml

response 354784

(+) = Expected Retention Time

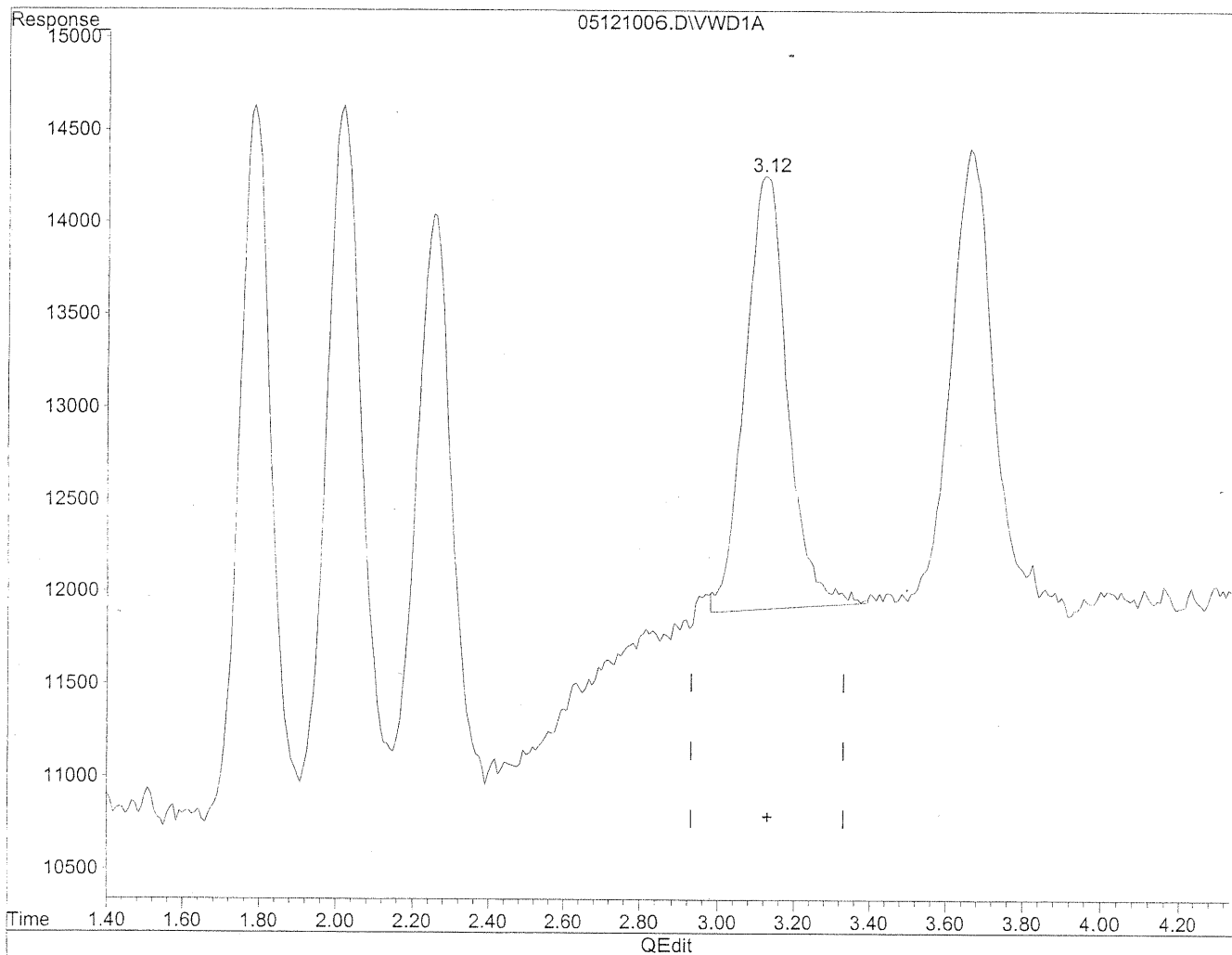
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Thu May 13 10:30:55 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
 Acq On : 12-May-2010, 13:08 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



(4) Crotonaldehyde

3.12min 46.328ng/ml m

response 182213

HC
5/19/10

TZ
MD
5/13/10

(+) = Expected Retention Time

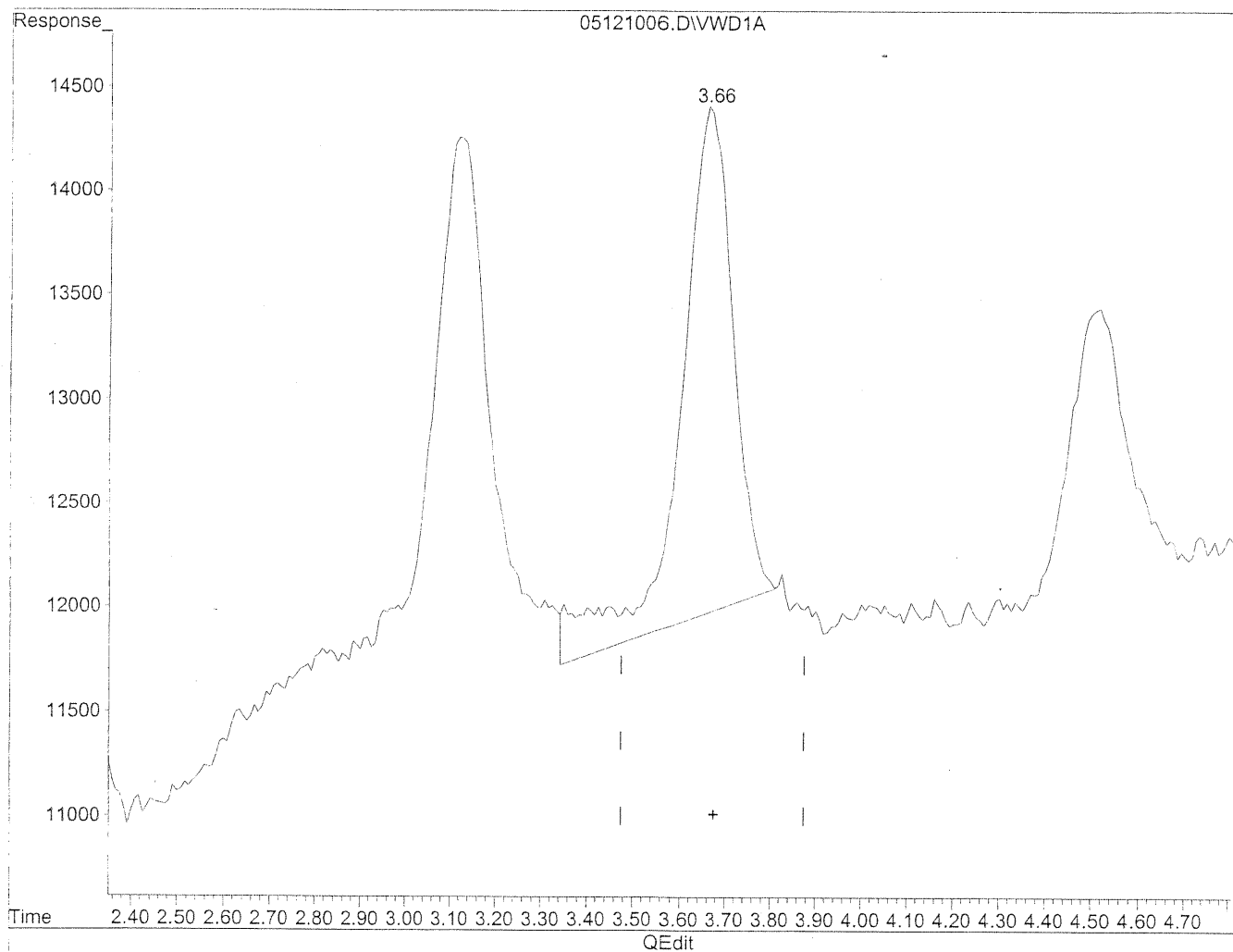
05121006.D TO110510.M

Thu May 13 10:31:05 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.66min 49.877ng/ml

response 197767

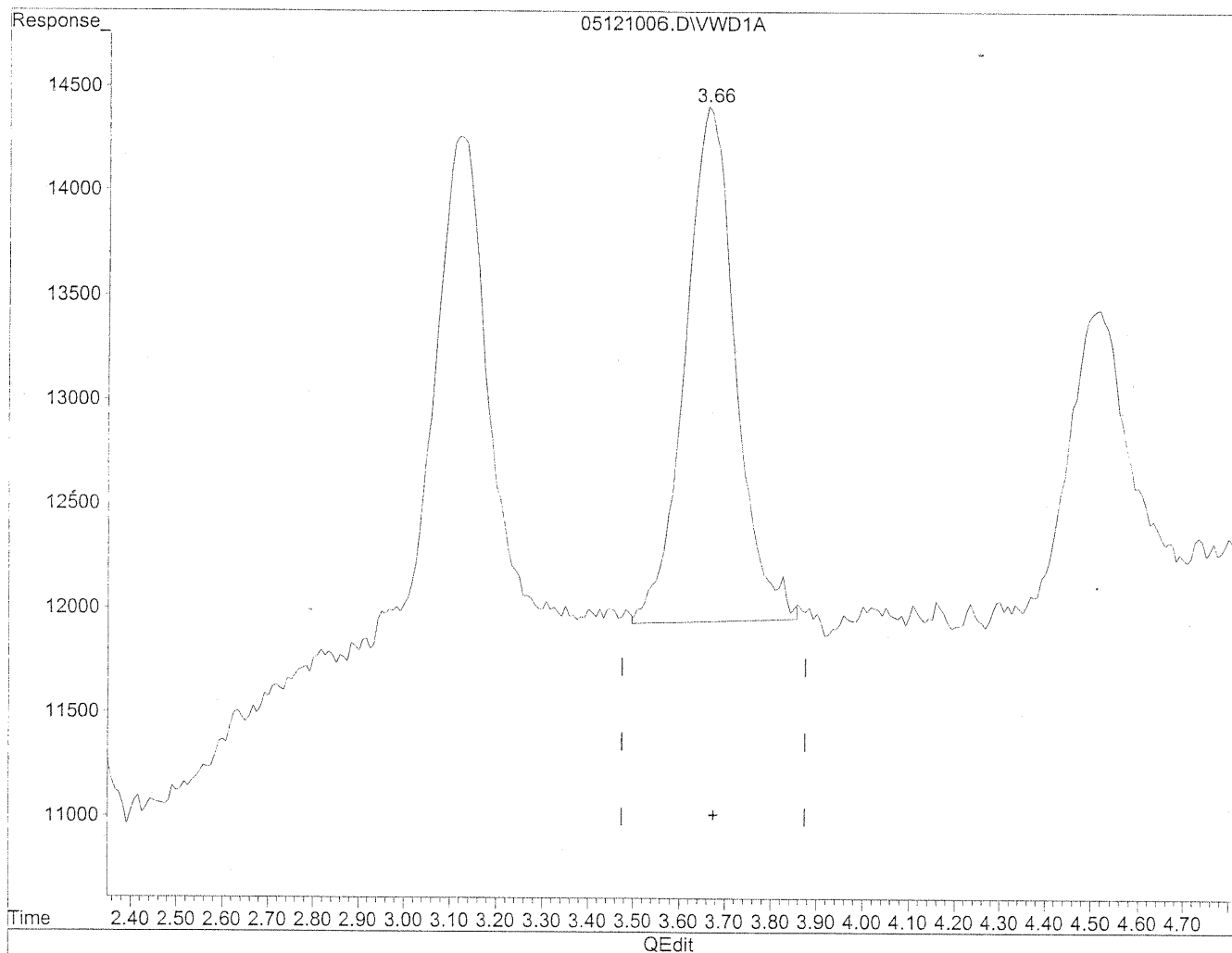
(+) = Expected Retention Time

05121006.D TO110510.M Thu May 13 10:31:08 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.66min 47.461ng/ml m

response 188187

alc
5/19/10

R
MD
5/13/10

(+) = Expected Retention Time

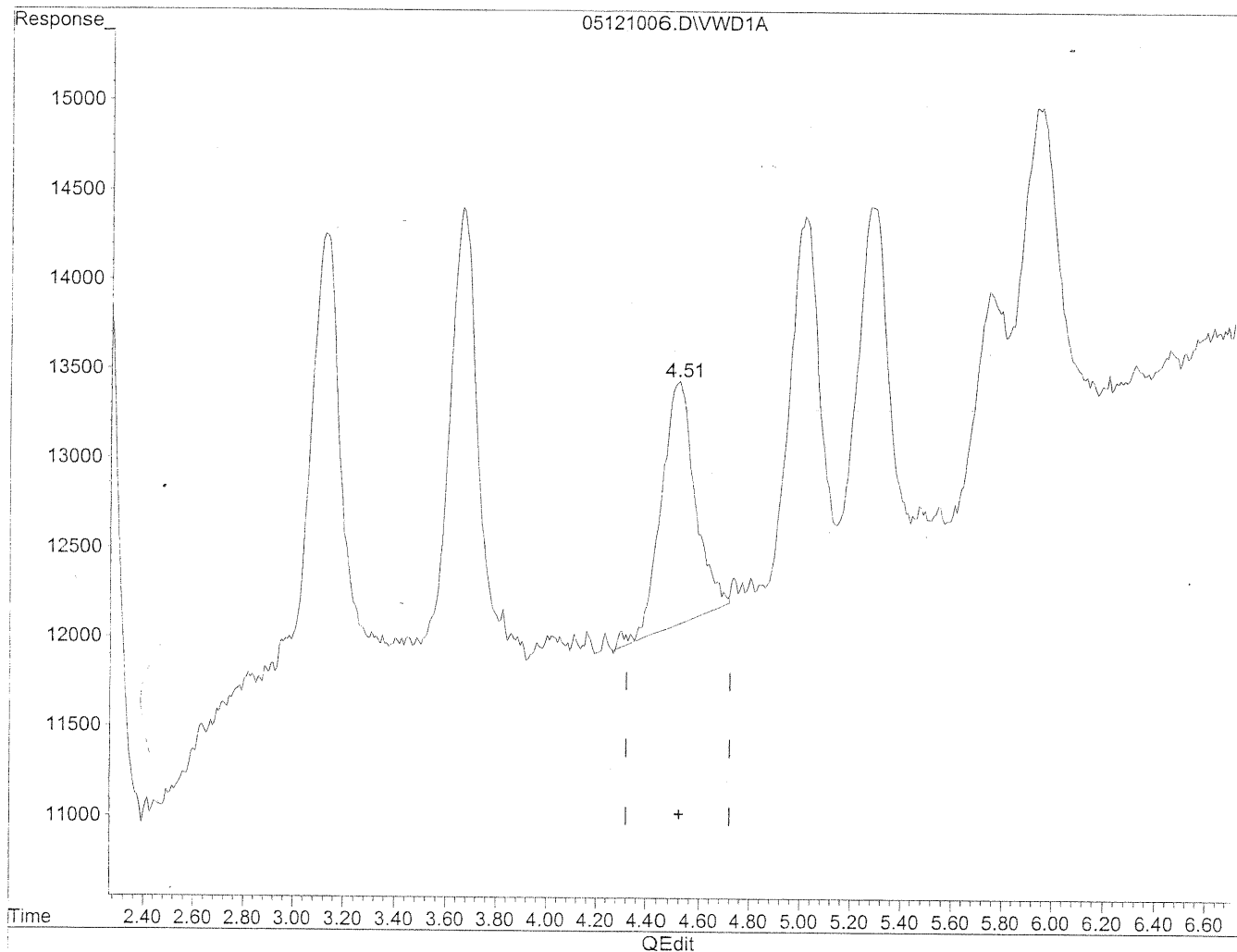
05121006.D TO110510.M

Thu May 13 10:31:12 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:31 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:01:33 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.52min 45.807ng/ml

response 120389

(+) = Expected Retention Time

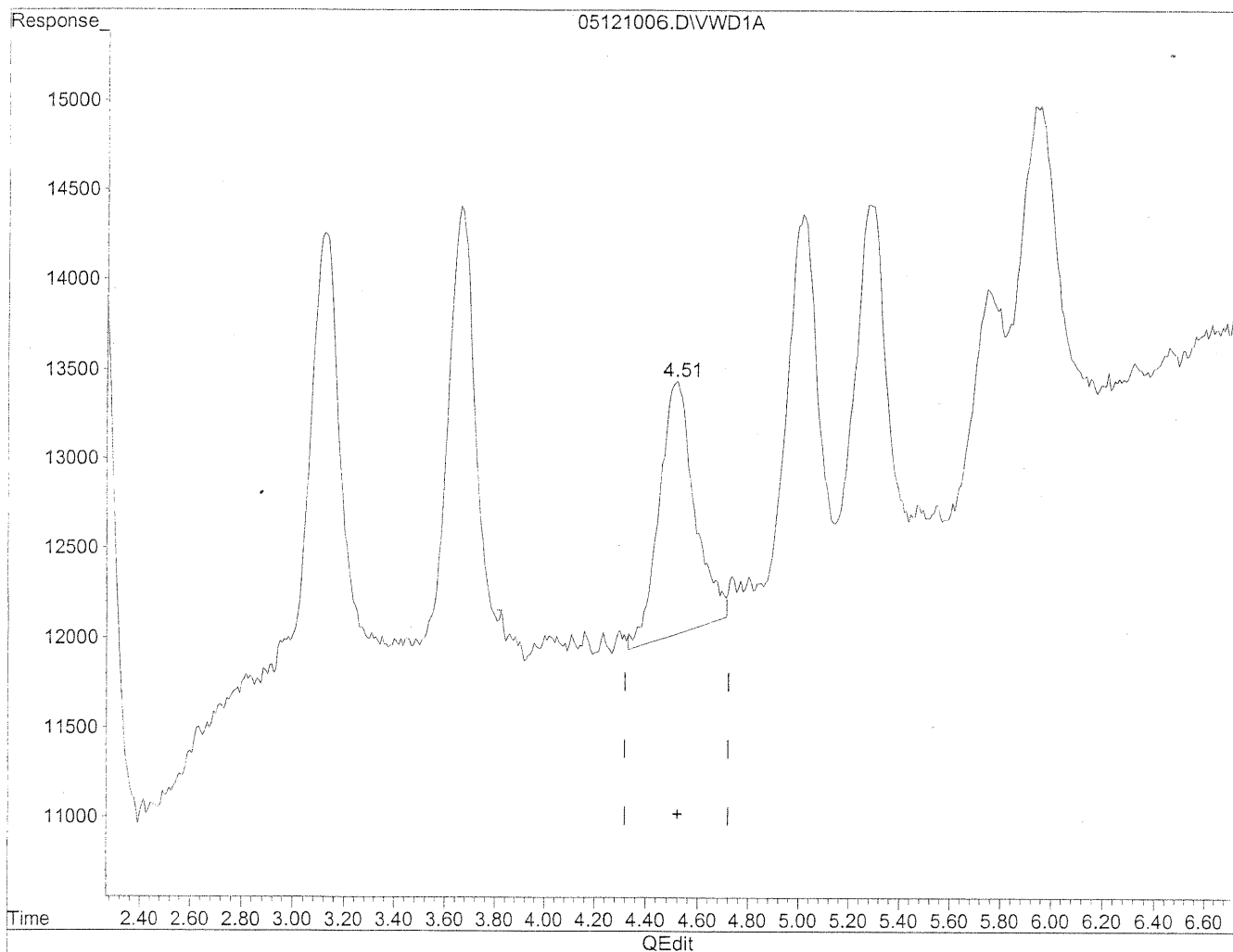
05121006.D TO110510.M

Thu May 13 11:07:31 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
 Acq On : 12-May-2010, 13:08 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:31 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 11:01:33 2010
 Response via : Multiple Level Calibration



(6) Benzaldehyde

4.51min 50.443ng/ml m

response 132575

HL
5/11/10

B2
MD
5/13/10

(+) = Expected Retention Time

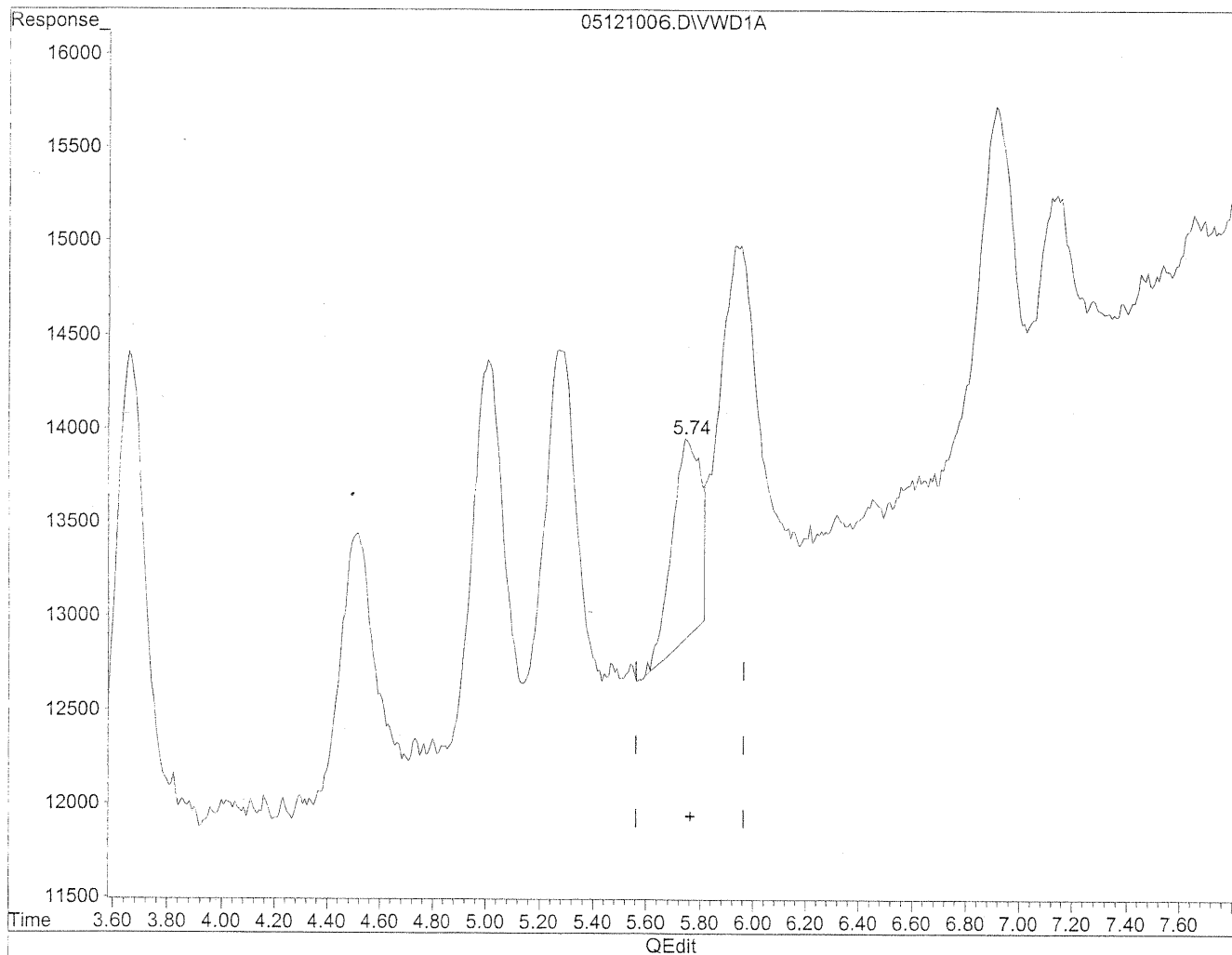
05121006.D TO110510.M

Thu May 13 11:07:38 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:31 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:01:33 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

5.75min 28.710ng/ml

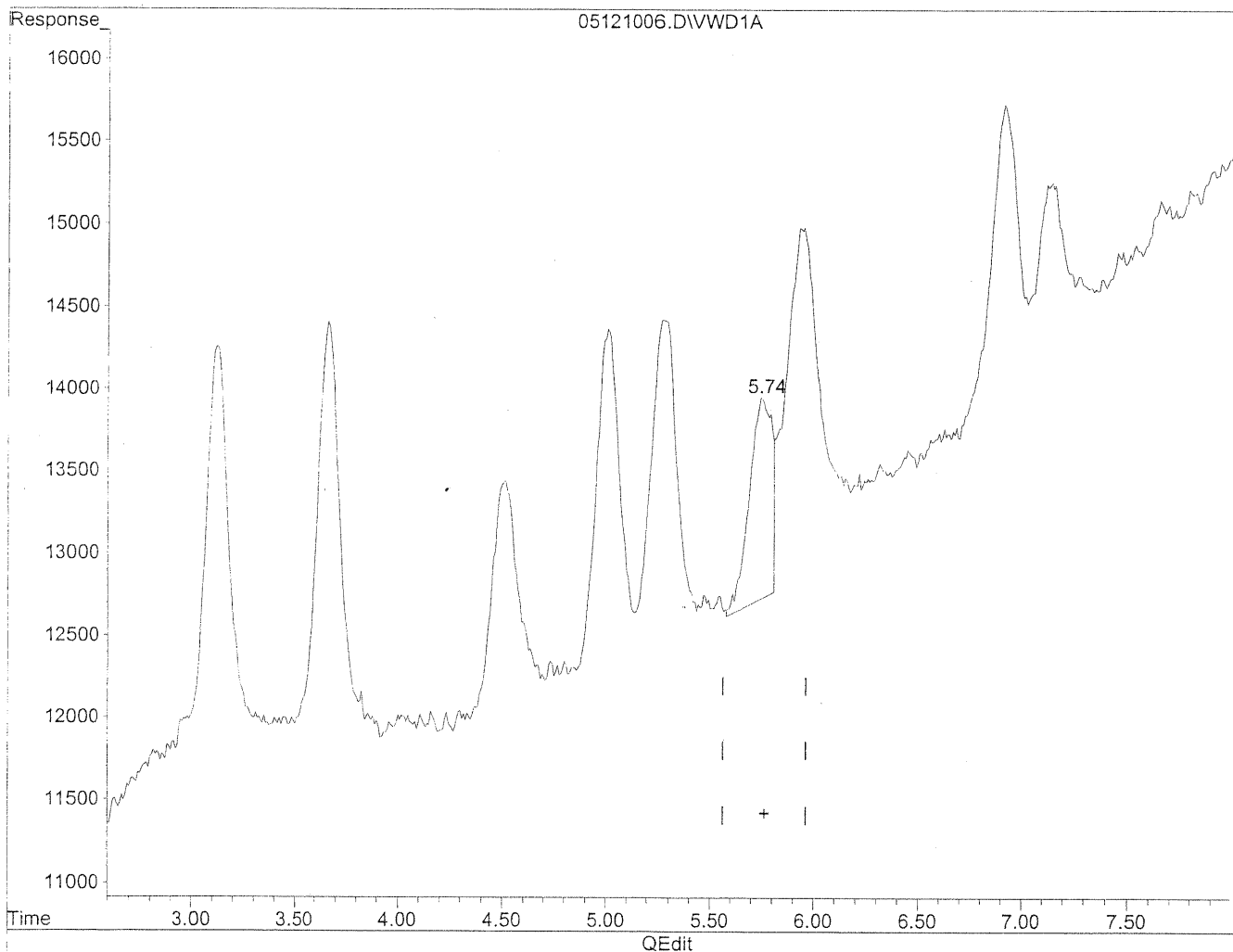
response 75929

(+) = Expected Retention Time
05121006.D TO110510.M Thu May 13 11:07:52 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:31 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:01:33 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde
5.74min 32.945ng/ml m
response 87129

gk
5/19/10

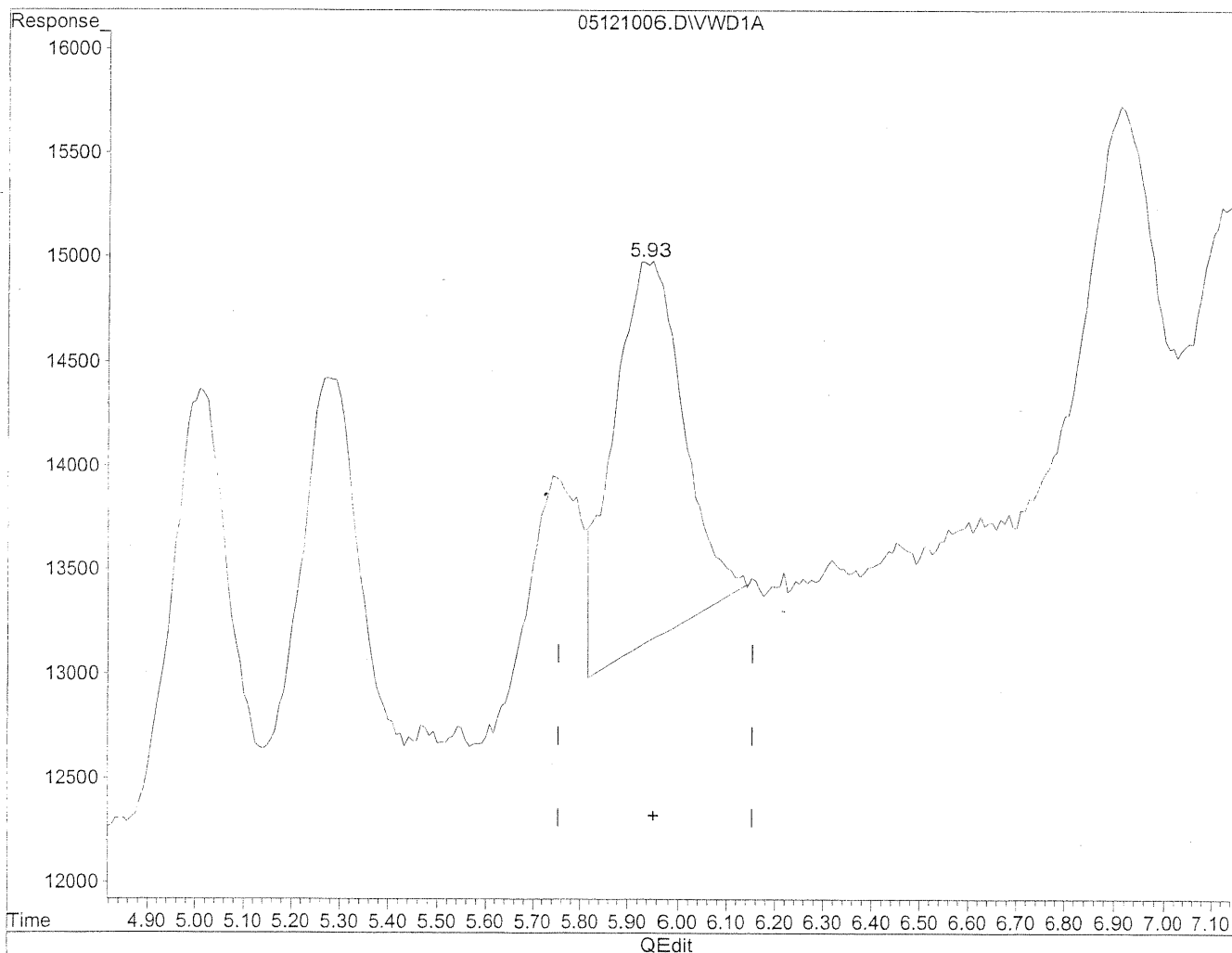
pc
MD
5/13/10

(+) = Expected Retention Time
05121006.D TO110510.M Thu May 13 11:08:42 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
 Acq On : 12-May-2010, 13:08 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

5.94min 86.715ng/ml

response 182081

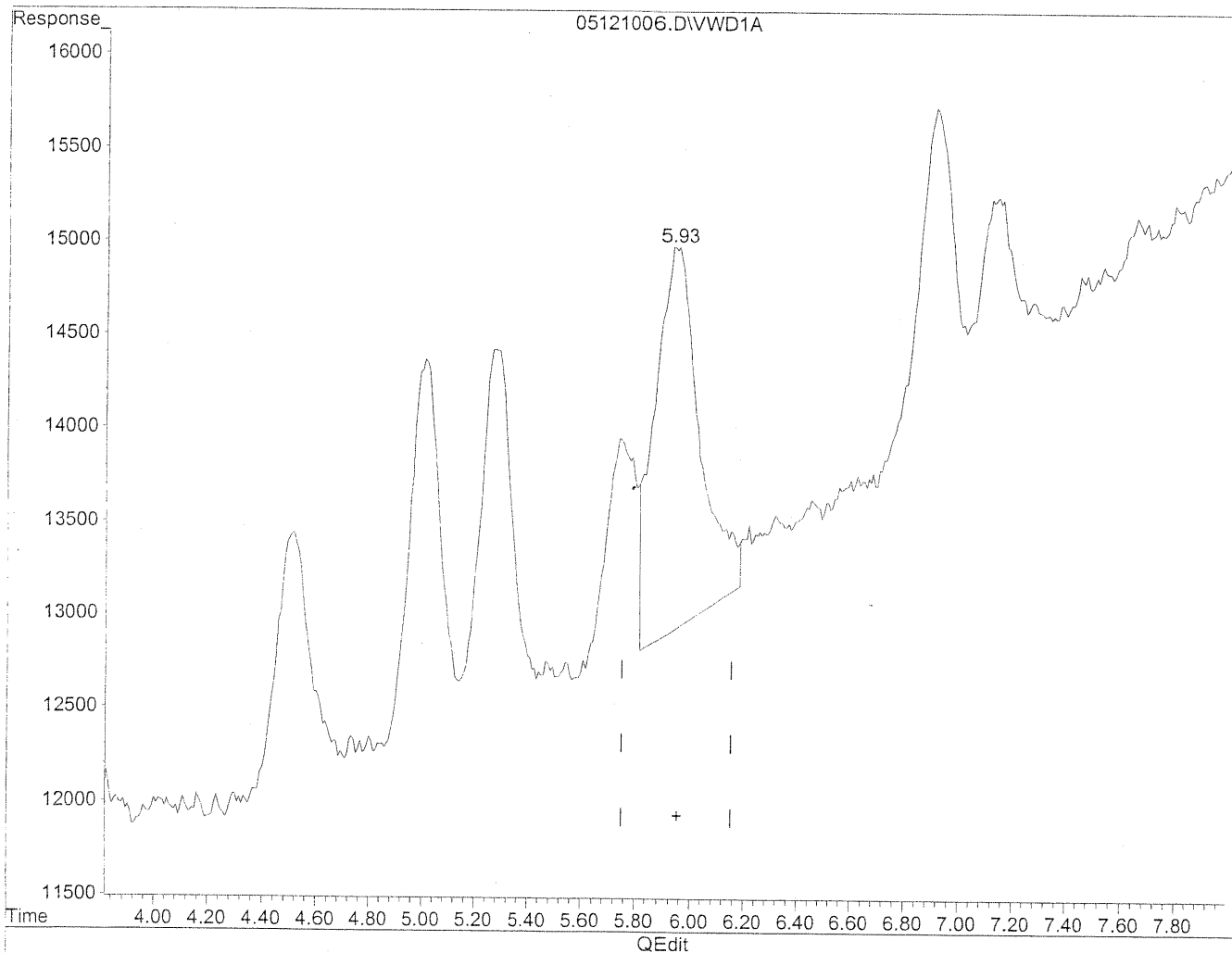
(+) = Expected Retention Time

05121006.D TO110510.M Thu May 13 10:31:25 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
 Acq On : 12-May-2010, 13:08 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:31 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 11:01:33 2010
 Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

5.93min 111.551ng/ml m

response 234231

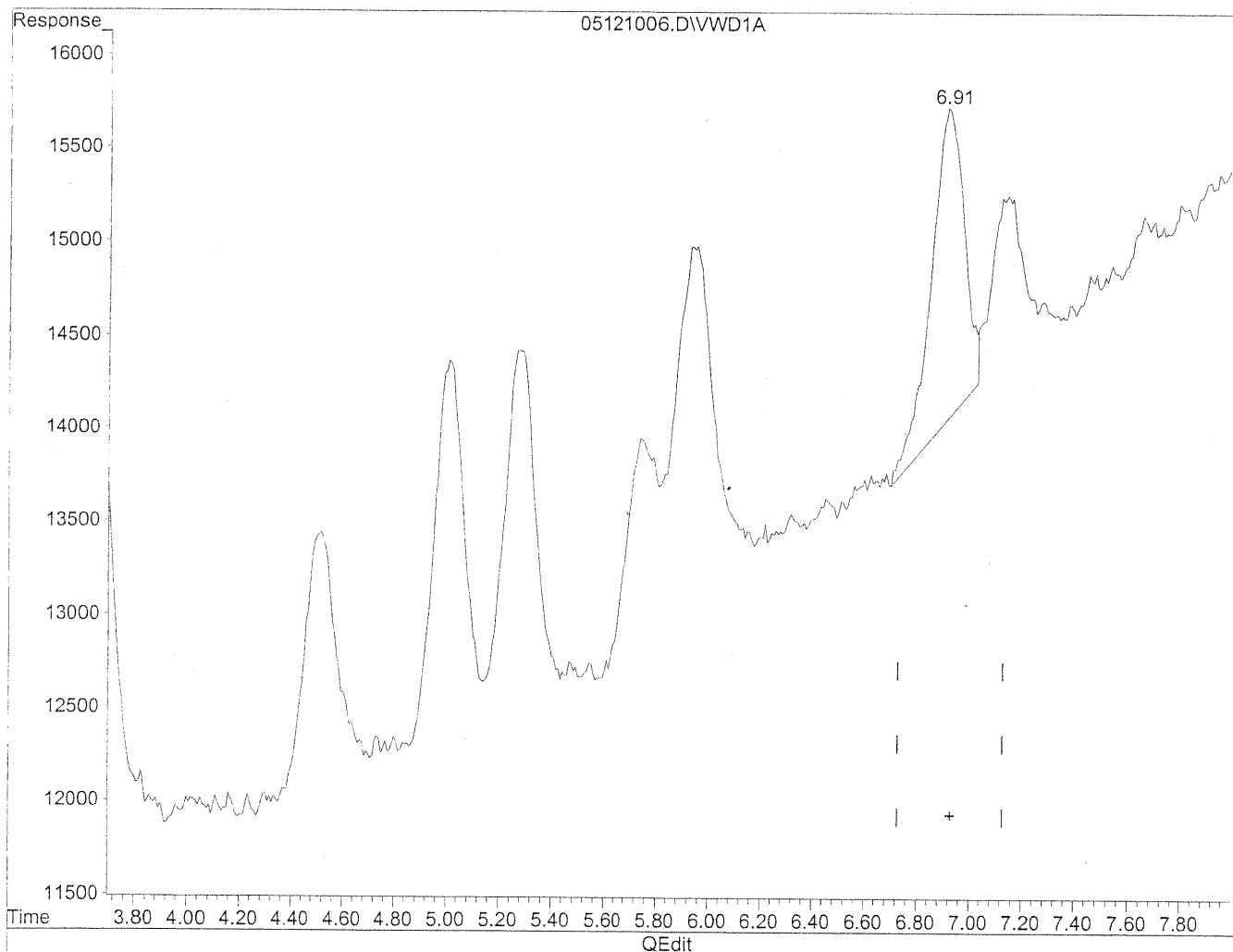
Handwritten: 5/13/10

Handwritten: 5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:09 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:01:33 2010
Response via : Multiple Level Calibration



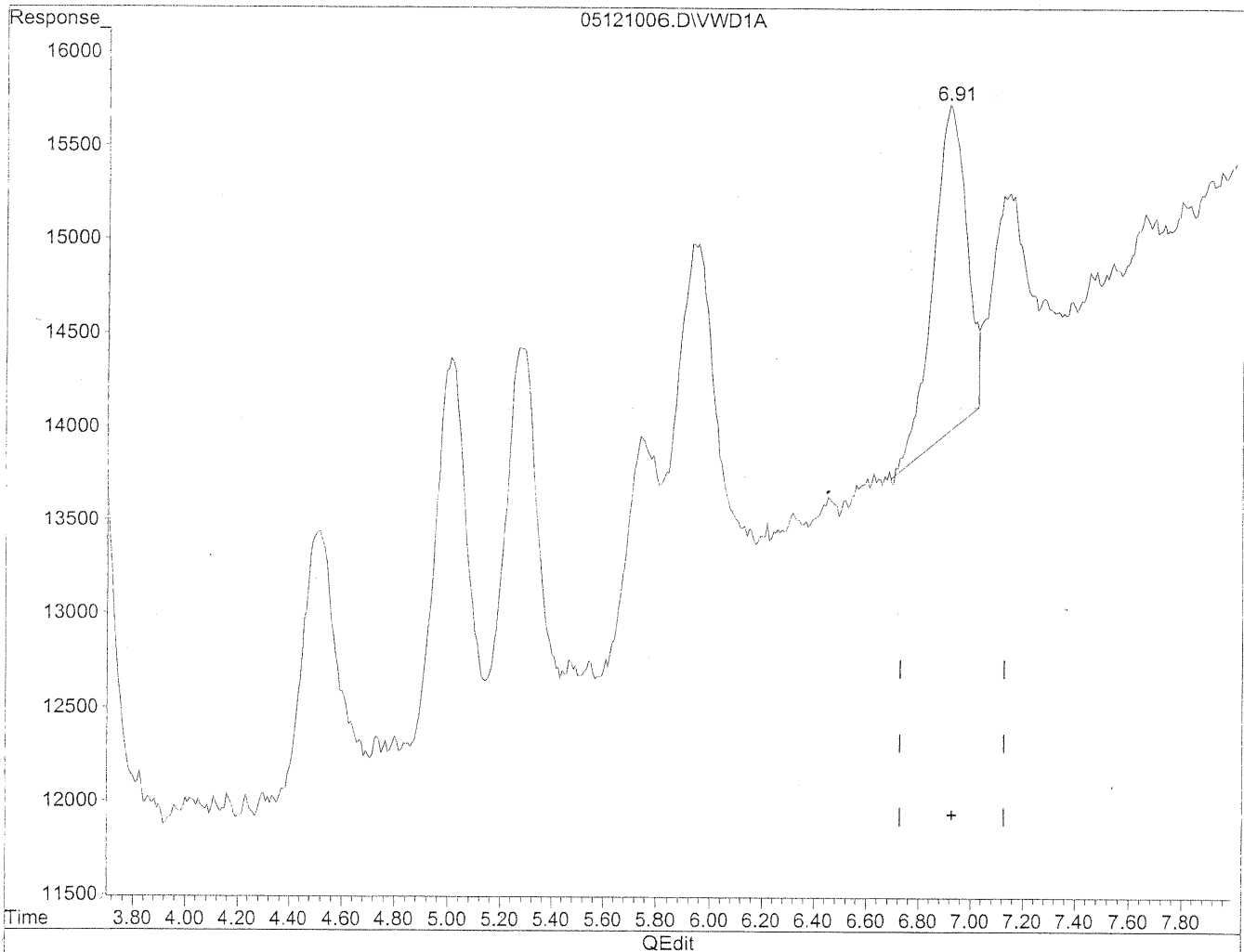
(11) Hexaldehyde
6.91min 45.687ng/ml
response 142864

(+) = Expected Retention Time
05121006.D TO110510.M Thu May 13 11:10:25 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:09 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:01:33 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.91min 49.469ng/ml m

response 154688

HC
5/19/10

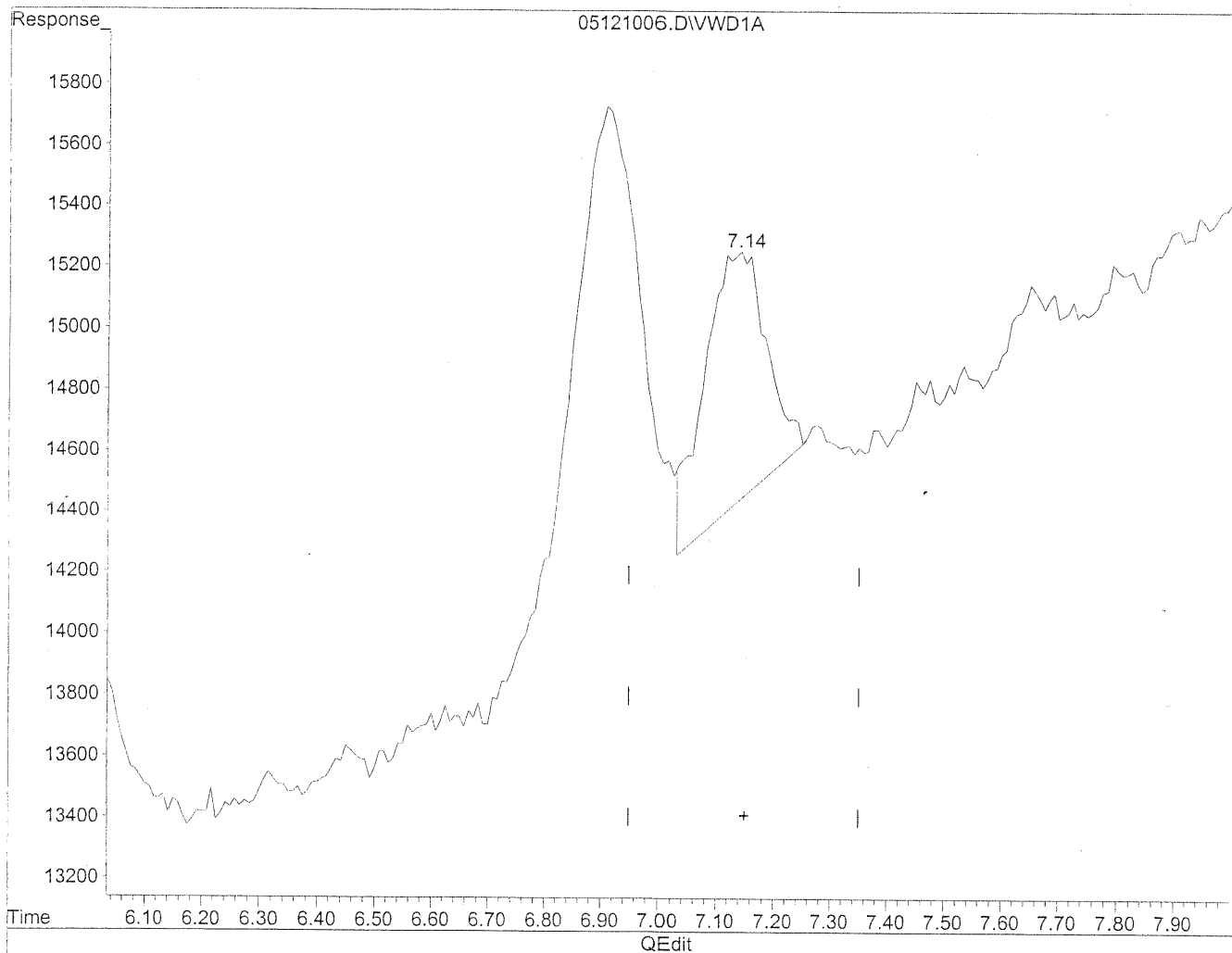
MD
5/13/10

(+) = Expected Retention Time
05121006.D TO110510.M Thu May 13 11:10:37 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
 Acq On : 12-May-2010, 13:08 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:30 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.14min 34.808ng/ml

response 62119

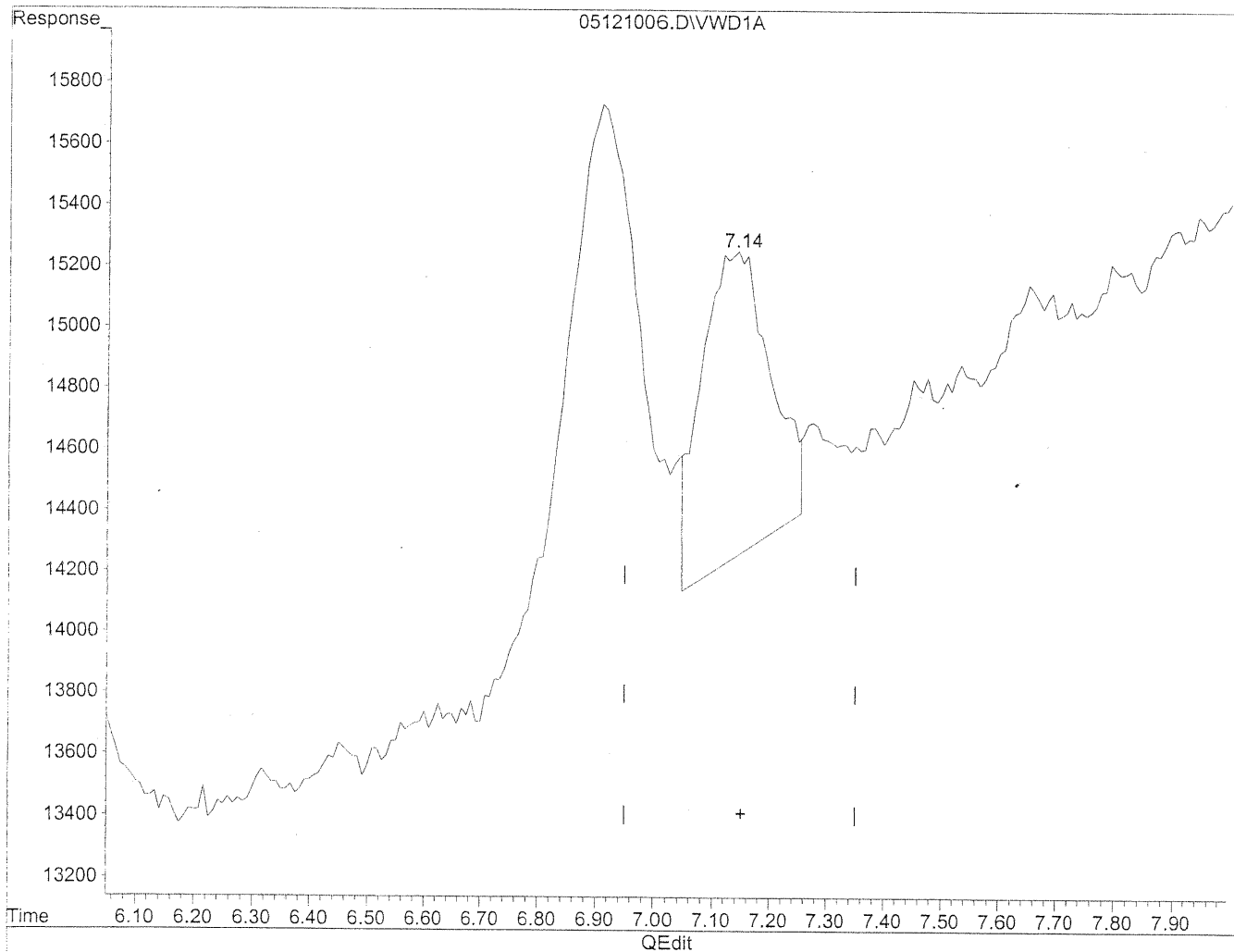
(+) = Expected Retention Time

05121006.D TO110510.M Thu May 13 10:31:37 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121006.D Vial: 126
Acq On : 12-May-2010, 13:08 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:45 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:47:19 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.14min 46.830ng/ml m

response 83574

HC
5/19/10

BU
5/13/10

(+) = Expected Retention Time

05121006.D TO110510.M

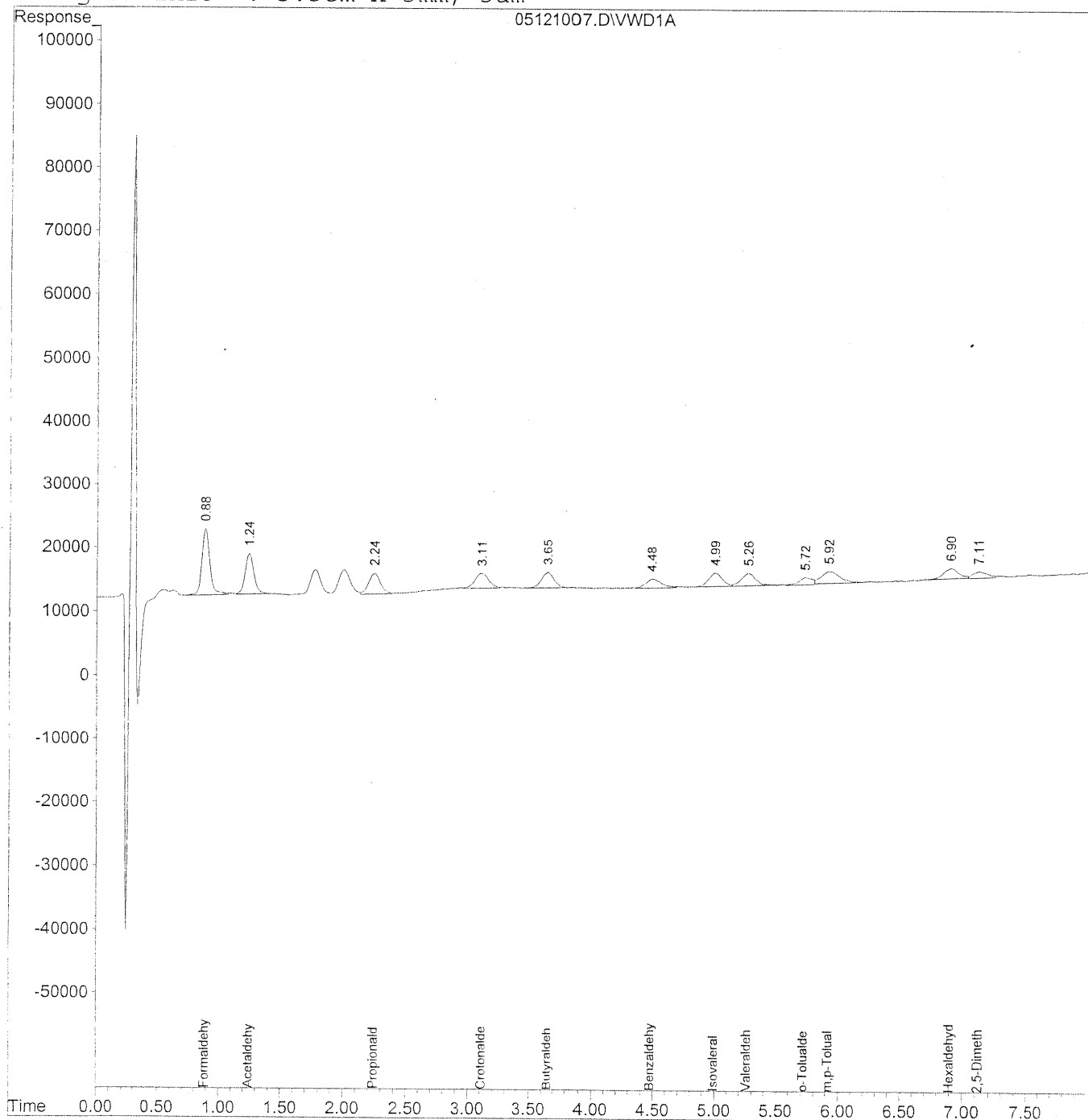
Thu May 13 11:48:15 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
 Acq On : 12-May-2010, 13:19 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:45 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:45 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

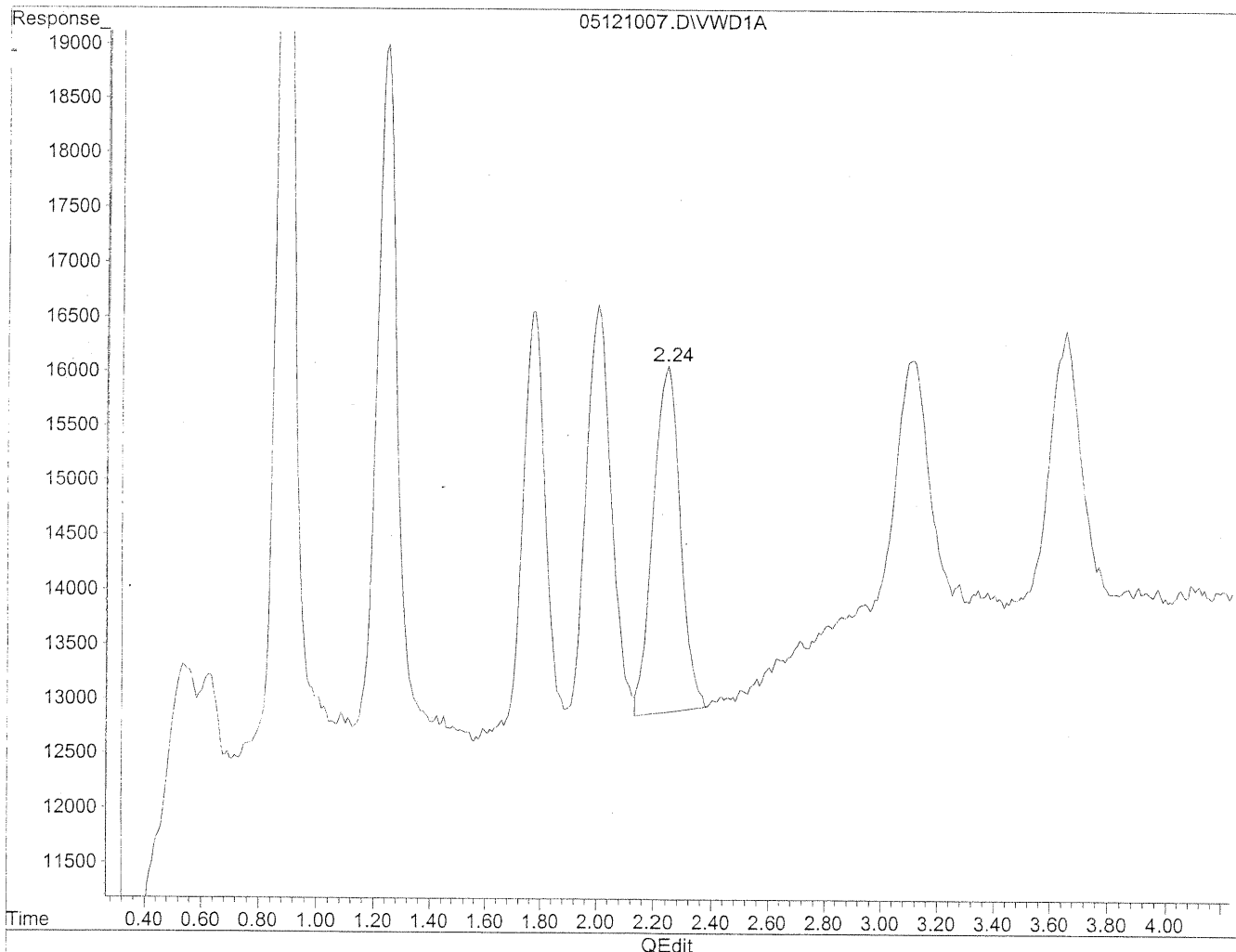
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	455638	50.107 ng/ml
2) Acetaldehyde	1.24	314805	48.004 ng/ml
3) Propionaldehyde	2.24	210977	43.960 ng/mlm
4) Crotonaldehyde	3.11	184135	46.110 ng/mlm
5) Butyraldehyde	3.65	181534	45.291 ng/ml
6) Benzaldehyde	4.48	129097	48.691 ng/mlm
7) Isovaleraldehyde	5.00	163123	46.033 ng/ml
8) Valeraldehyde	5.27	159085	52.166 ng/ml
9) o-Tolualdehyde	5.72	79874	31.986 ng/mlm
10) m,p-Tolualdehyde	5.92	197795	93.234 ng/mlm
11) Hexaldehyde	6.90	135007	42.839 ng/mlm
12) 2,5-Dimethylbenzaldehyde	7.11	79484	45.044 ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:10:54 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.24min 41.459ng/ml

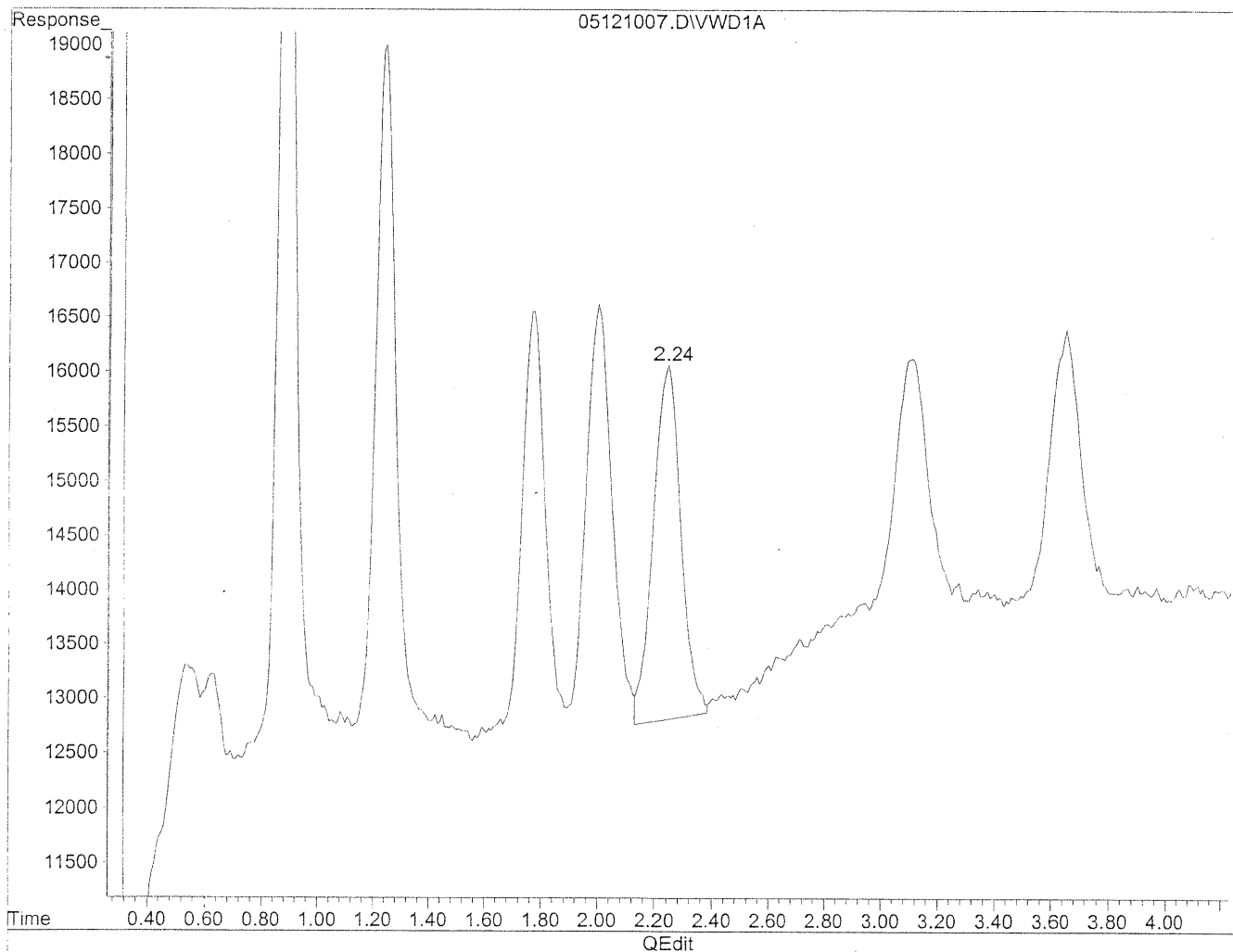
response 198974

(+) = Expected Retention Time
05121007.D TO110510.M Thu May 13 11:11:18 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:10:54 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde
2.24min 43.960ng/ml m
response 210977

JIC
5/19/10

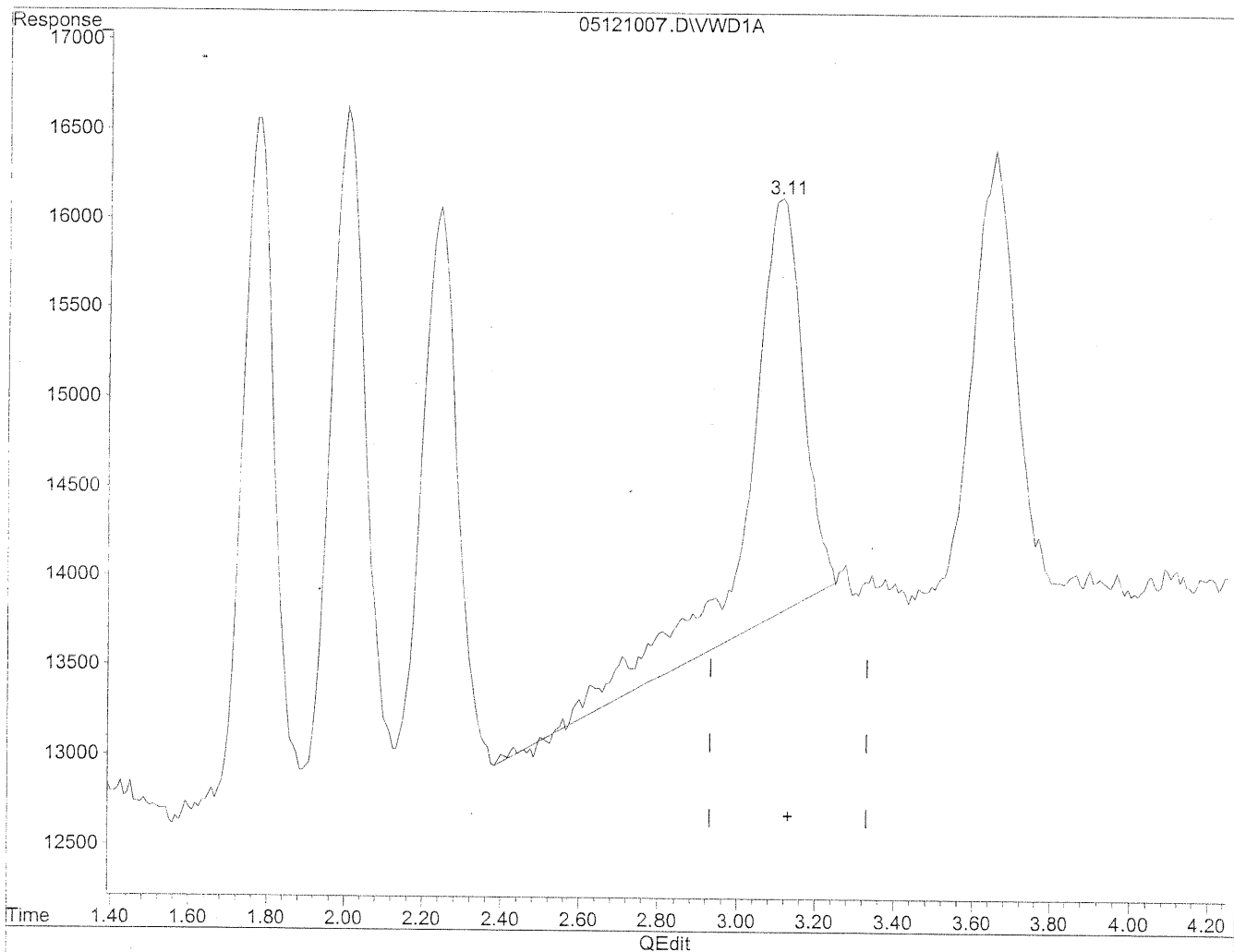
MD

pxc
5/12/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
 Acq On : 12-May-2010, 13:19 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:32 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



(4) Crotonaldehyde
 3.11min 57.096ng/ml
 response 228003

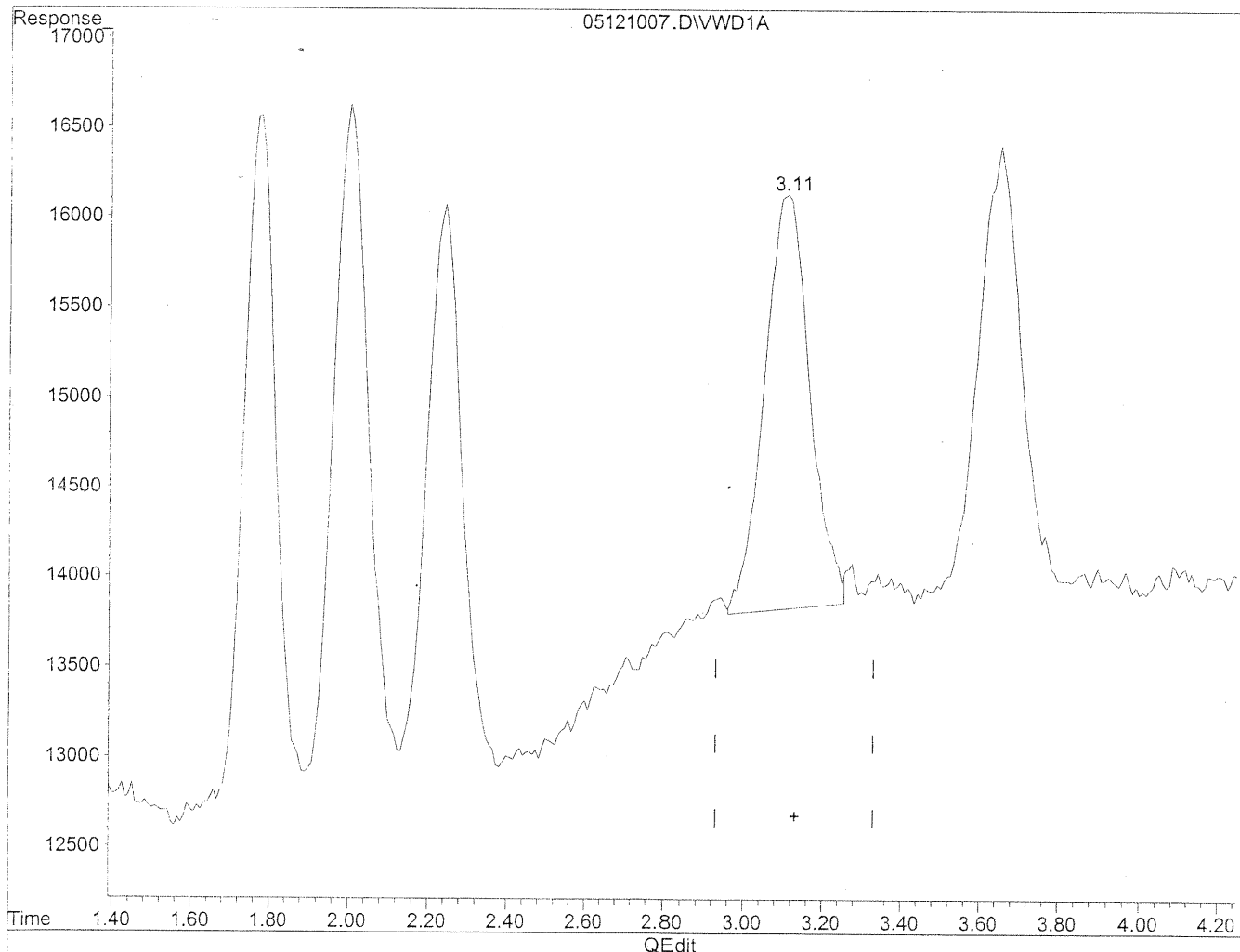
(+) = Expected Retention Time

05121007.D TO110510.M Thu May 13 10:32:17 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
 Acq On : 12-May-2010, 13:19 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:32 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



(4) Crotonaldehyde
 3.11min 46.110ng/ml m
 response 184135

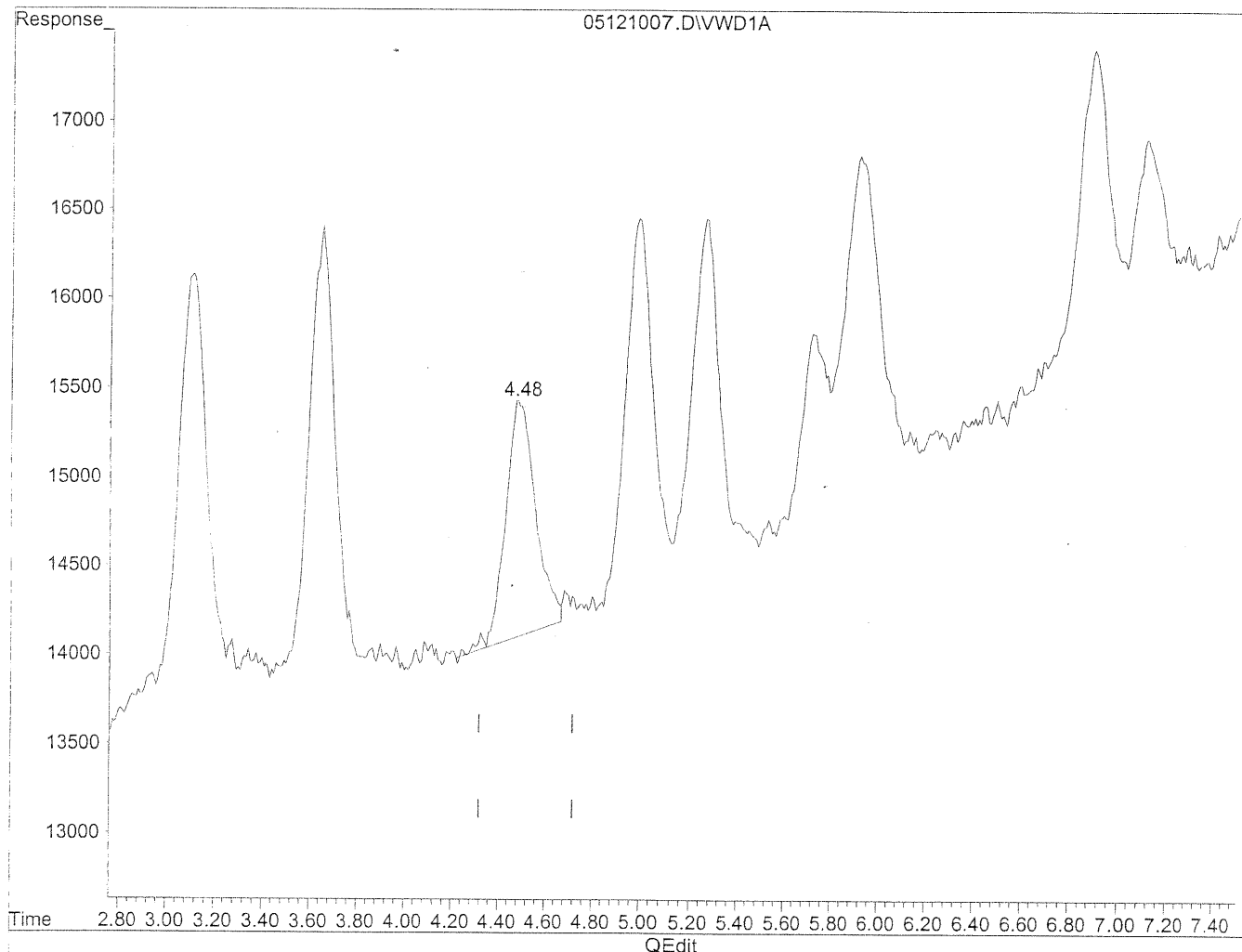
Handwritten: JLC 5/19/10

Handwritten: IC MD 5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:10:54 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

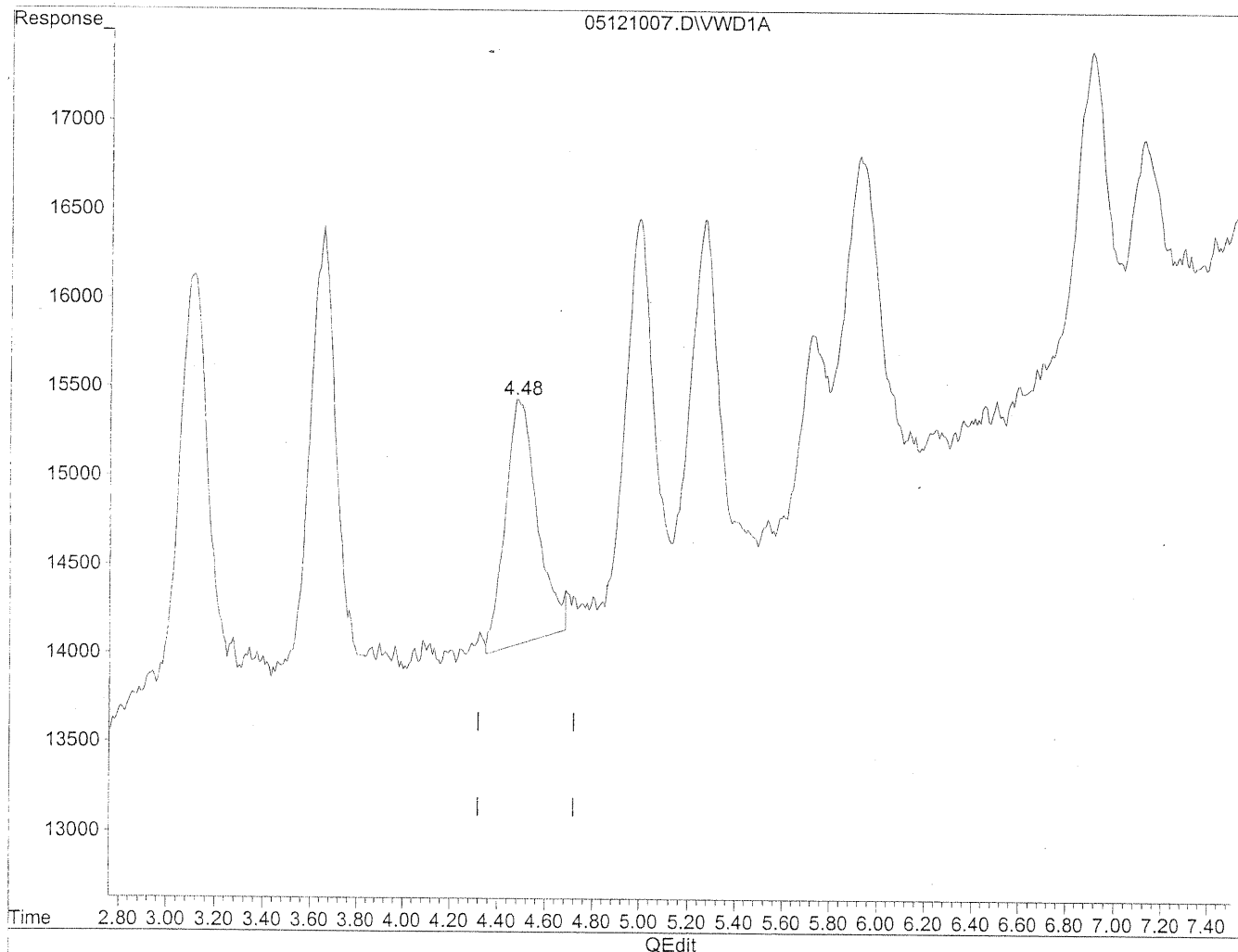
4.48min 44.658ng/ml

response 118403

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:10:54 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.48min 48.691ng/ml m

response 129097

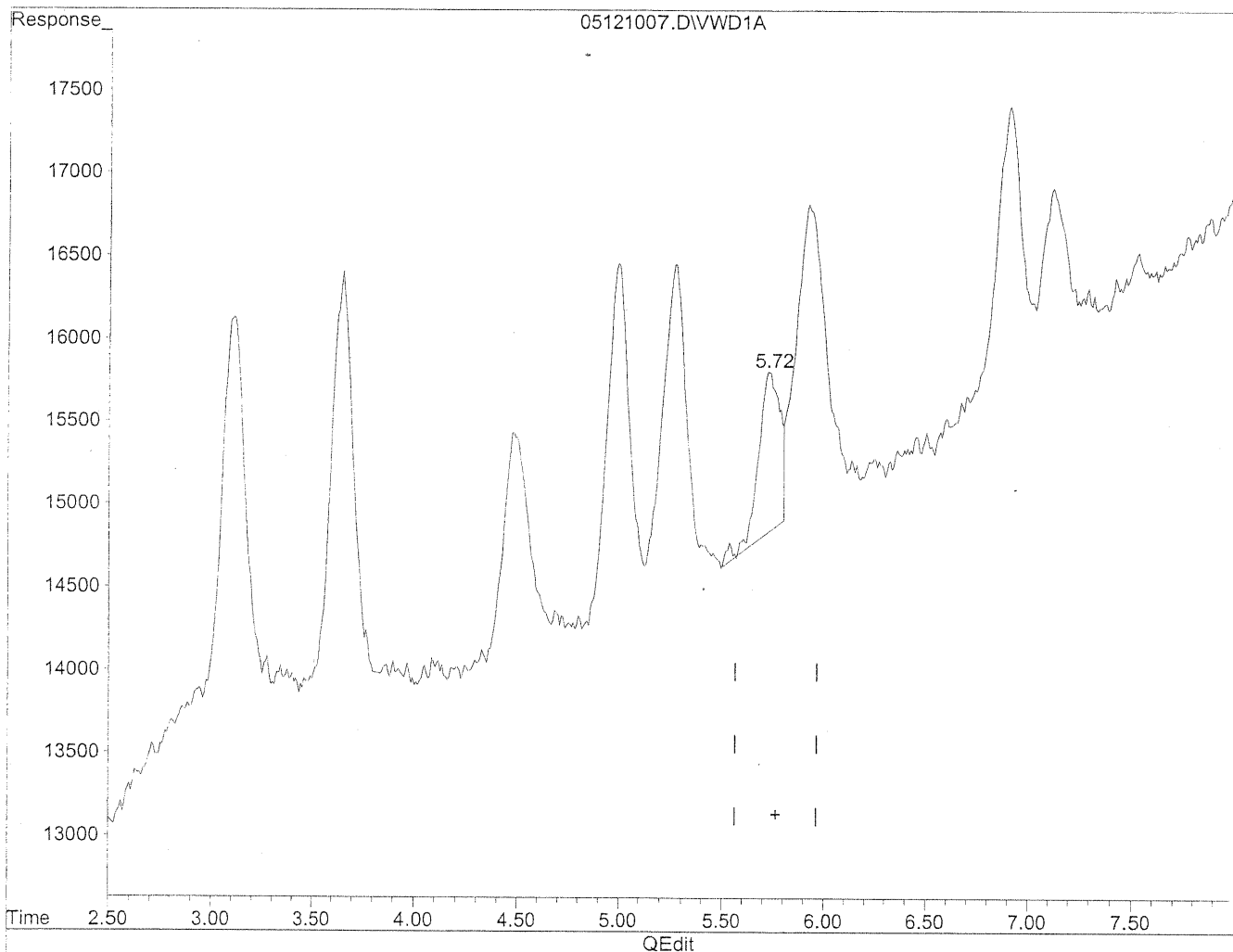
AC
5/19/10 BC
MD
5/13/10

(+) = Expected Retention Time
05121007.D TO110510.M Thu May 13 11:11:55 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:10:54 2010
Response via : Multiple Level Calibration



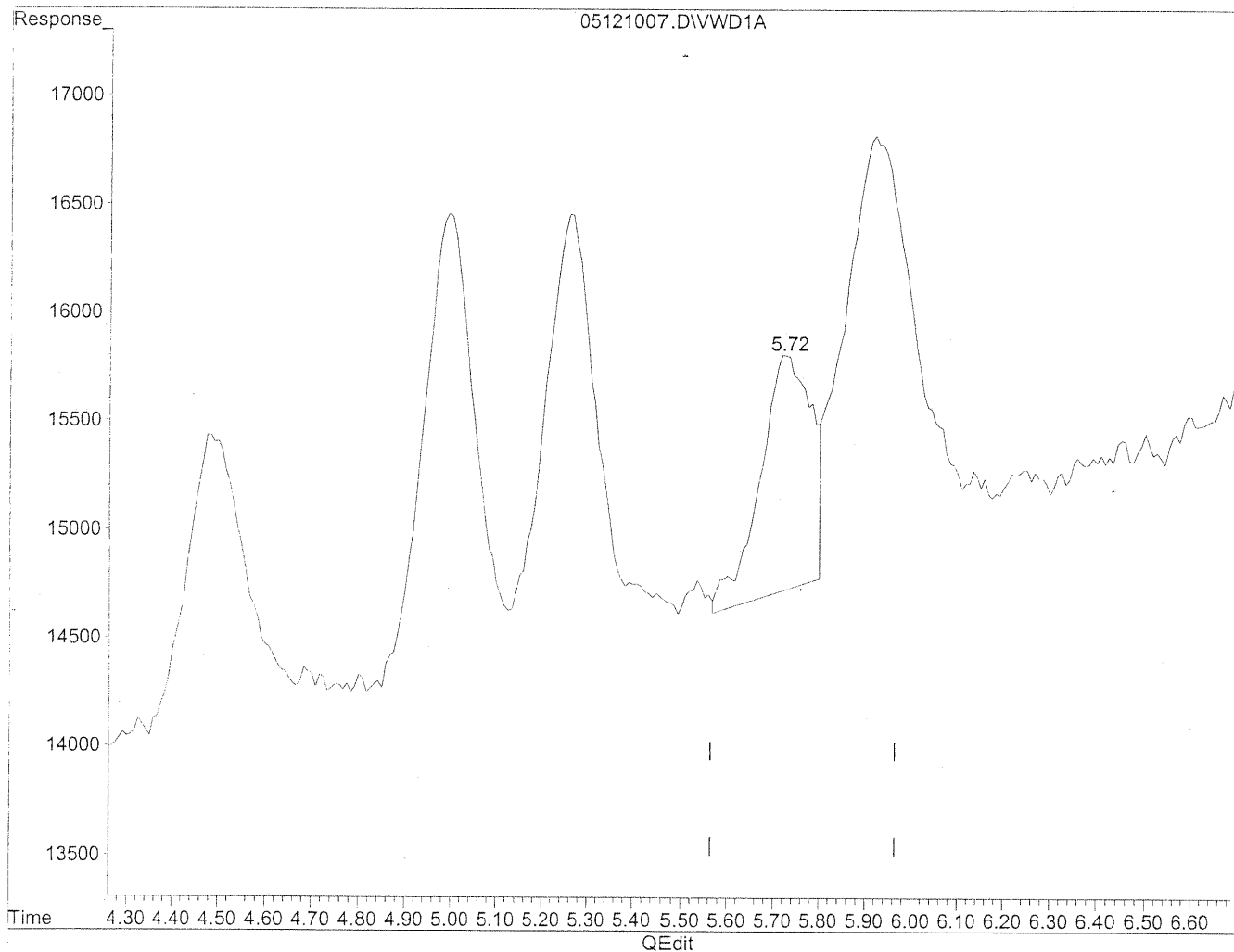
(9) o-Tolualdehyde
5.73min 27.799ng/ml
response 69418

(+) = Expected Retention Time
05121007.D TO110510.M Thu May 13 11:12:05 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
 Acq On : 12-May-2010, 13:19 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 11:10:54 2010
 Response via : Multiple Level Calibration



(9) o-Tolualdehyde

5.72min 31.986ng/ml m

response 79874

Handwritten: 5/19/10

Handwritten: PE (MP) 5/13/10

(+) = Expected Retention Time

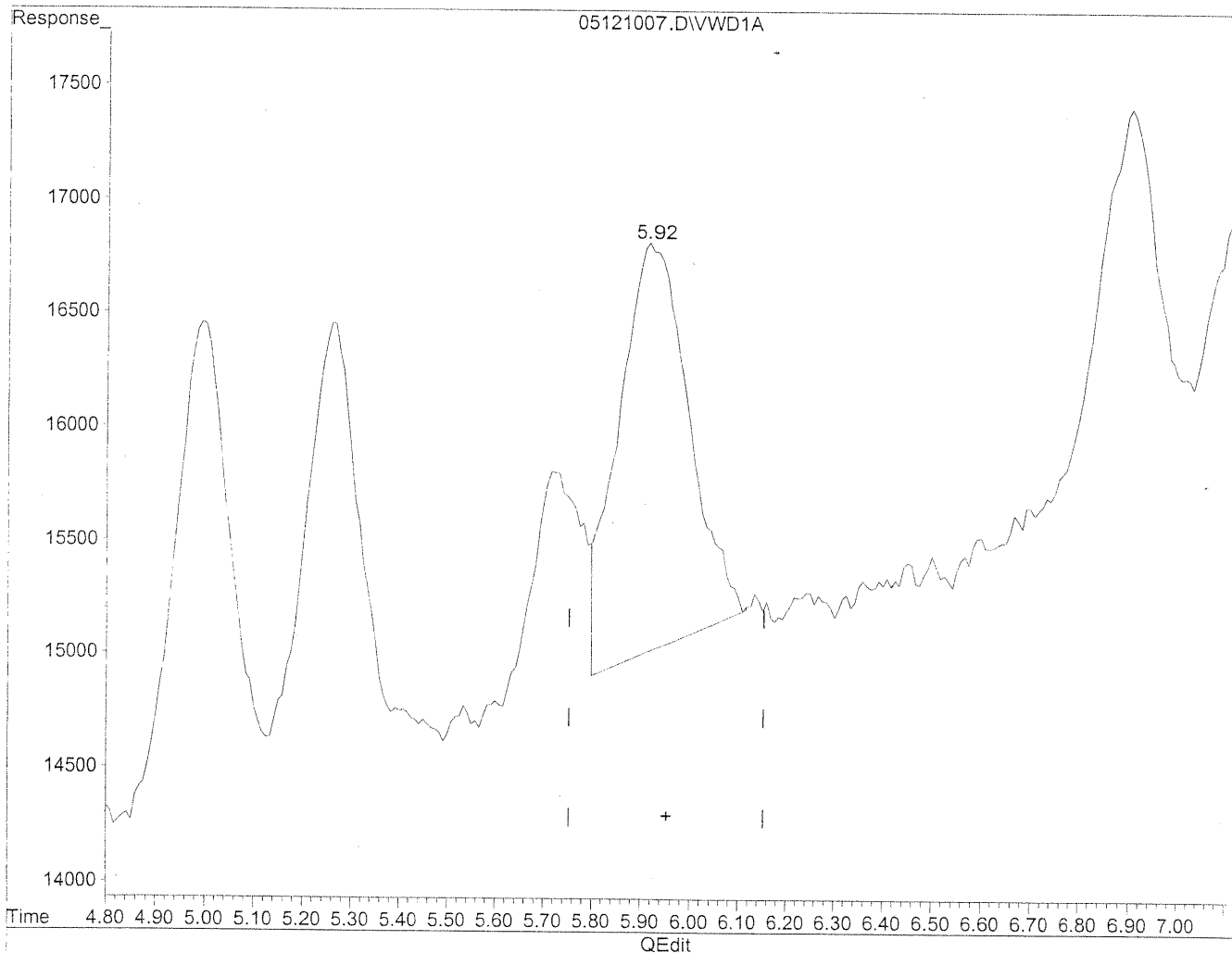
05121007.D TO110510.M

Thu May 13 11:12:23 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:32 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

5.92min 84.279ng/ml

response 178798

(+) = Expected Retention Time

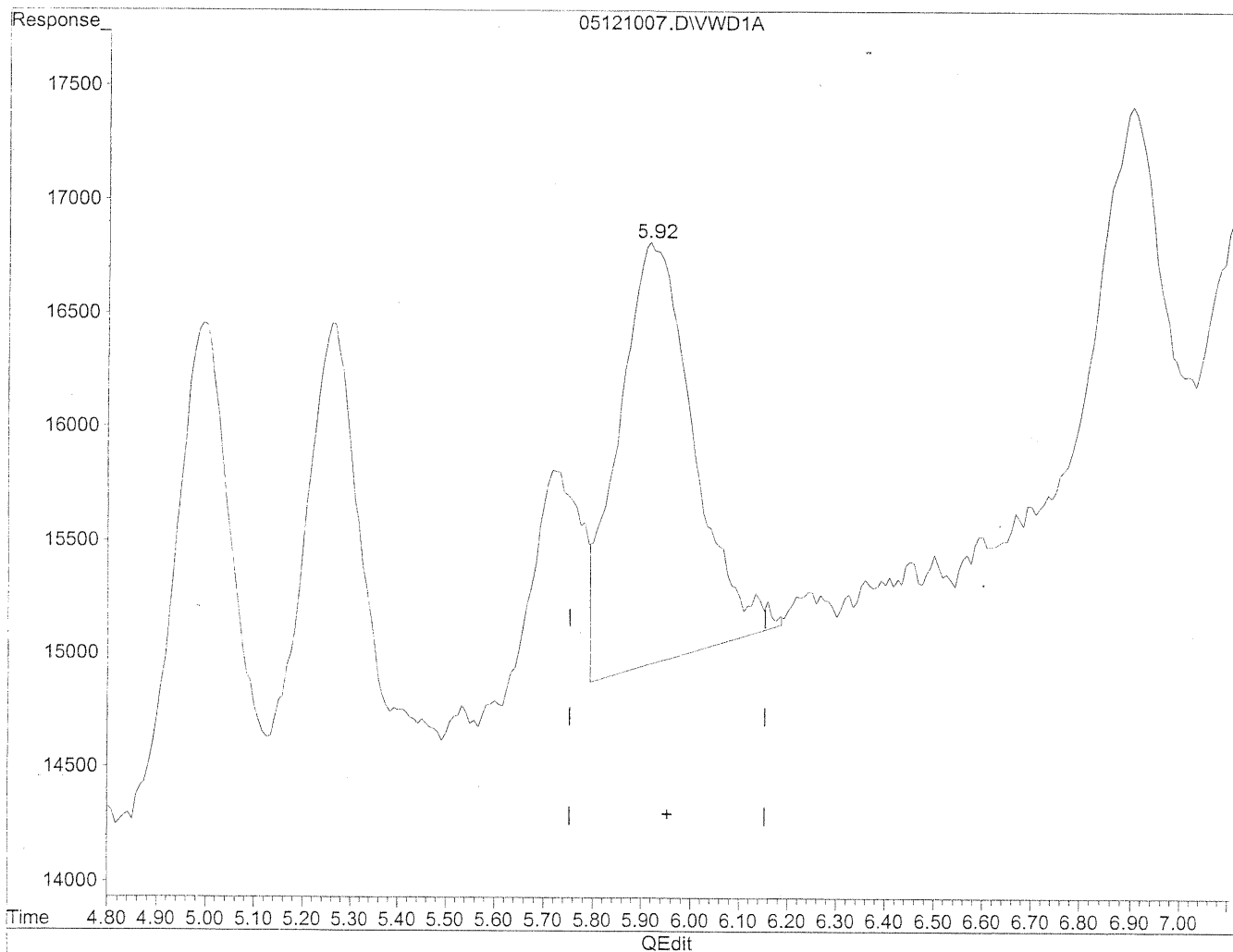
05121007.D TO110510.M

Thu May 13 10:32:33 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:32 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde
5.92min 93.234ng/ml m
response 197795

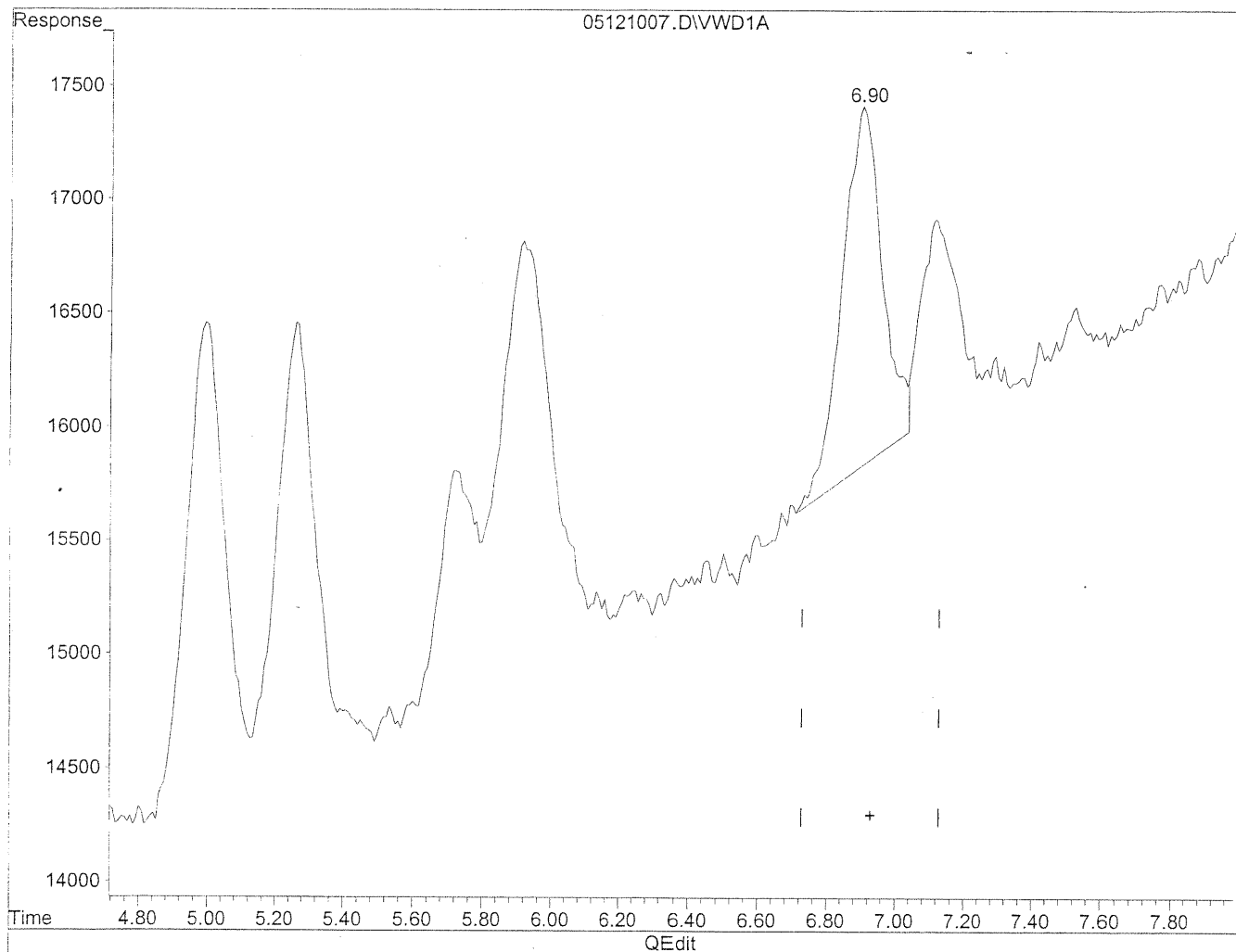
4C
5/19/10

for
MA
5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:12 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:10:54 2010
Response via : Multiple Level Calibration

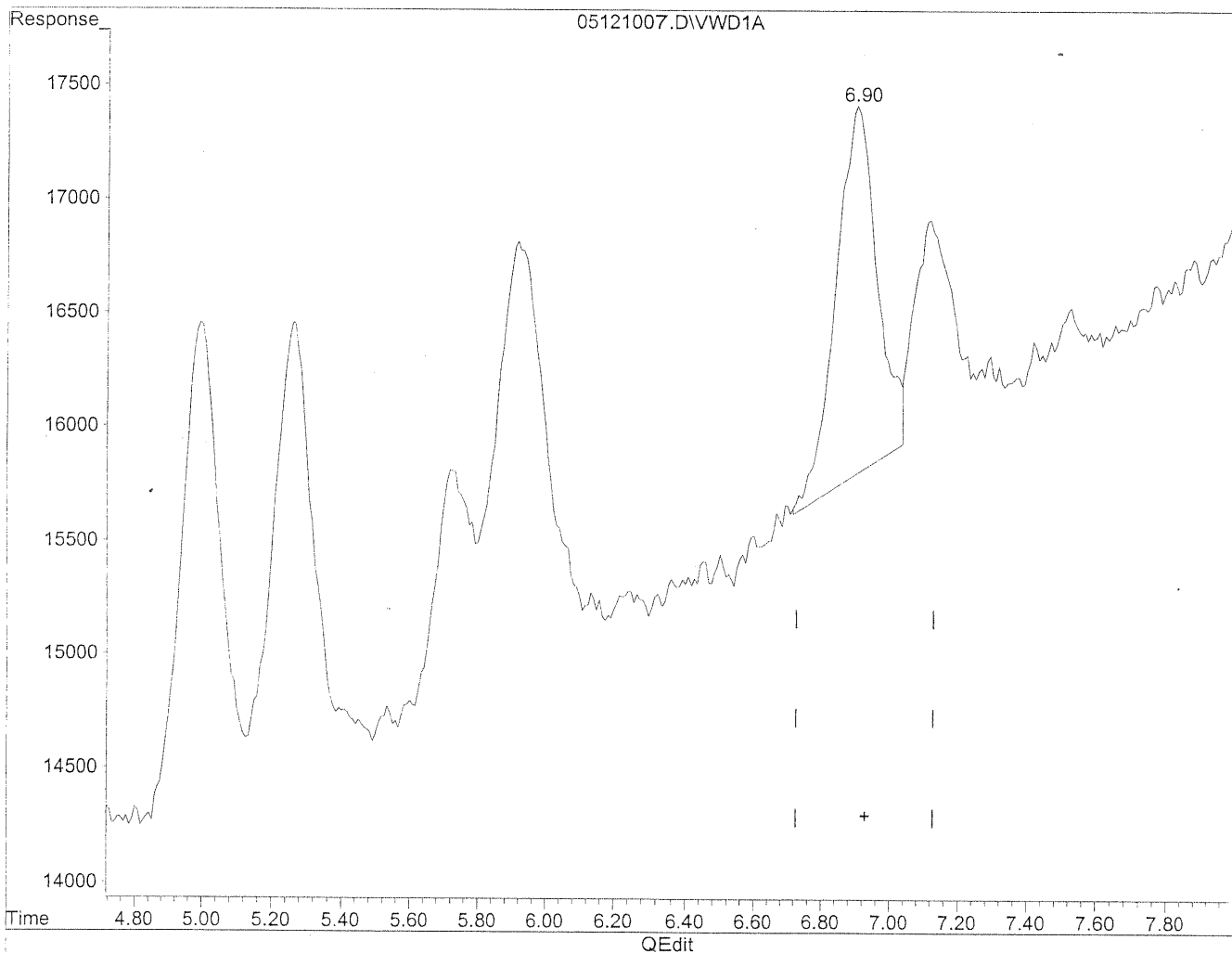


(11) Hexaldehyde
6.90min 40.372ng/ml
response 127230

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
 Acq On : 12-May-2010, 13:19 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:12 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 11:10:54 2010
 Response via : Multiple Level Calibration



(11) Hexaldehyde
 6.90min 42.839ng/ml m
 response 135007

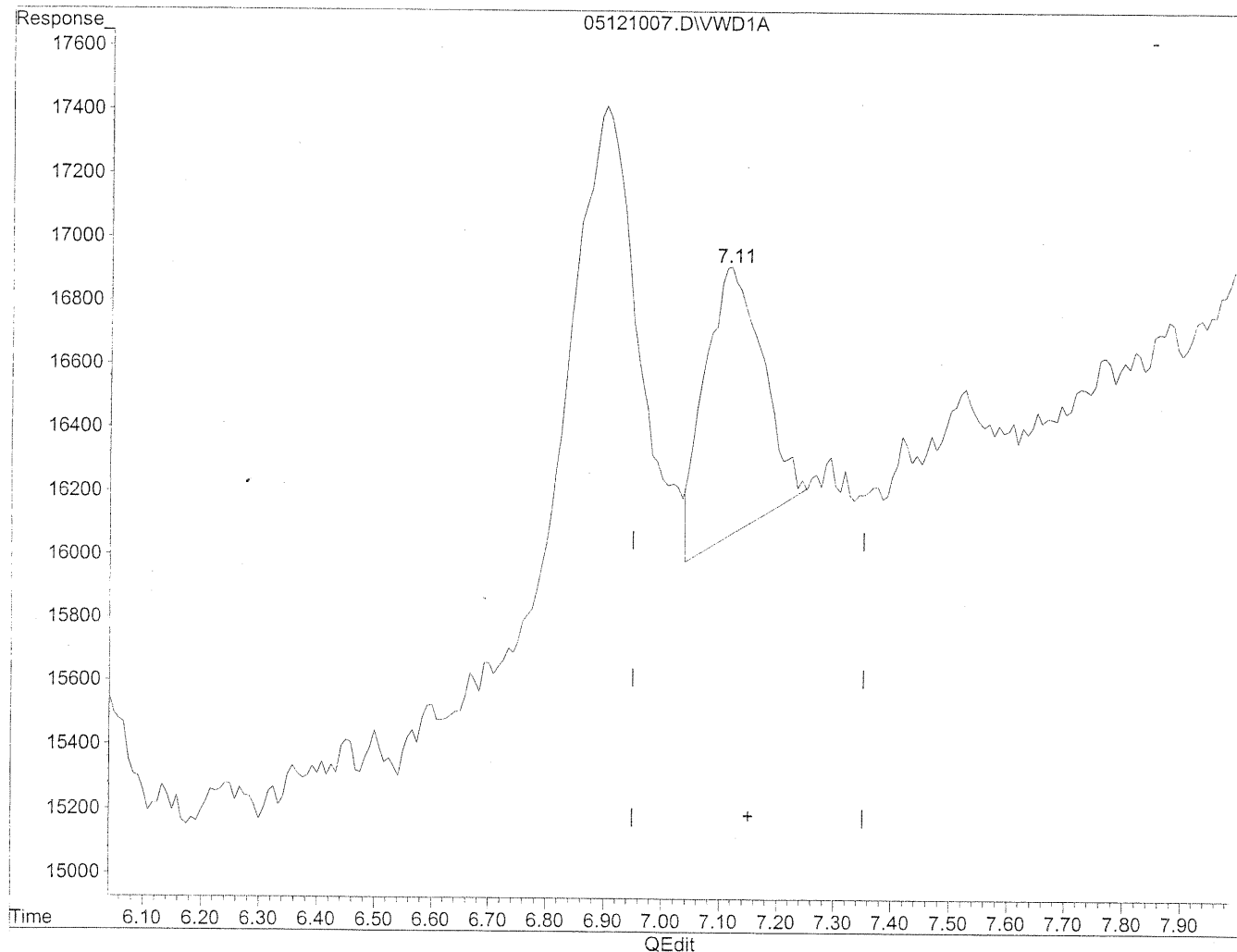
Handwritten: AC 5/19/10

Handwritten: IC MD 5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:32 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.12min 33.460ng/ml

response 59043

(+) = Expected Retention Time

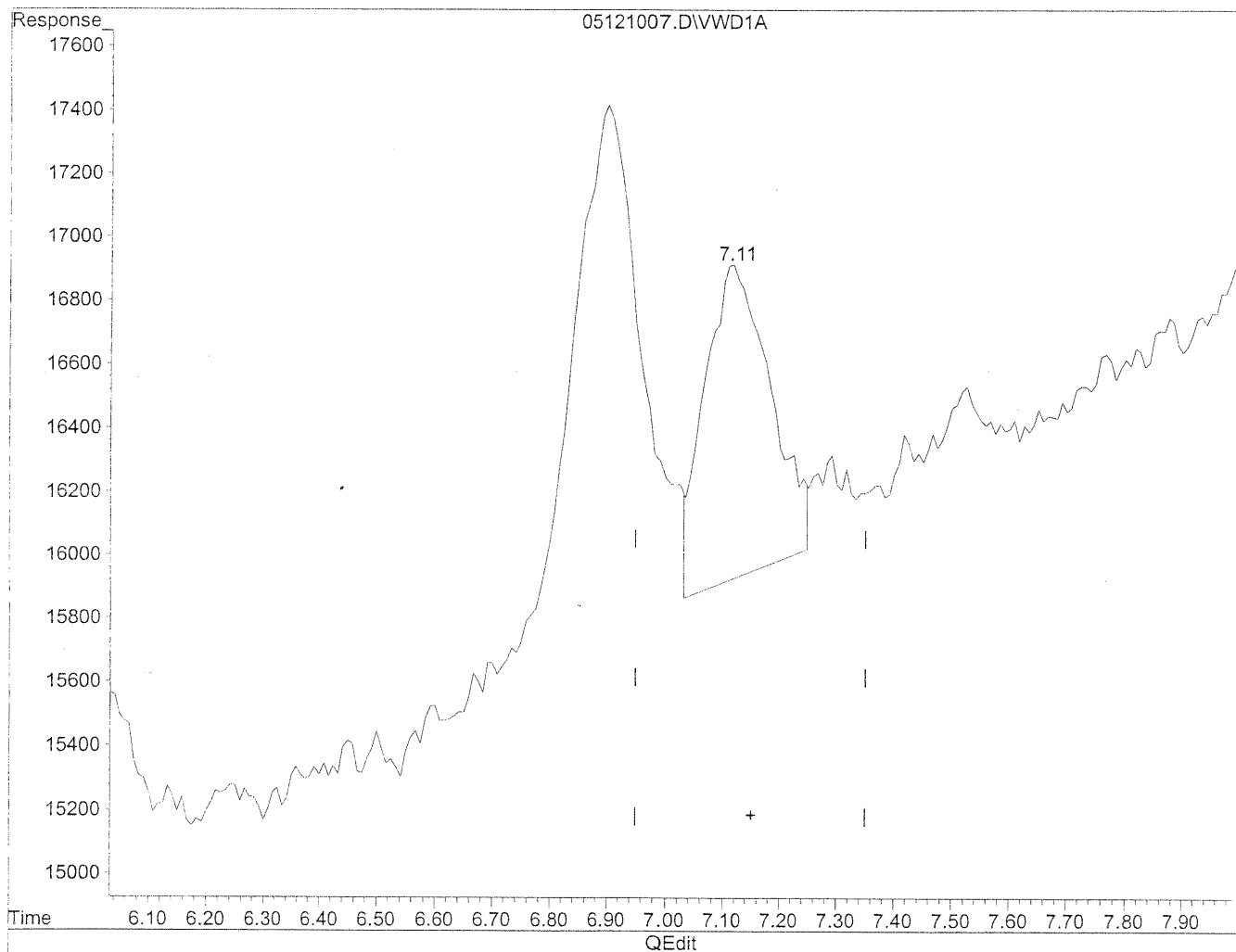
05121007.D TO110510.M

Thu May 13 10:32:44 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121007.D Vial: 126
Acq On : 12-May-2010, 13:19 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:45 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:47:19 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.11min 45.044ng/ml m

response 79484

416
5/19/10

BU
5/13/10

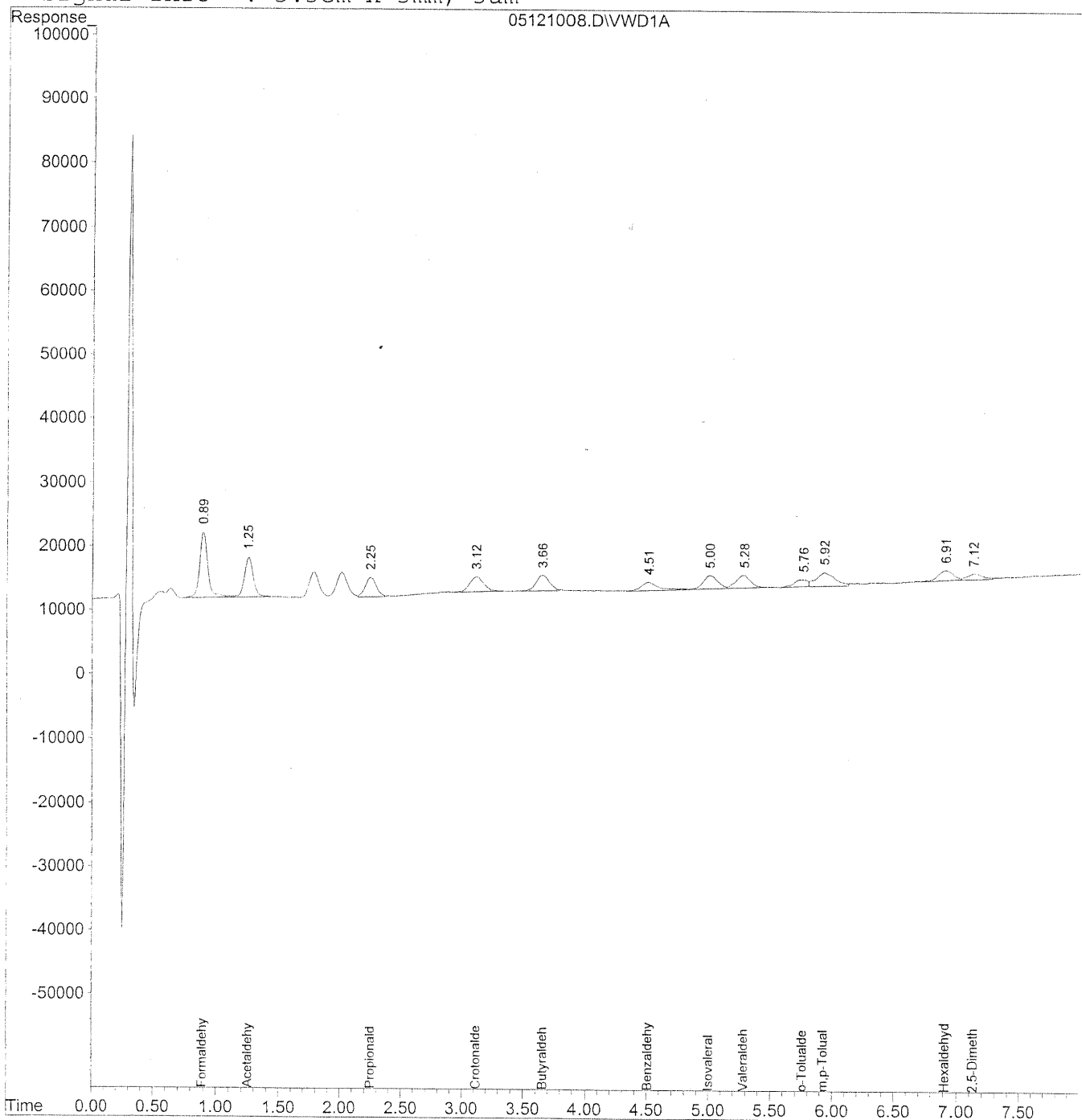
(+) = Expected Retention Time
05121007.D TO110510.M Thu May 13 11:48:23 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
 Acq On : 12-May-2010, 13:29 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:46 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
Acq On : 12-May-2010, 13:29 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:46 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

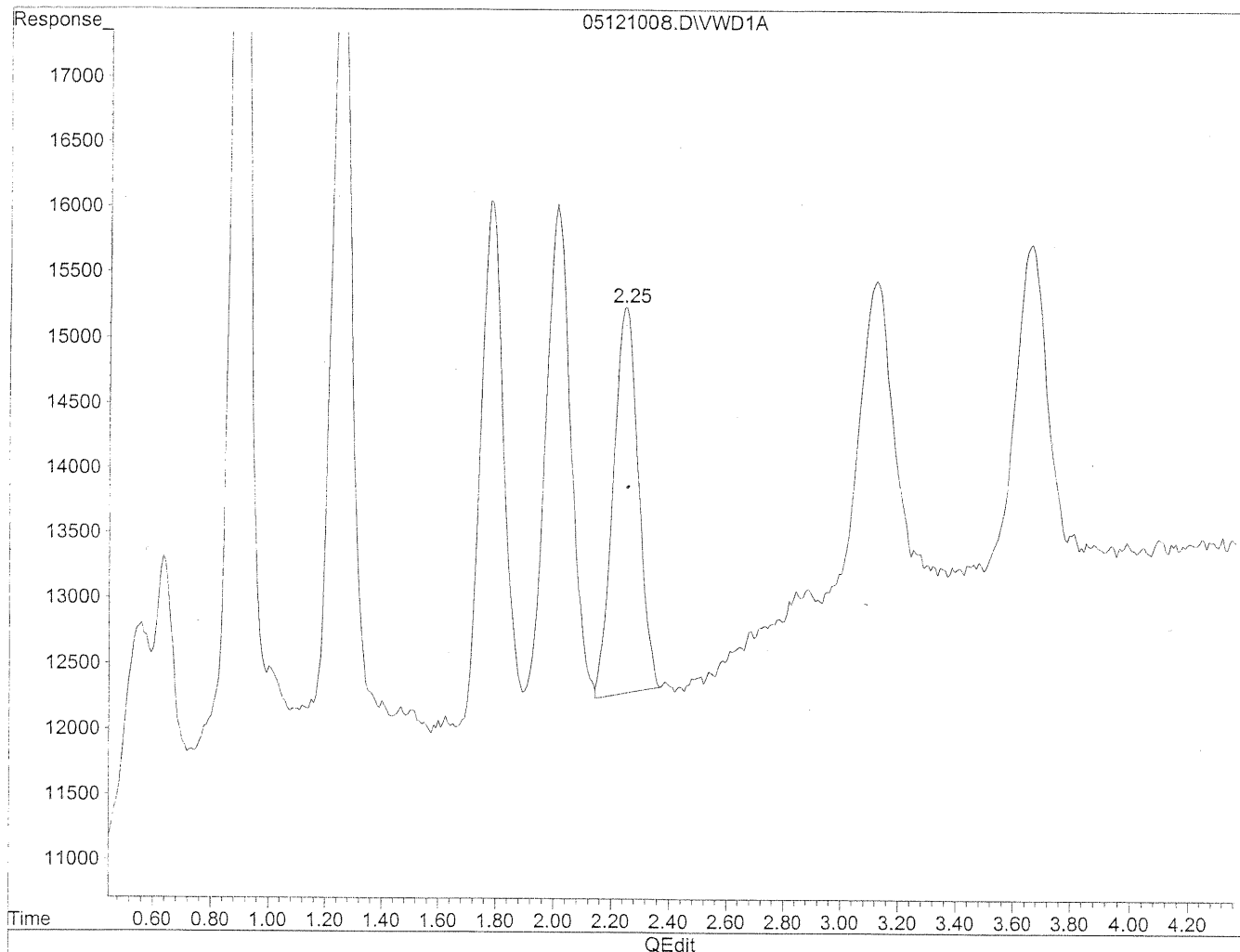
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	466051	51.382 ng/ml
2) Acetaldehyde	1.25	318576	48.792 ng/ml
3) Propionaldehyde	2.25	195999	40.796 ng/mlm
4) Crotonaldehyde	3.12	192970	48.284 ng/ml
5) Butyraldehyde	3.66	184246	46.095 ng/ml
6) Benzaldehyde	4.51	130943	49.449 ng/mlm
7) Isovaleraldehyde	5.00	167432	47.084 ng/ml
8) Valeraldehyde	5.28	162963	53.182 ng/ml
9) o-Tolualdehyde	5.76	80865	32.524 ng/mlm
10) m,p-Tolualdehyde	5.92	229847	108.673 ng/mlm
11) Hexaldehyde	6.91	128732	41.189 ng/ml
12) 2,5-Dimethylbenzaldehyde	7.12	77285	44.346 ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
Acq On : 12-May-2010, 13:29 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:13:47 2010
Response via : Multiple Level Calibration



(3) Propionaldehyde

2.25min 37.794ng/ml

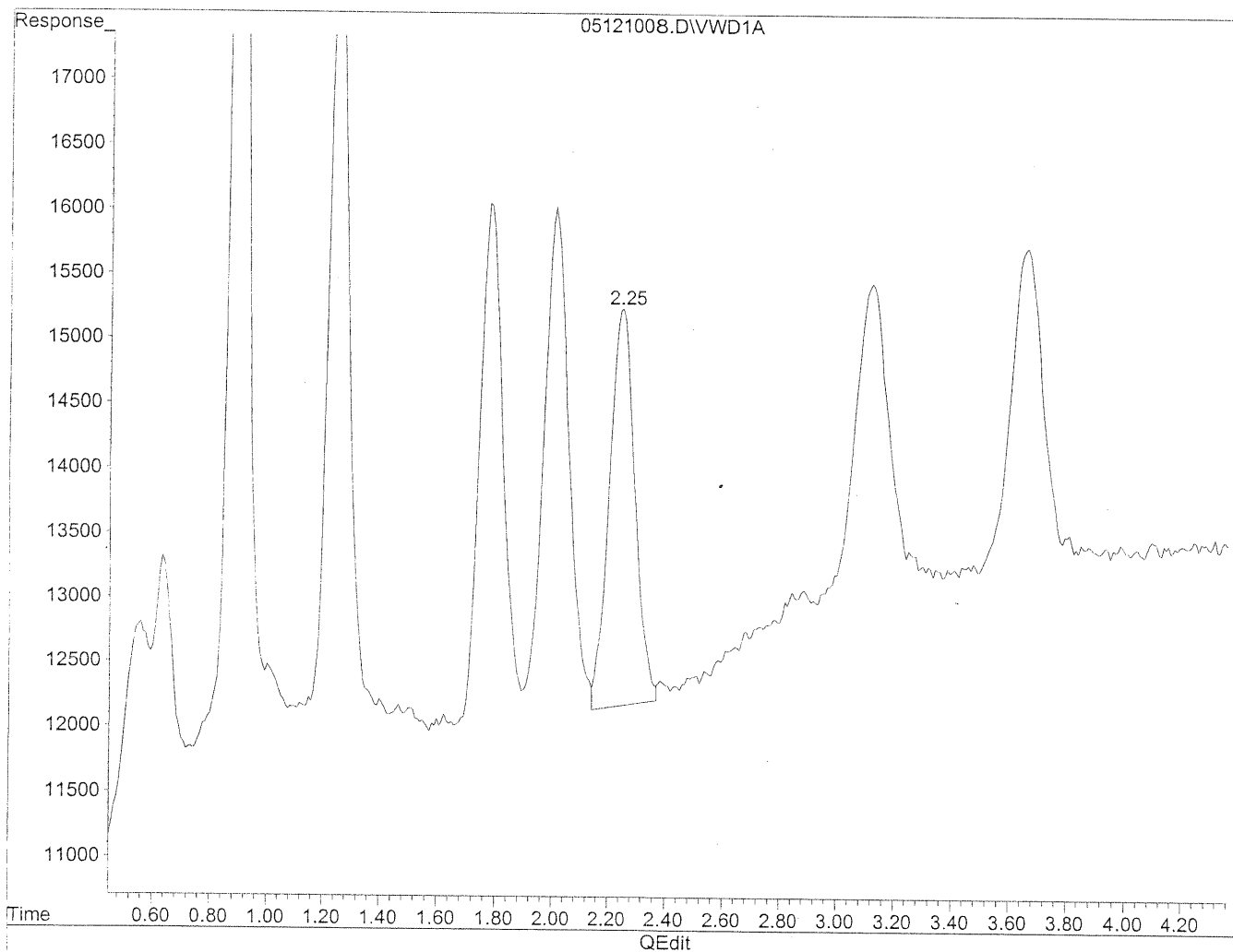
response 181574

(+) = Expected Retention Time
05121008.D TO110510.M Thu May 13 11:14:06 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
 Acq On : 12-May-2010, 13:29 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 11:13:47 2010
 Response via : Multiple Level Calibration



(3) Propionaldehyde
 2.25min 40.796ng/ml m
 response 195999

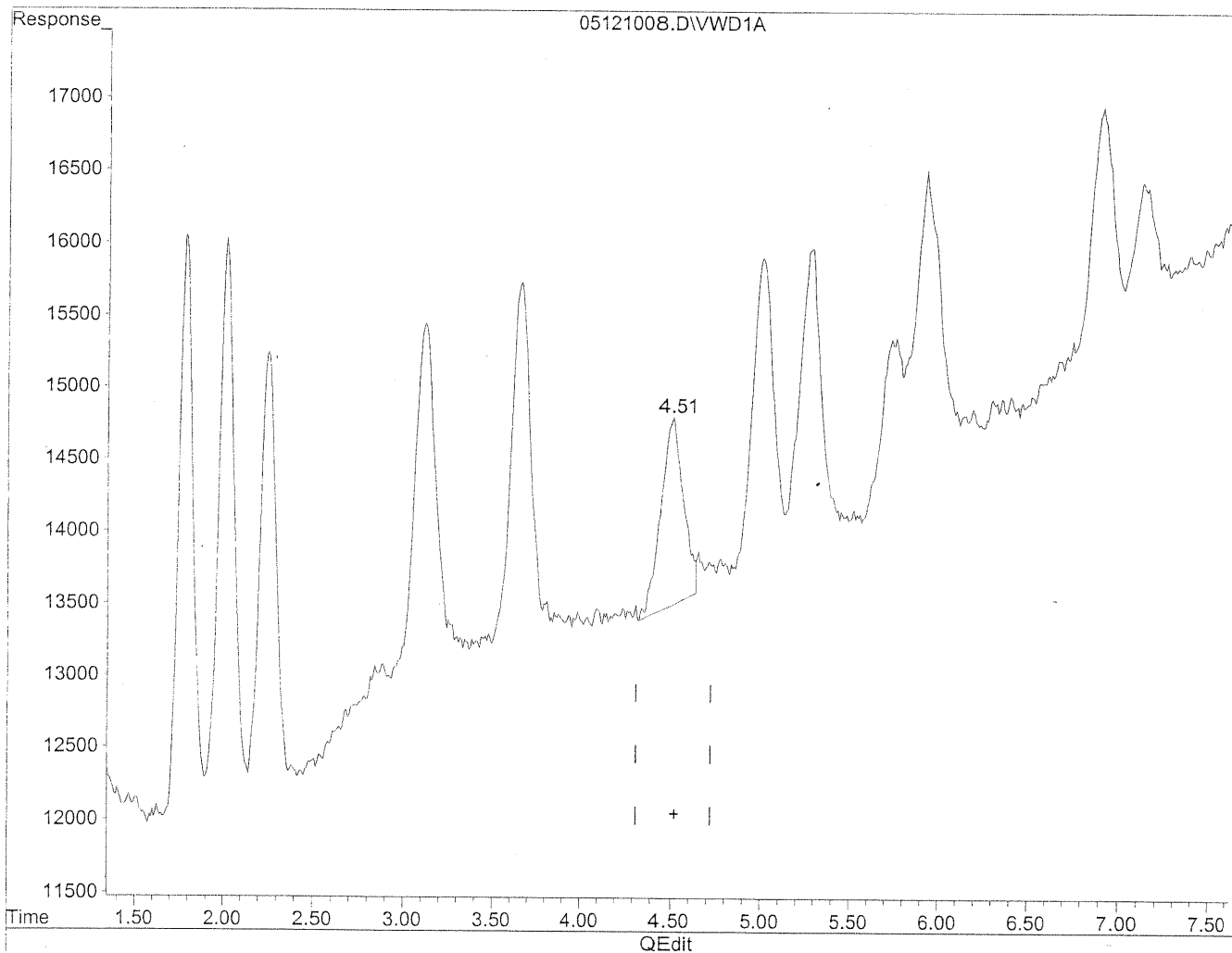
HC 5/17/10

BC
(7112)
5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
 Acq On : 12-May-2010, 13:29 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:14 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Tue Oct 13 11:33:26 2009
 Response via : Multiple Level Calibration

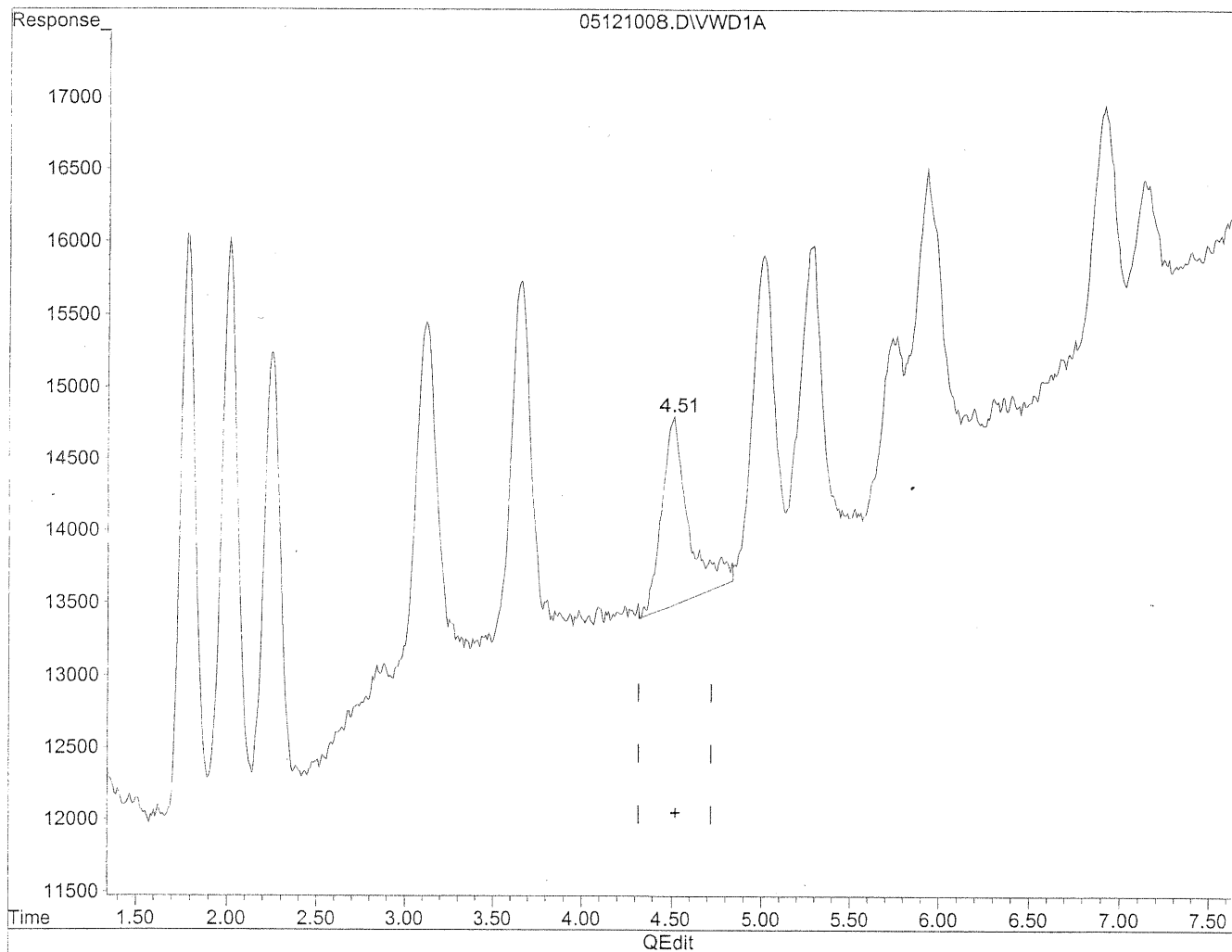


(6) Benzaldehyde
 4.51min 40.171ng/ml
 response 106374

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
 Acq On : 12-May-2010, 13:29 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:14 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Tue Oct 13 11:33:26 2009
 Response via : Multiple Level Calibration



(6) Benzaldehyde

4.51min 49.449ng/ml m

response 130943

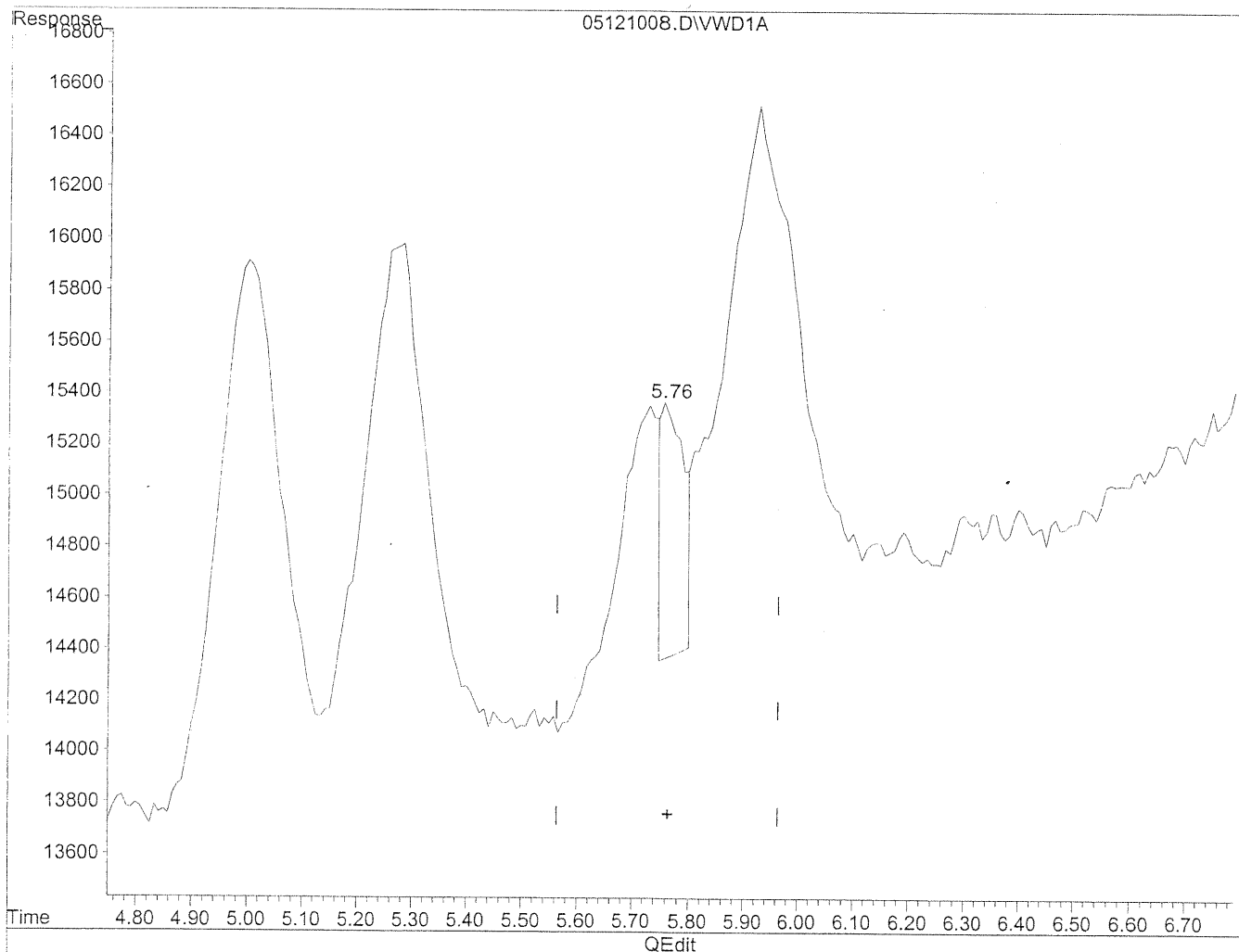
HC
5/13/10

PC
5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
Acq On : 12-May-2010, 13:29 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

5.76min 10.541ng/ml

response 26208

(+) = Expected Retention Time

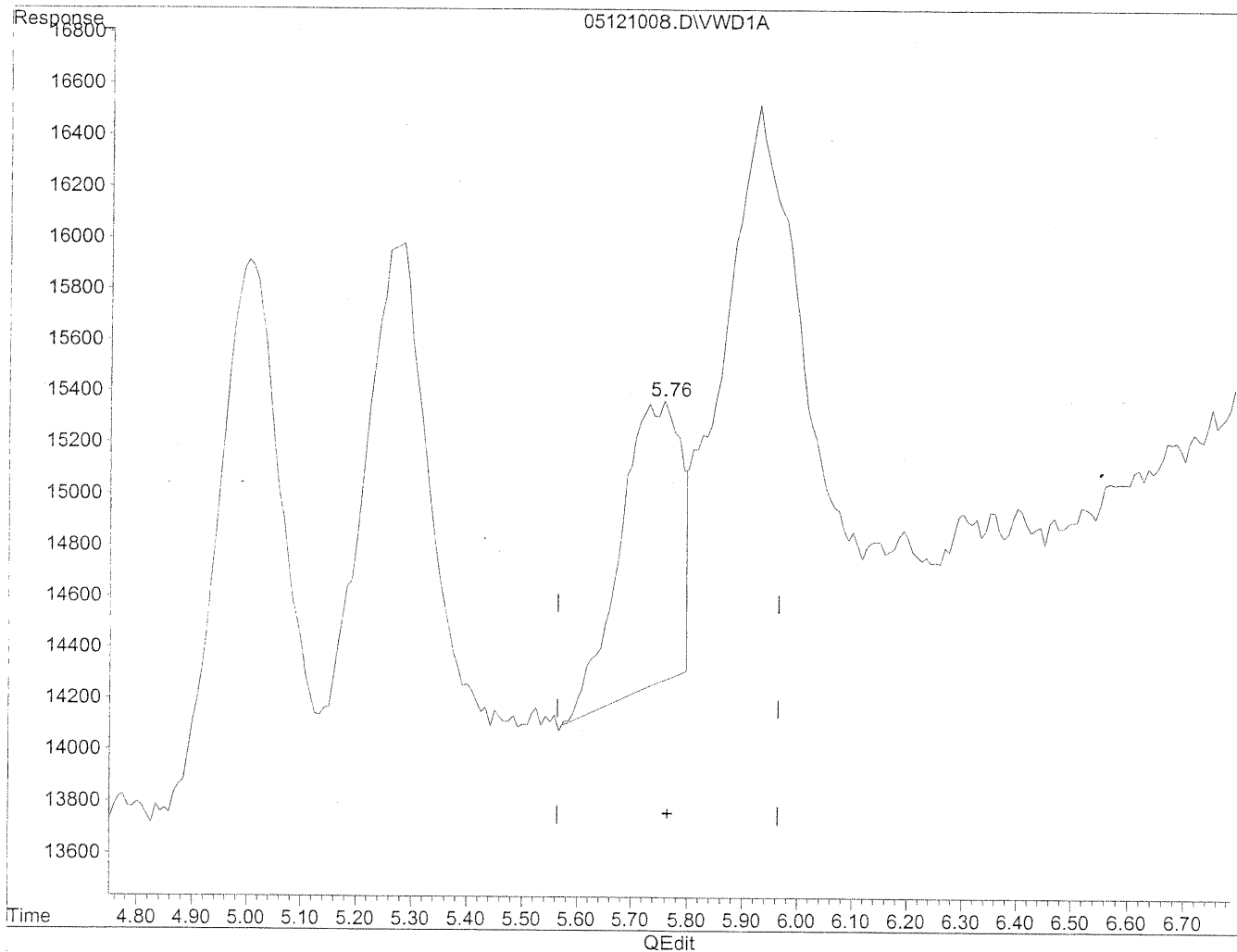
05121008.D TO110510.M

Thu May 13 10:33:36 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
Acq On : 12-May-2010, 13:29 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

5.76min 32.524ng/ml m

response 80865

12
5/13/10

12
5/13/10

(+) = Expected Retention Time

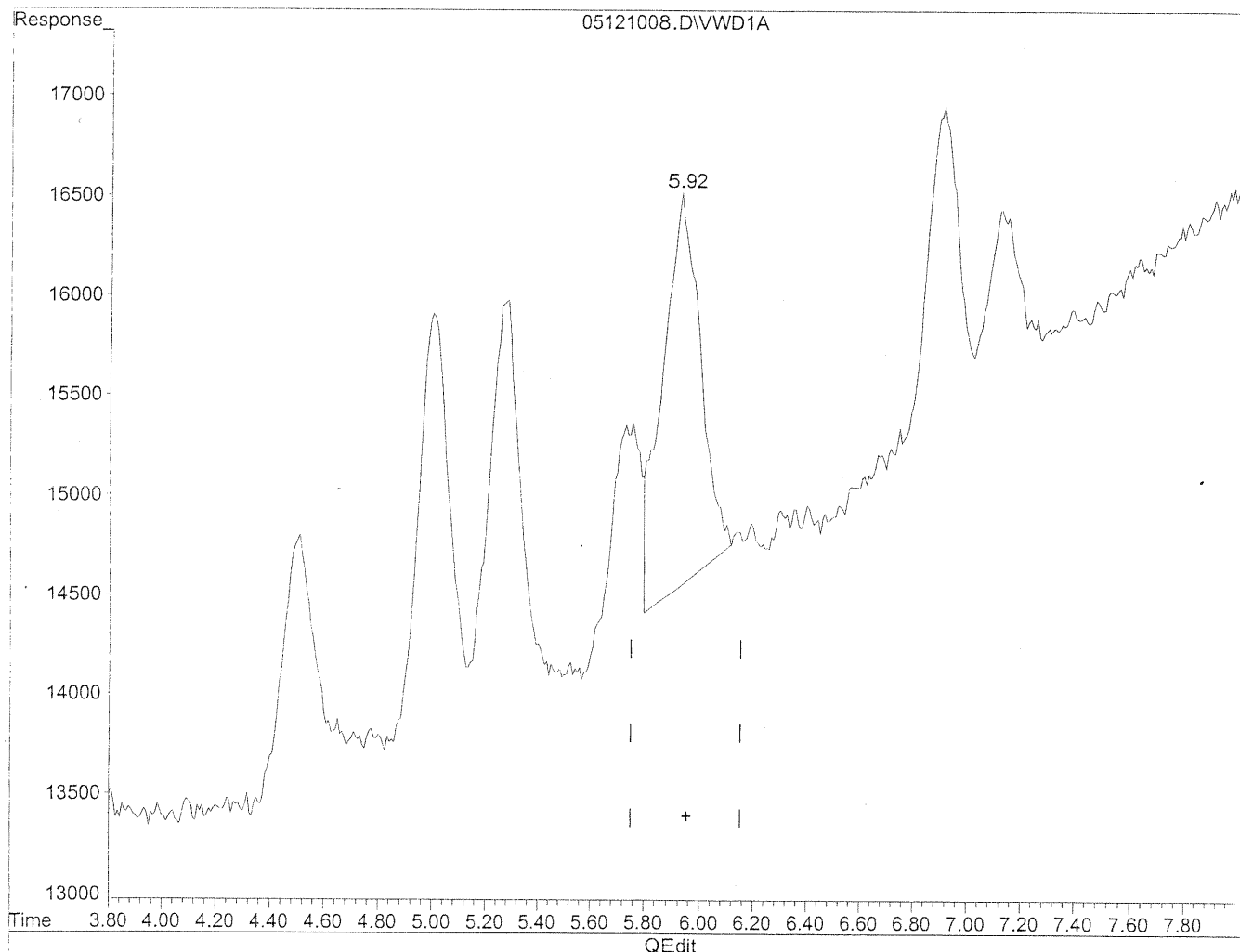
05121008.D TO110510.M

Thu May 13 10:33:42 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
Acq On : 12-May-2010, 13:29 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

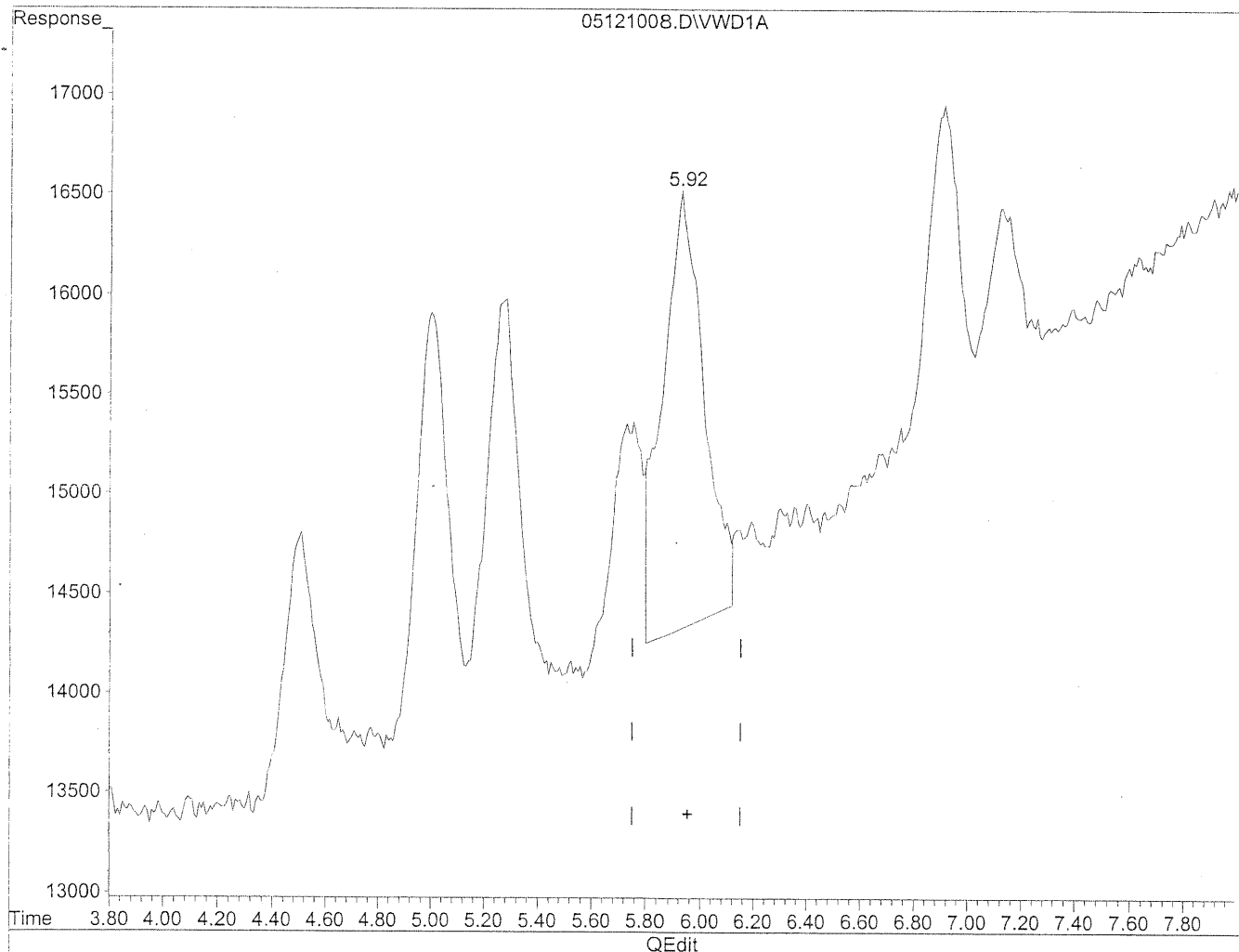
5.93min 87.965ng/ml

response 186049

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
Acq On : 12-May-2010, 13:29 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

5.92min 108.673ng/ml m

response 229847

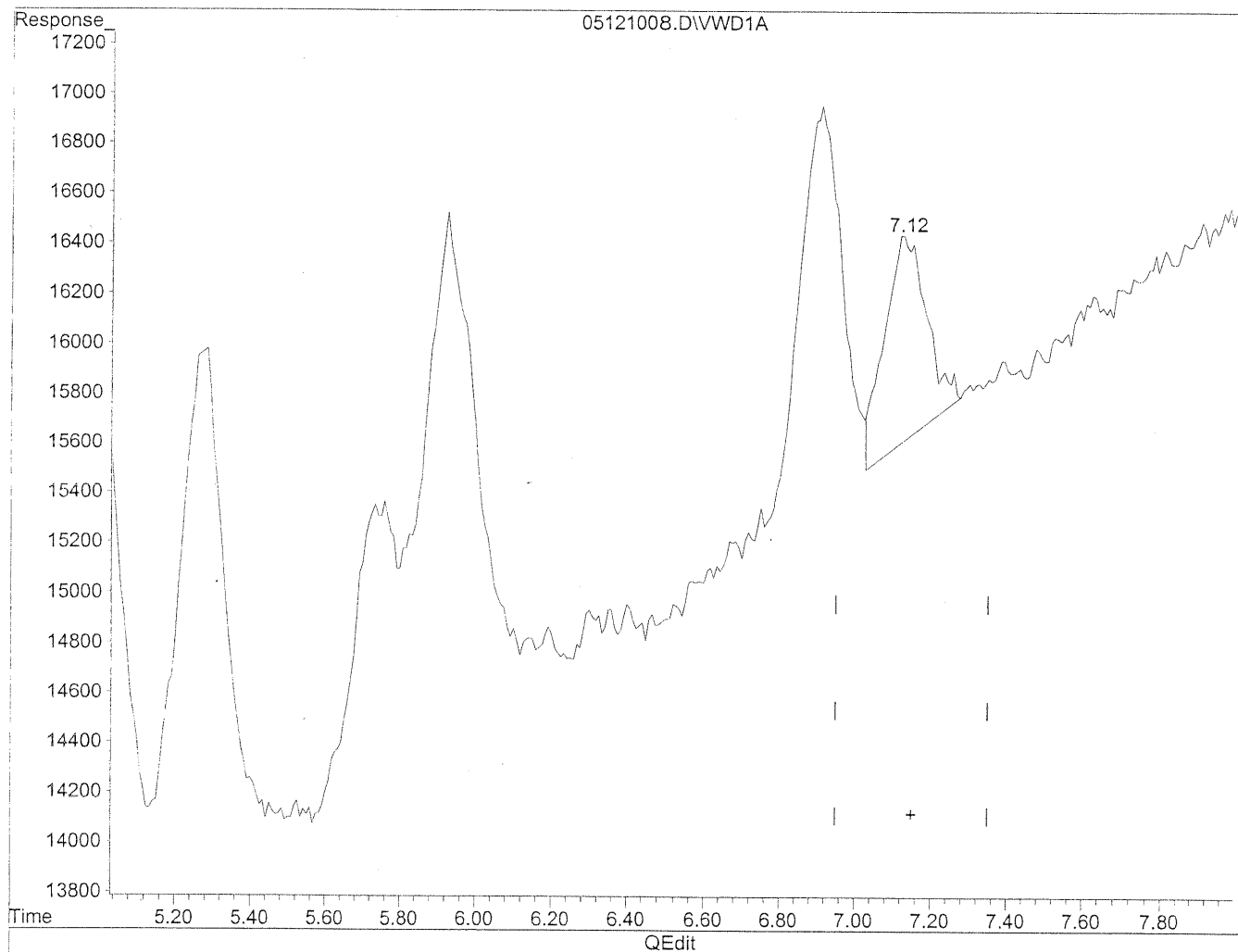
He 5/19/10

pc
5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
 Acq On : 12-May-2010, 13:29 Operator: MD
 Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:33 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 11:13:47 2010
 Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.13min 36.406ng/ml

response 63447

(+) = Expected Retention Time

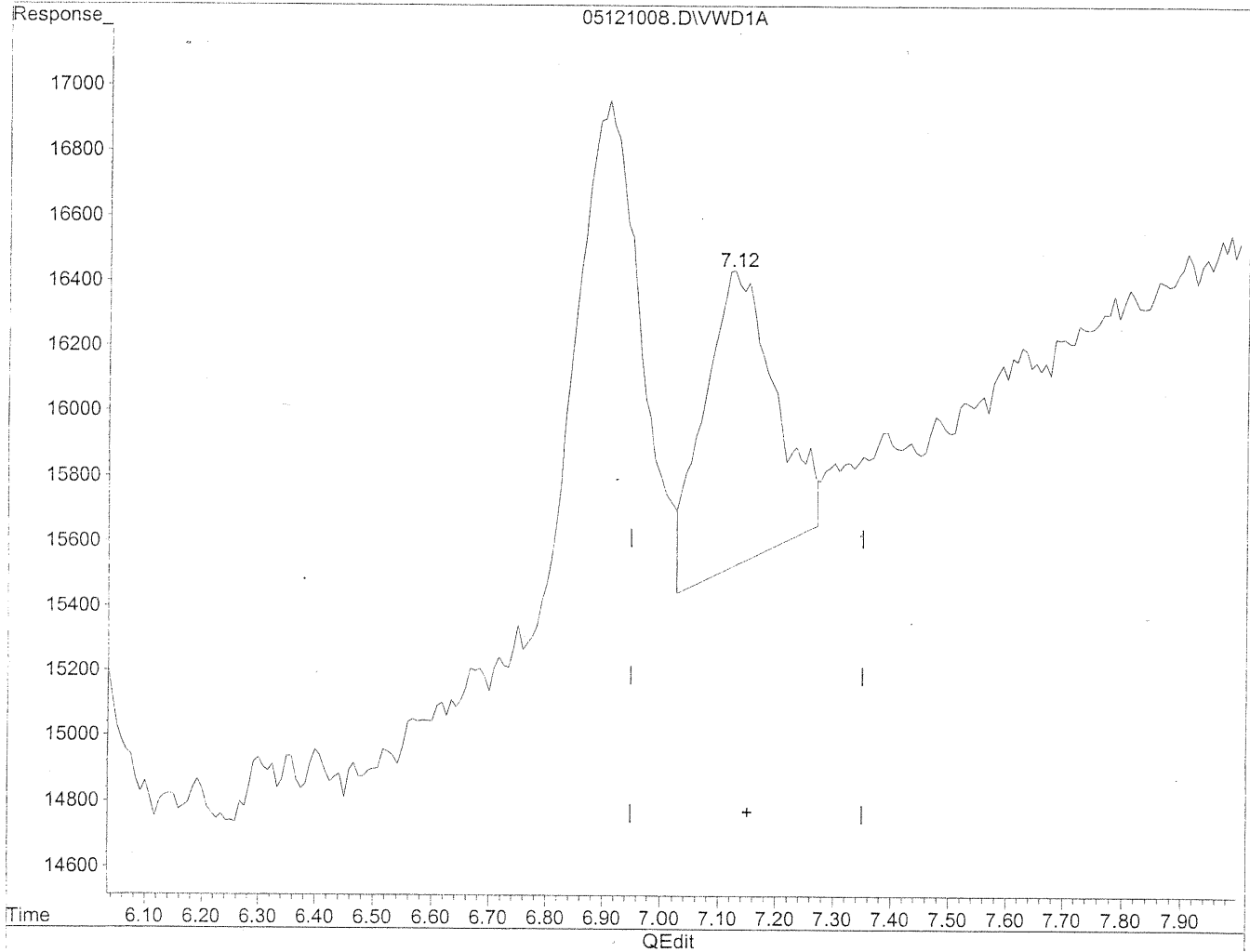
05121008.D TO110510.M

Thu May 13 11:14:39 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121008.D Vial: 126
Acq On : 12-May-2010, 13:29 Operator: MD
Sample : 50ng/ml TO-11A S21-03091012 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:46 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:47:19 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.12min 44.346ng/ml m

response 77285

*file
5/13/10*

*pr
(mp)
5/13/10*

(+) = Expected Retention Time

05121008.D TO110510.M

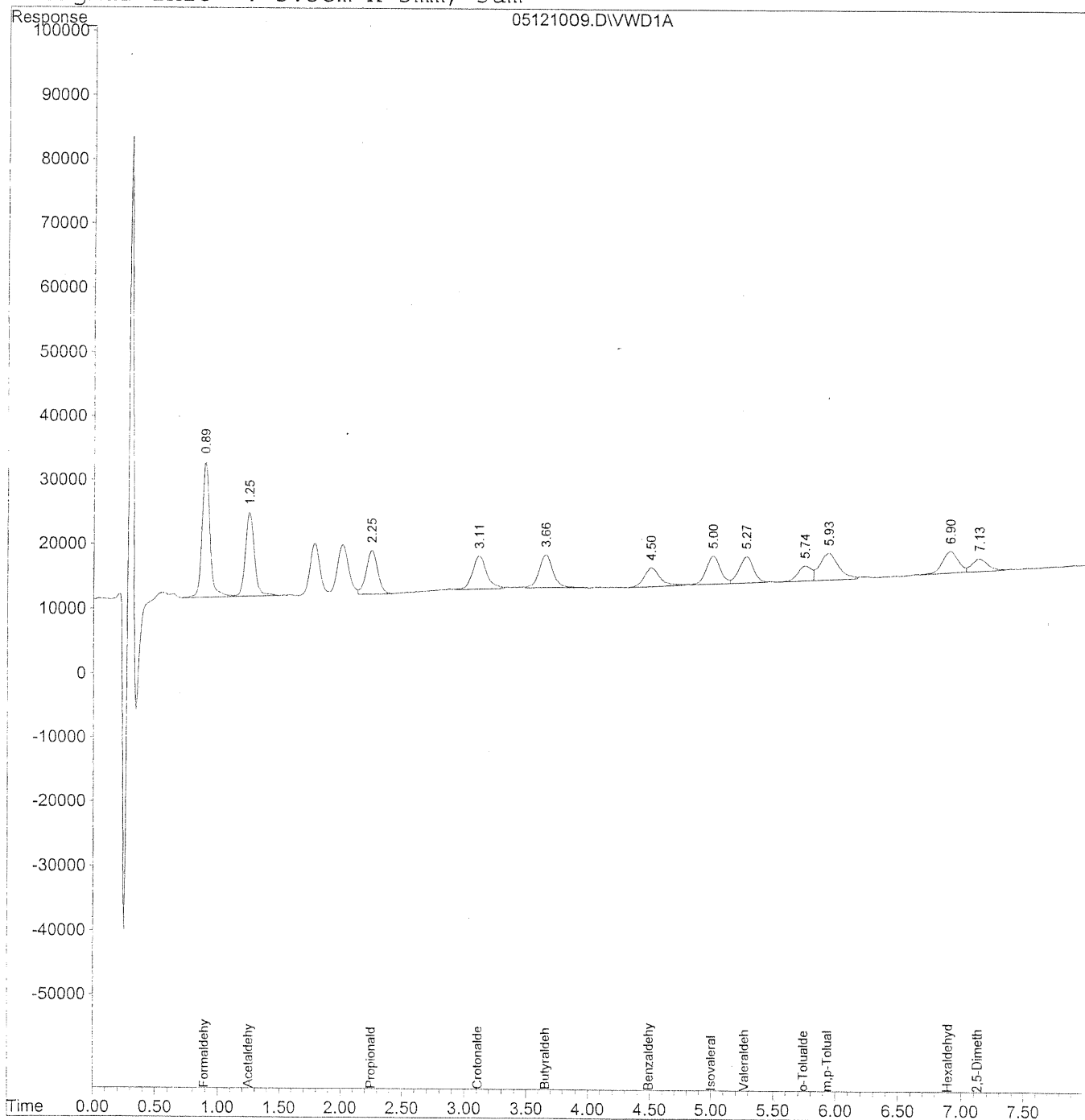
Thu May 13 11:48:30 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
 Acq On : 12-May-2010, 13:40 Operator: MD
 Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:17 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
Acq On : 12-May-2010, 13:40 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:17 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

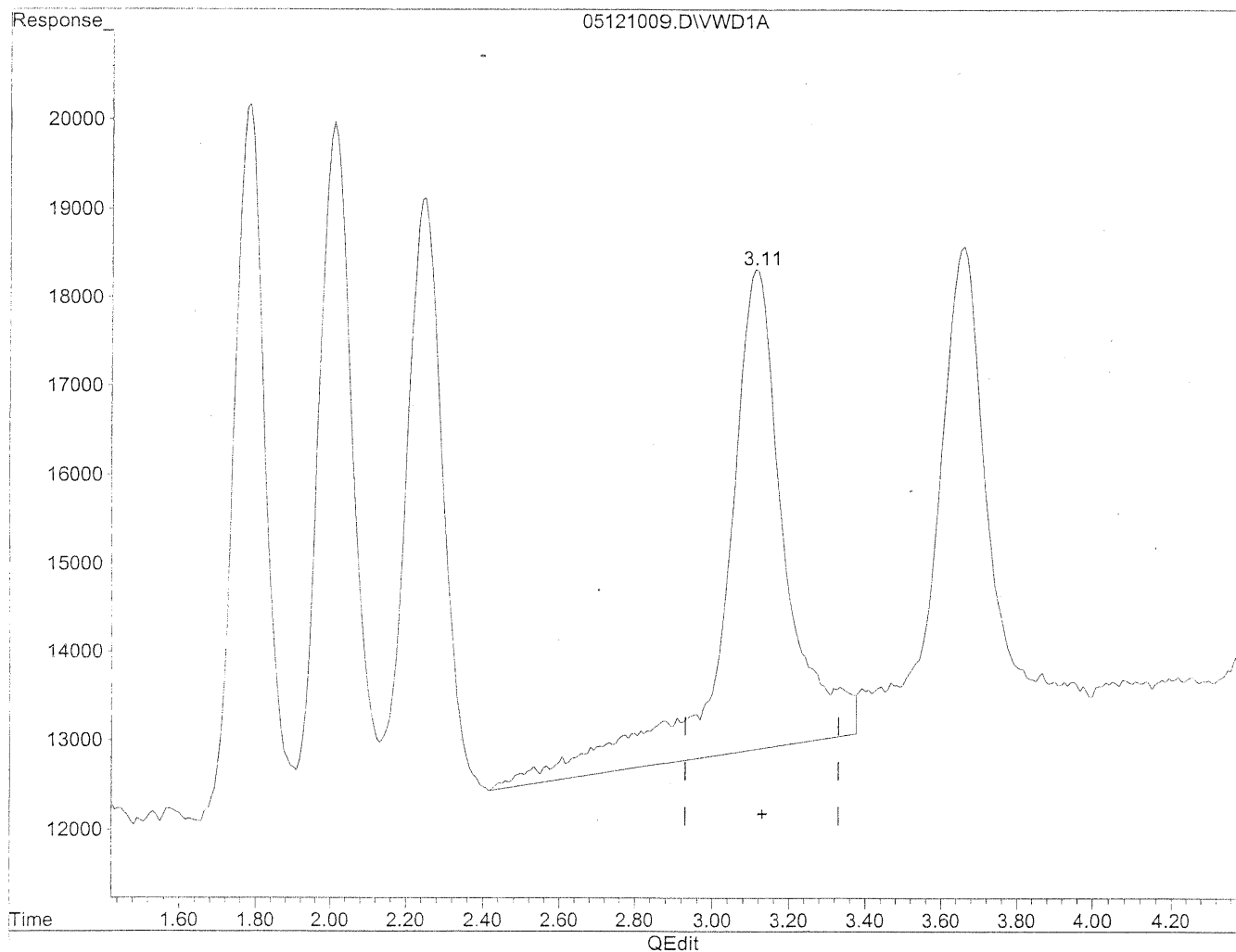
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.89	932611	102.777 ng/ml
2)	Acetaldehyde	1.25	659740	101.125 ng/ml
3)	Propionaldehyde	2.25	447517	93.493 ng/ml
4)	Crotonaldehyde	3.11	408188	101.858 ng/mlm
5)	Butyraldehyde	3.66	398668	99.756 ng/mlm
6)	Benzaldehyde	4.50	261667	99.358 ng/mlm
7)	Isovaleraldehyde	5.00	350261	98.250 ng/ml
8)	Valeraldehyde	5.27	328444	106.864 ng/ml
9)	o-Tolualdehyde	5.74	187057	74.960 ng/mlm
10)	m,p-Tolualdehyde	5.93	435423	204.358 ng/mlm
11)	Hexaldehyde	6.91	275782	88.437 ng/ml
12)	2,5-Dimethylbenzaldehyde	7.13	172979	100.053 ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
Acq On : 12-May-2010, 13:40 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(4) Crotonaldehyde

3.12min 145.785ng/ml

response 584226

(+) = Expected Retention Time

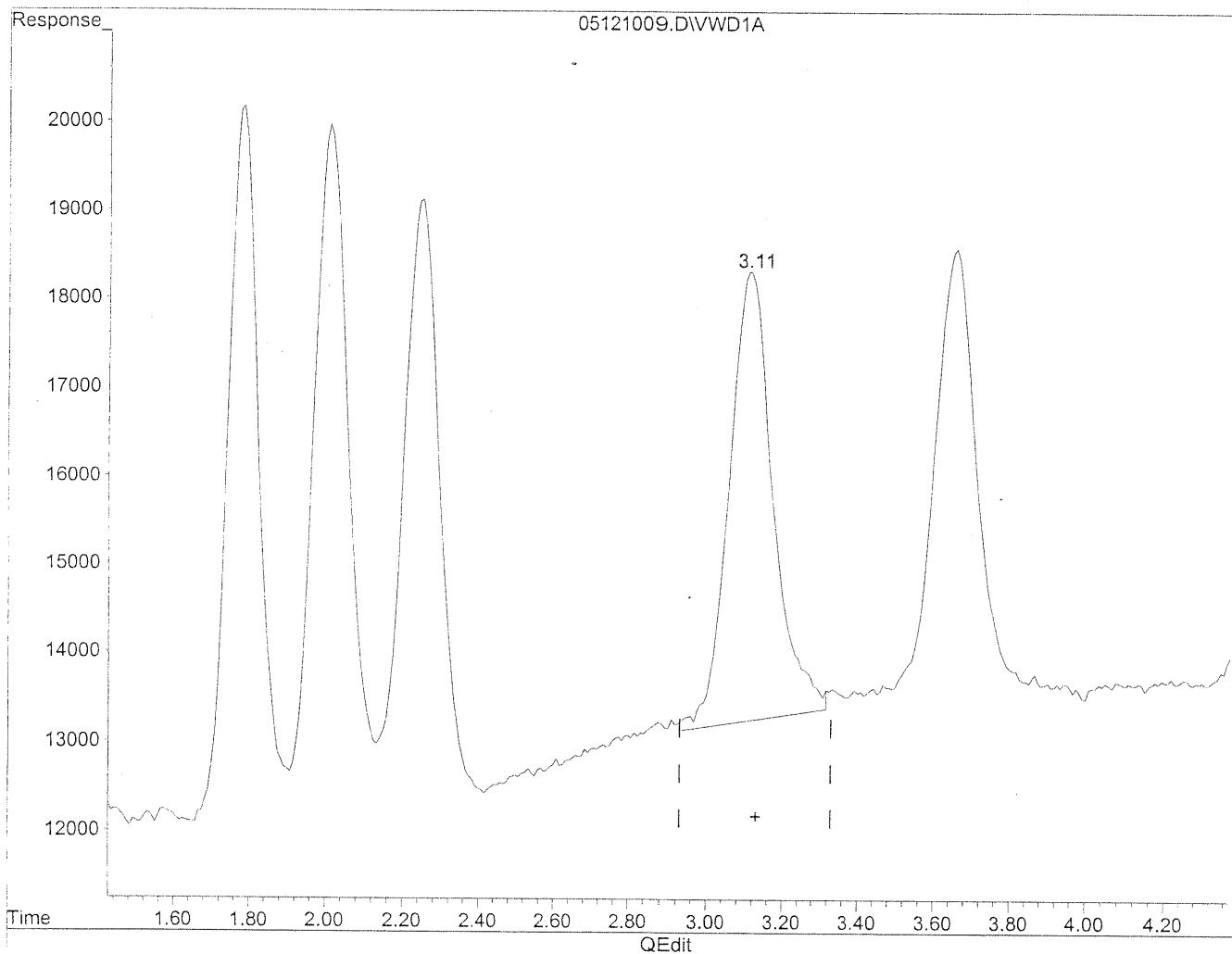
05121009.D TO110510.M

Thu May 13 10:34:22 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
Acq On : 12-May-2010, 13:40 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(4) Crotonaldehyde

3.11min 101.858ng/ml m

response 408188

AL
5/19/10

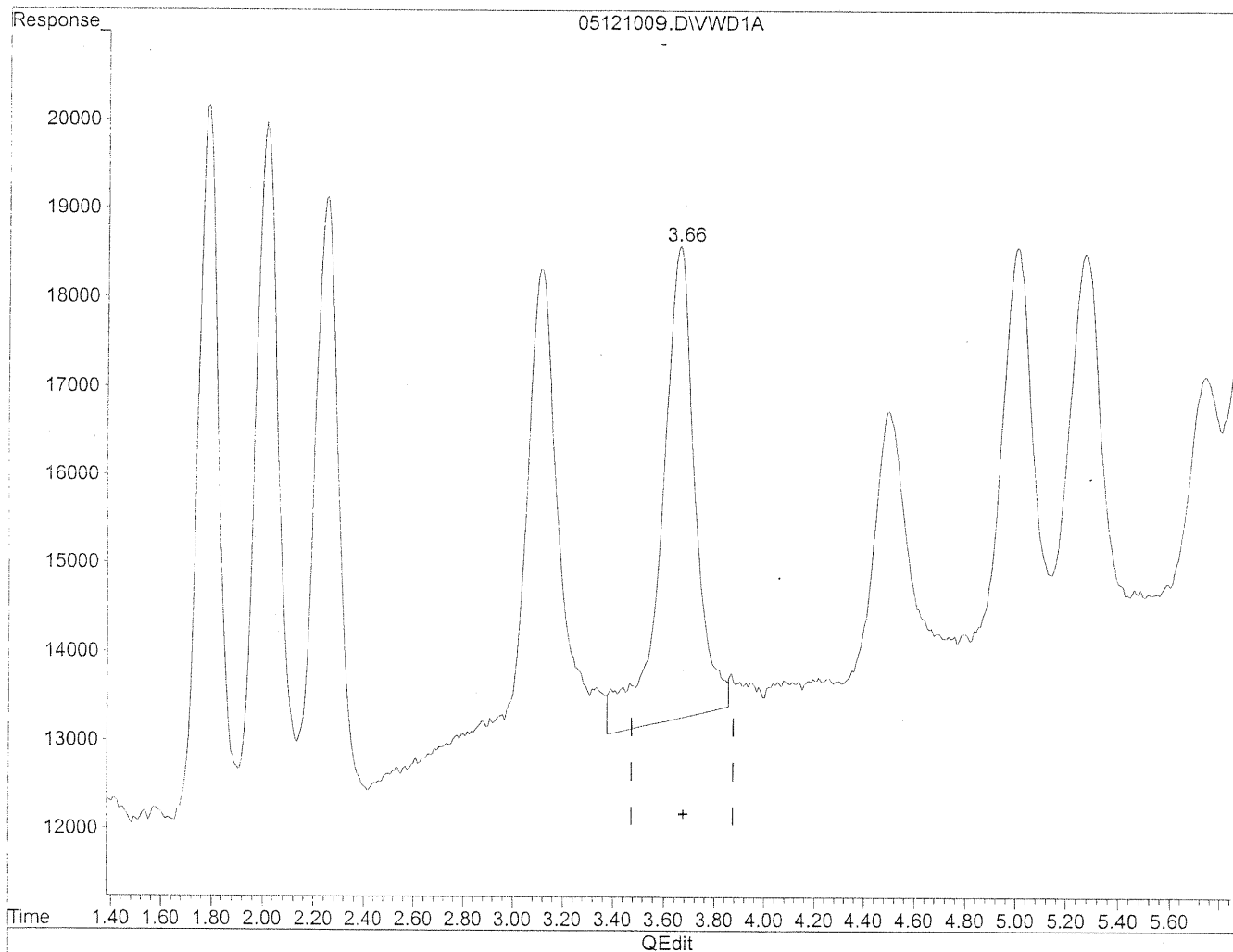
12
MD
5/13/10

(+) = Expected Retention Time
05121009.D TO110510.M Thu May 13 10:34:27 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
Acq On : 12-May-2010, 13:40 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

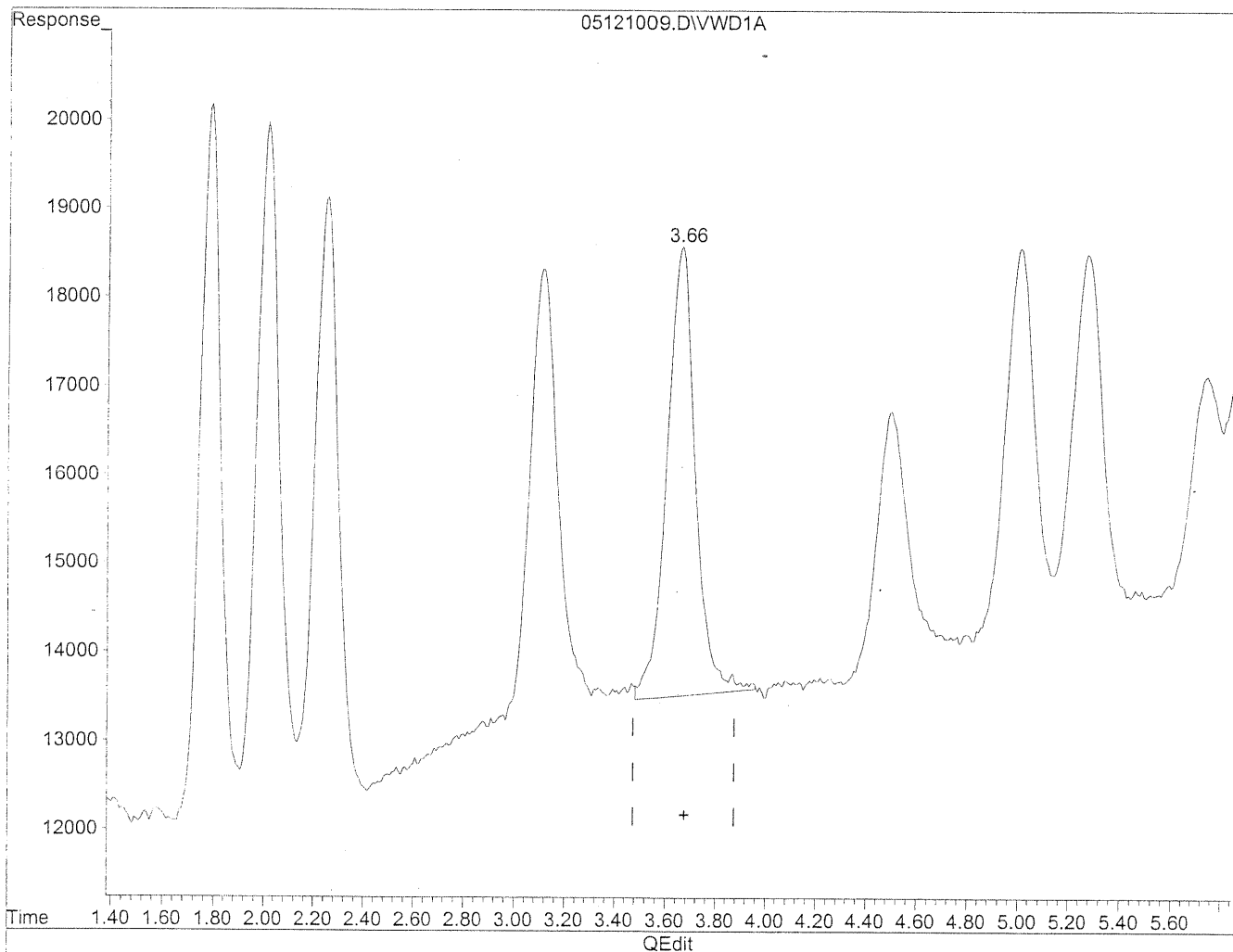
3.66min 119.907ng/ml

response 479199

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
 Acq On : 12-May-2010, 13:40 Operator: MD
 Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



(5) Butyraldehyde

3.66min 99.756ng/ml m

response 398668

HC
5/19/10

TU
MD
5/13/10

(+) = Expected Retention Time

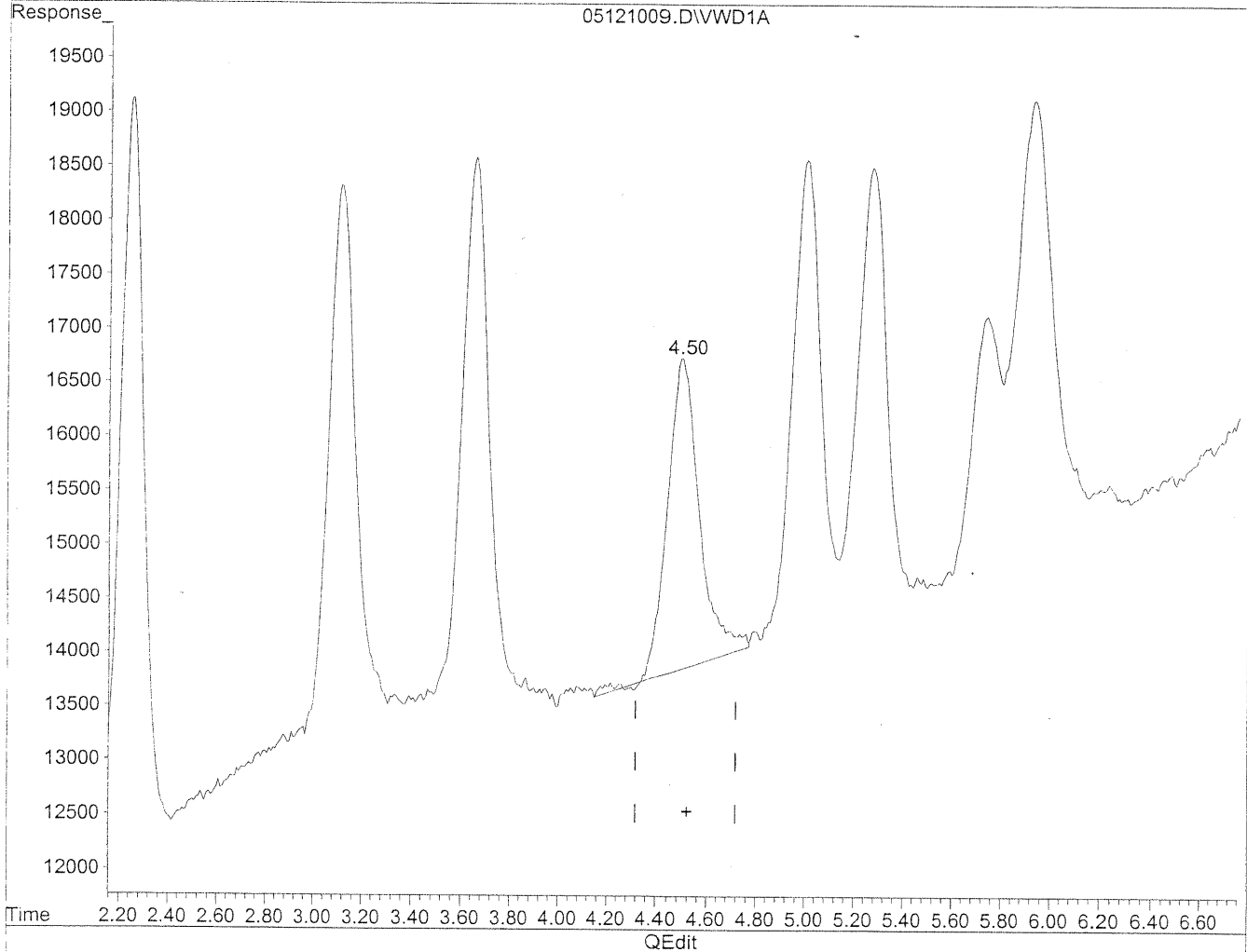
05121009.D TO110510.M

Thu May 13 10:34:37 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
Acq On : 12-May-2010, 13:40 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:15:00 2010
Response via : Multiple Level Calibration

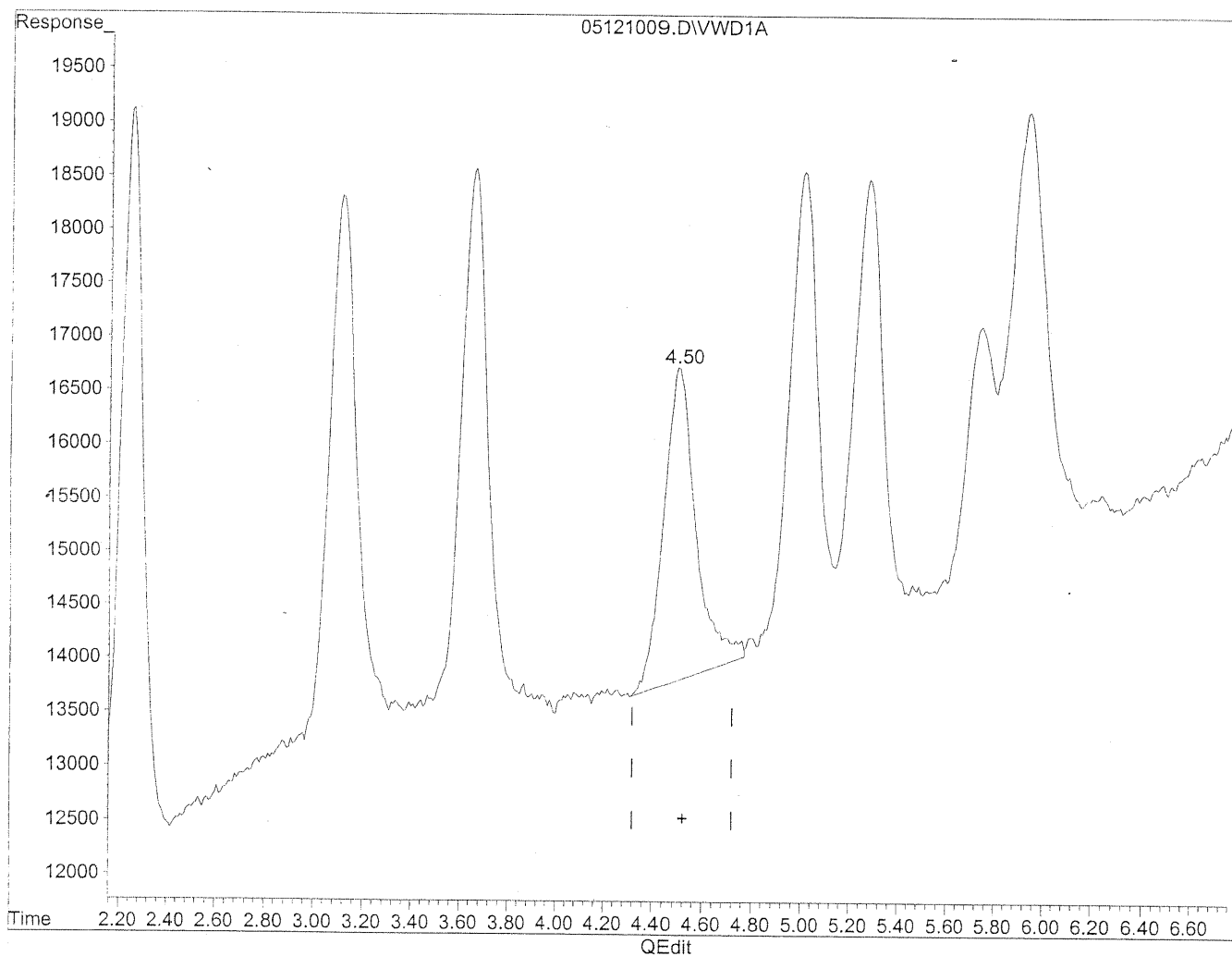


(6) Benzaldehyde
4.50min 95.373ng/ml
response 251171

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
Acq On : 12-May-2010, 13:40 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:15:00 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.50min 99.358ng/ml m

response 261667

SLC
5/13/10

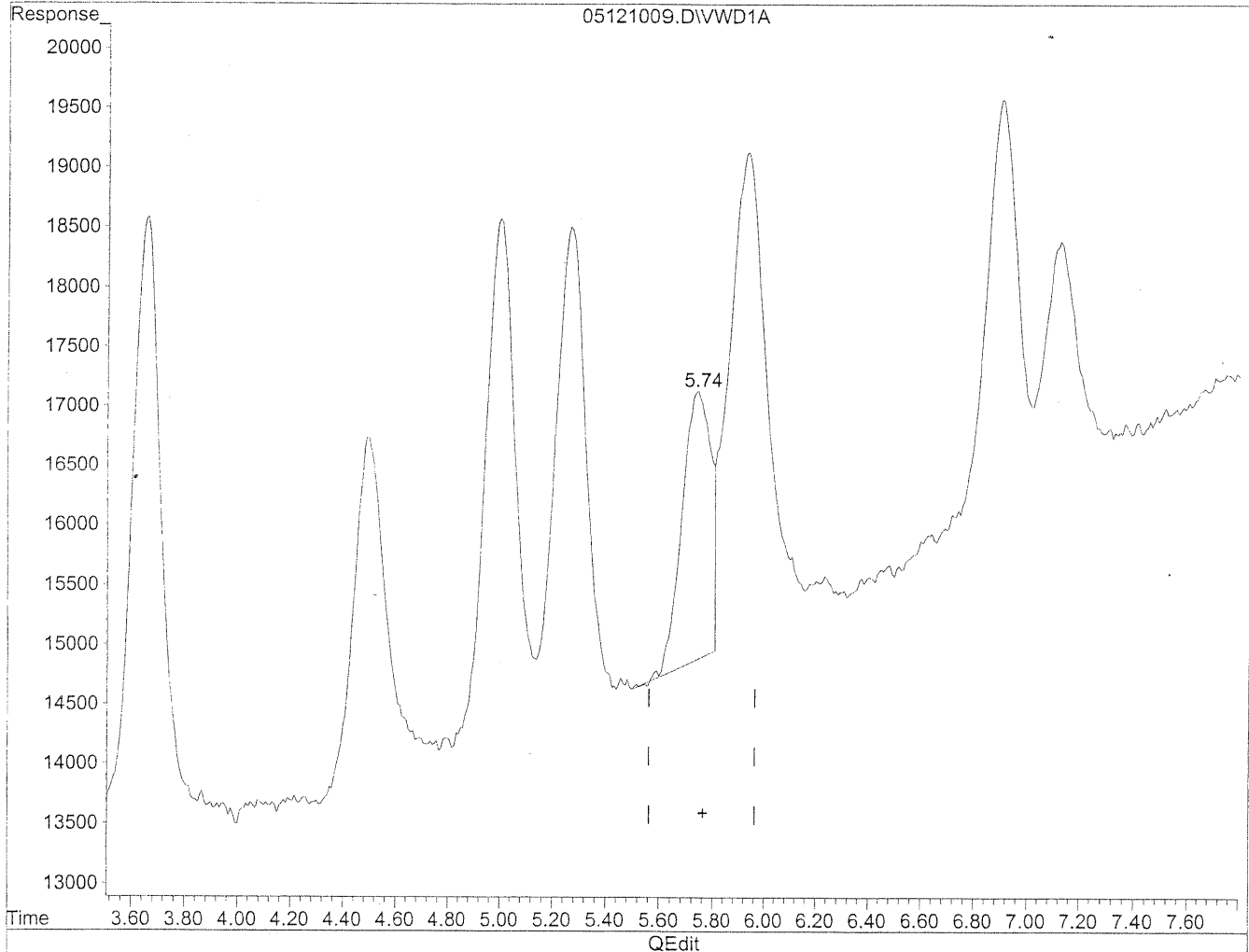
12
mm
5/13/10

(+) = Expected Retention Time
05121009.D TO110510.M Thu May 13 11:16:16 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
Acq On : 12-May-2010, 13:40 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:15:00 2010
Response via : Multiple Level Calibration

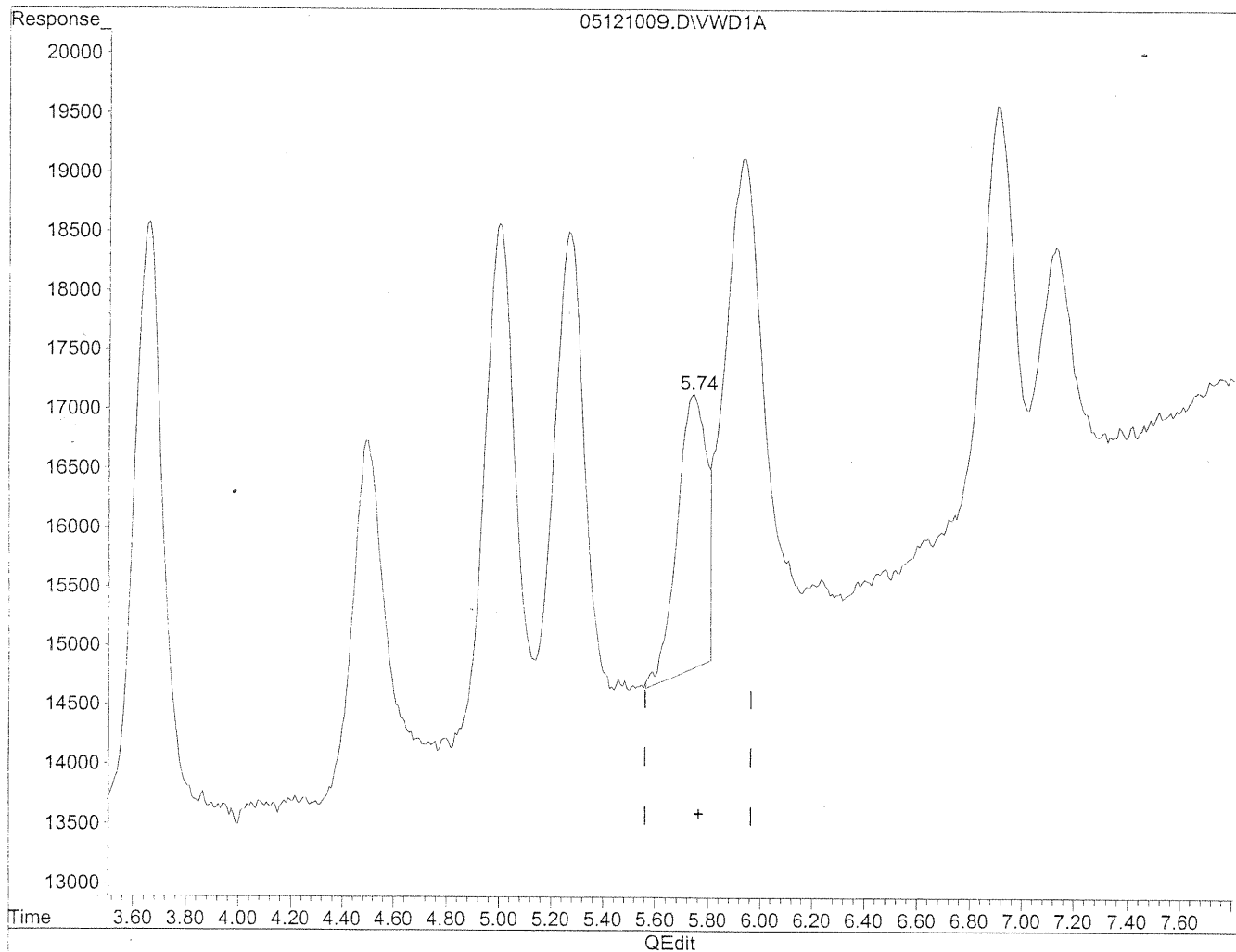


(9) o-Tolualdehyde
5.74min 66.961ng/ml
response 167097

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
 Acq On : 12-May-2010, 13:40 Operator: MD
 Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 11:15:00 2010
 Response via : Multiple Level Calibration



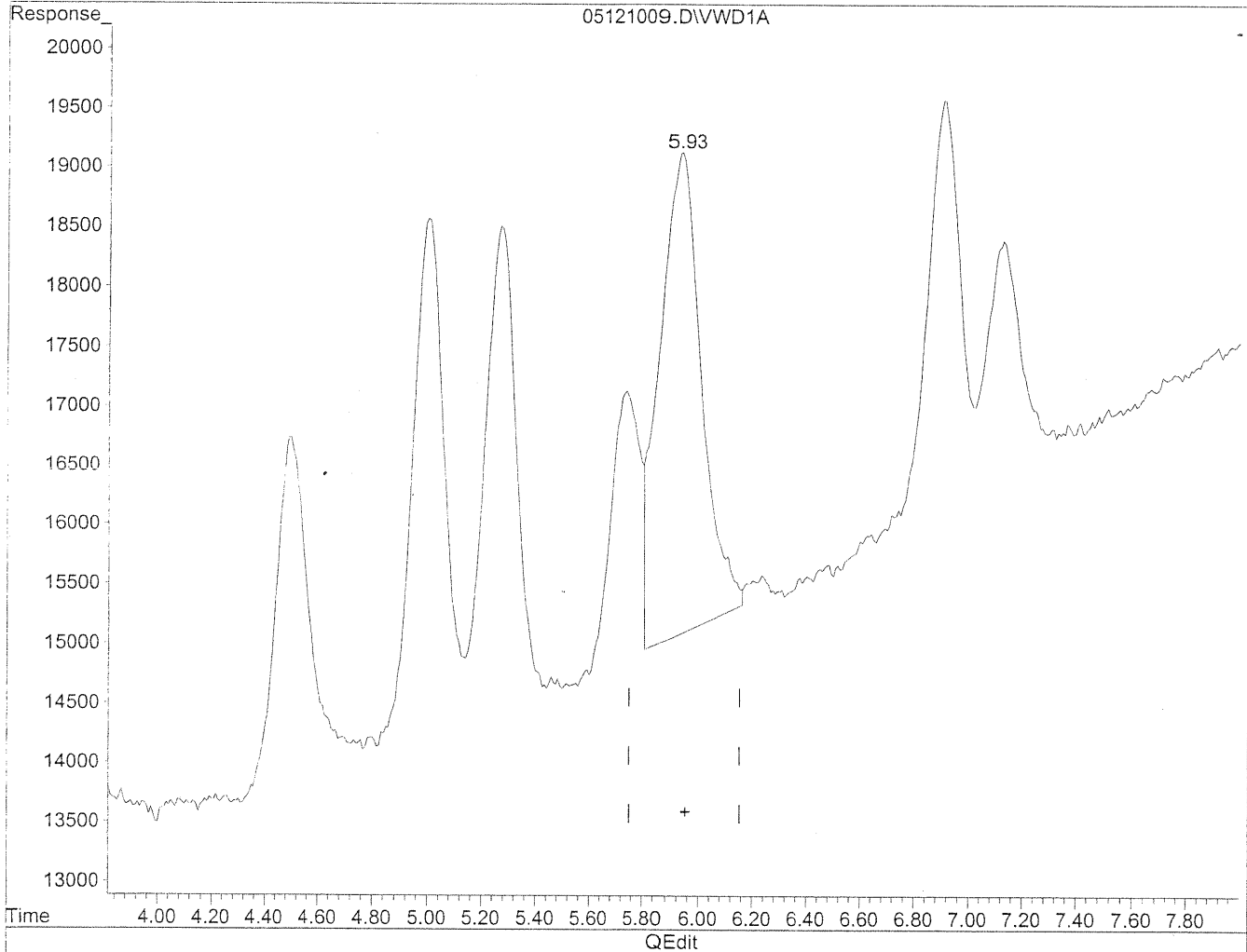
(9) o-Tolualdehyde
 5.74min 74.960ng/ml m
 response 187057

Handwritten notes: 12, 5/13/10, 5/19/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
Acq On : 12-May-2010, 13:40 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:15:00 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

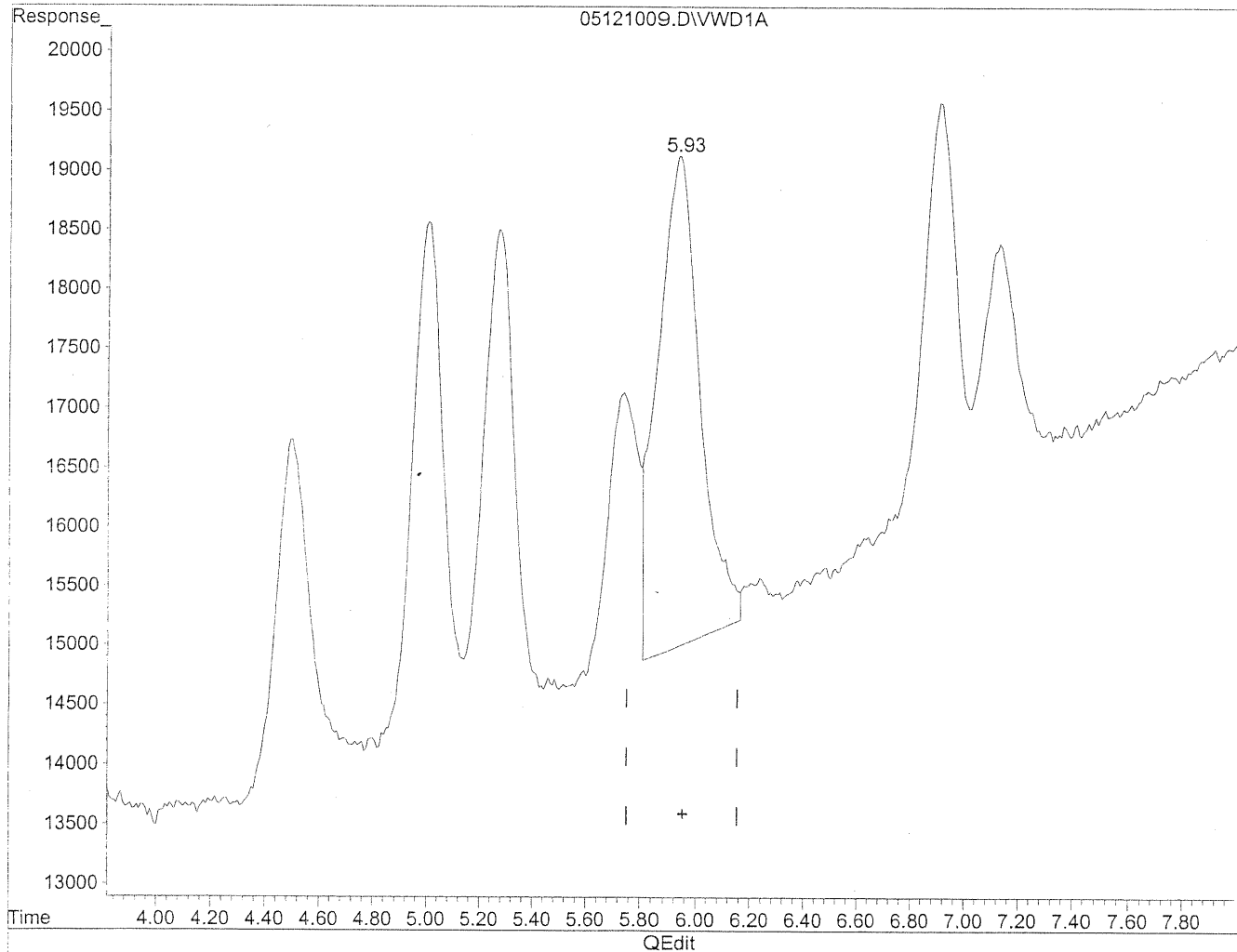
5.93min 196.892ng/ml

response 419515

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
Acq On : 12-May-2010, 13:40 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:15:00 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

5.93min 204.358ng/ml m

response 435423

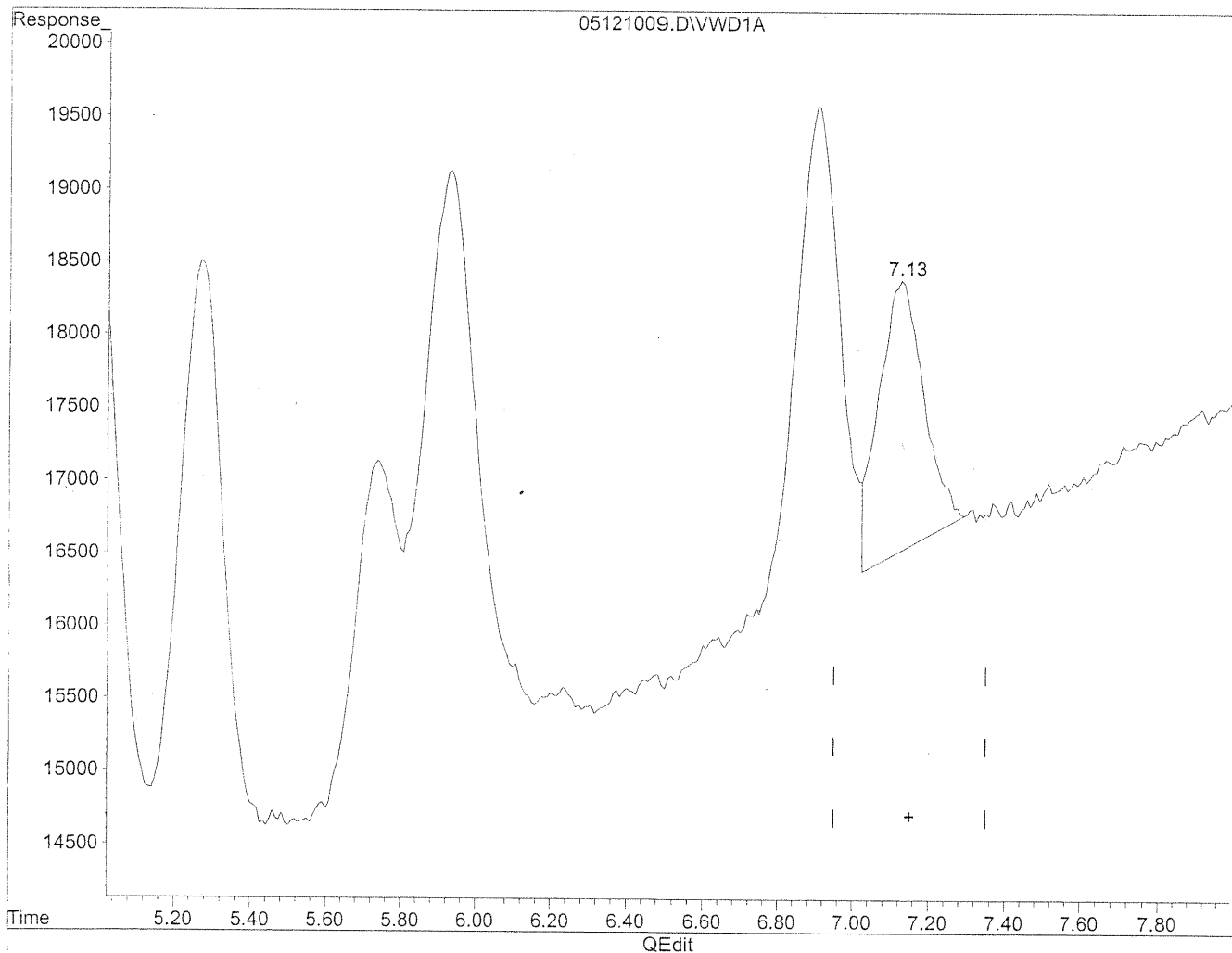
HL
5/19/10

MD
5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
Acq On : 12-May-2010, 13:40 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:15:00 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.13min 88.831ng/ml

response 153579

(+) = Expected Retention Time

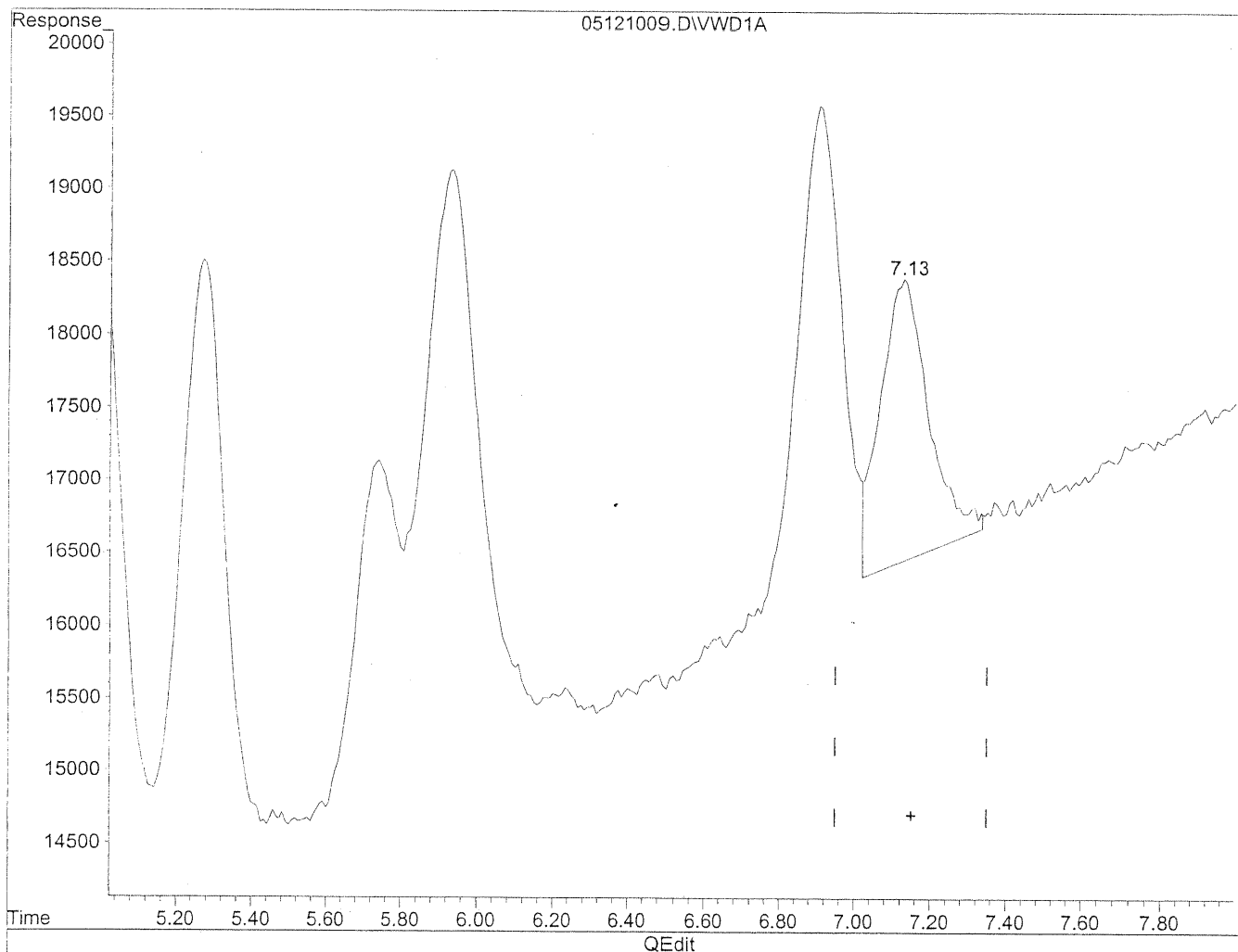
05121009.D TO110510.M

Thu May 13 11:16:53 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121009.D Vial: 127
 Acq On : 12-May-2010, 13:40 Operator: MD
 Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:34 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 11:15:00 2010
 Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde
 7.13min 100.053ng/ml m
 response 172979

HC
5/19/10

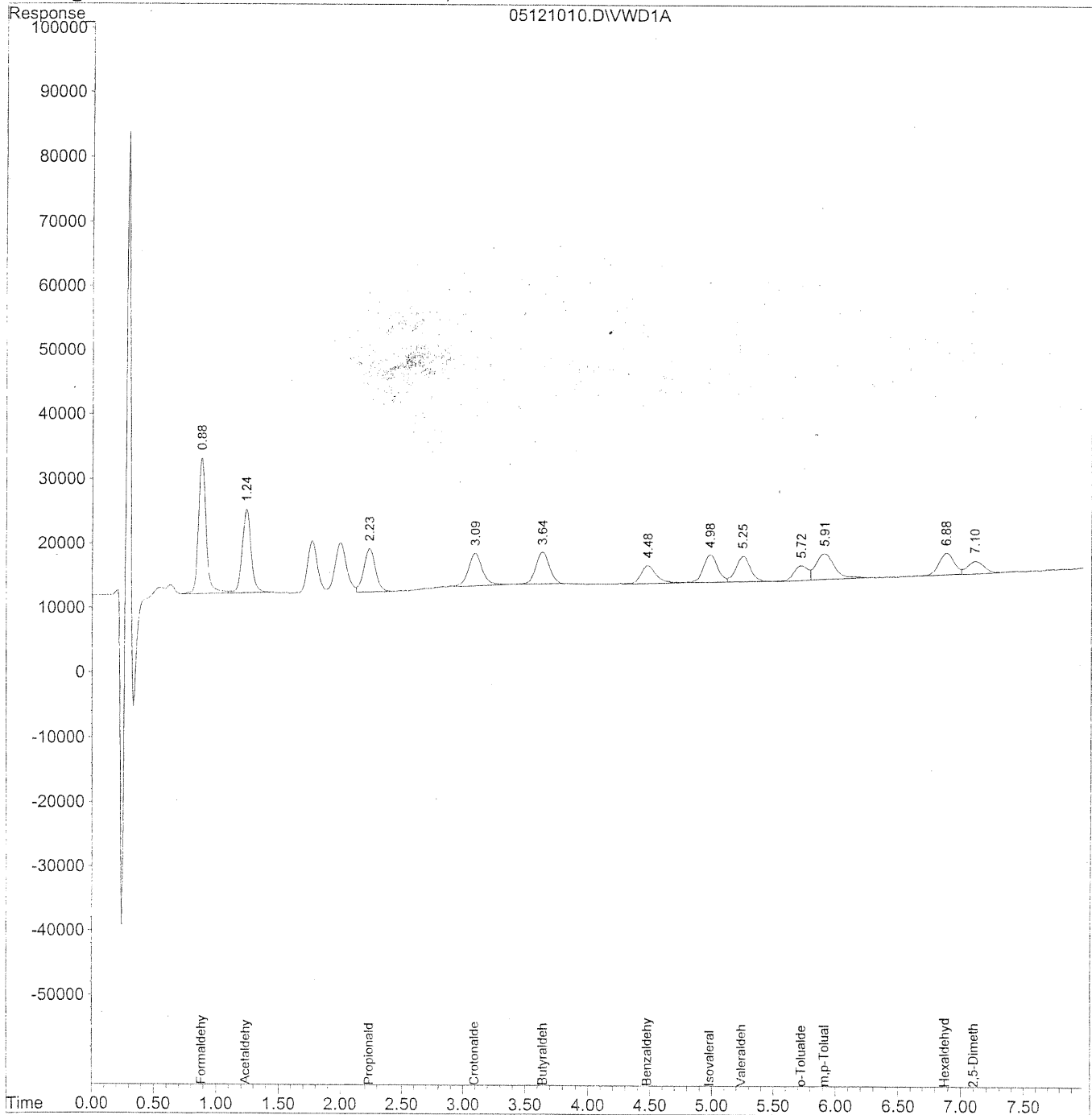
12
MD
5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:18 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:18 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

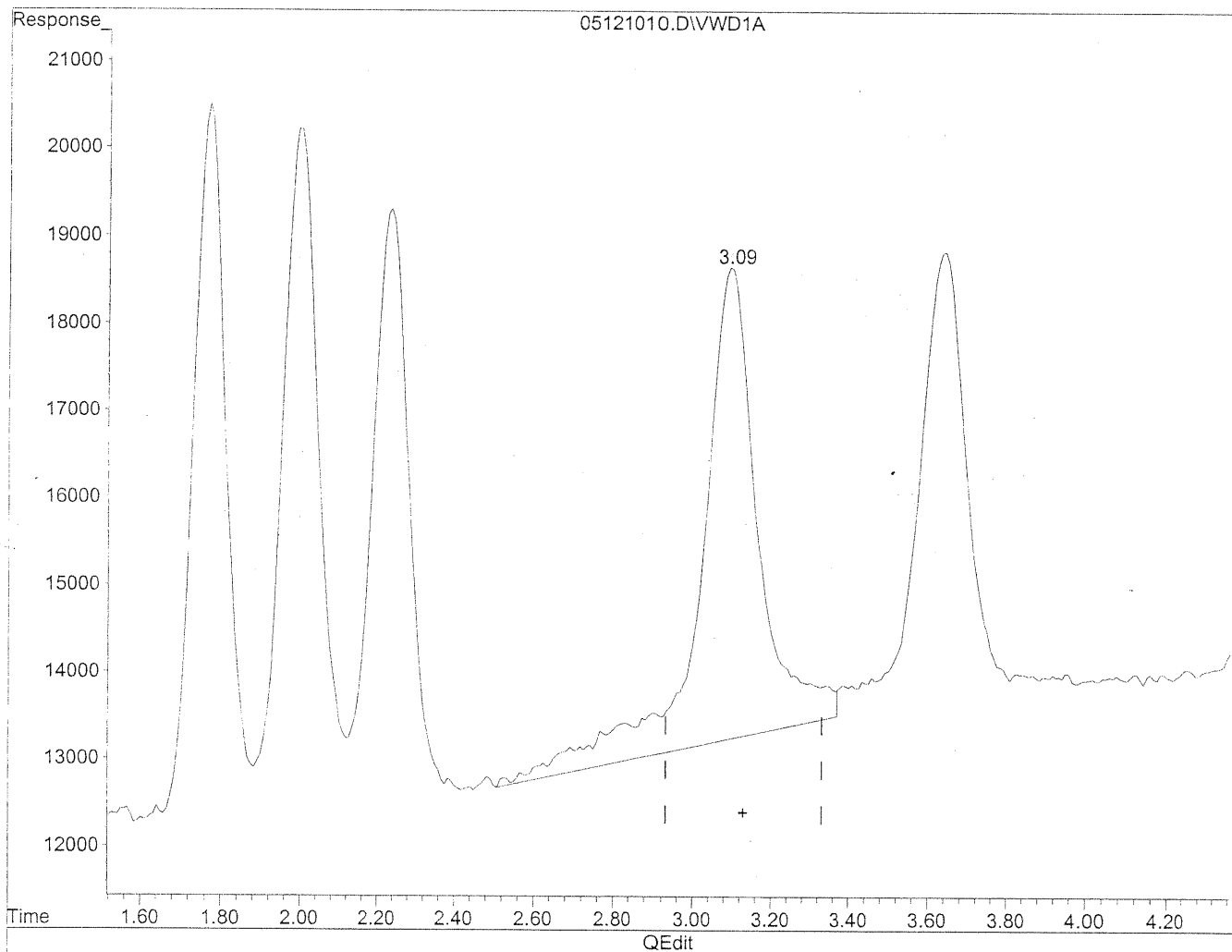
	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.88	917821	99.983 ng/ml
2)	Acetaldehyde	1.24	647445	98.075 ng/ml
3)	Propionaldehyde	2.24	451764	95.670 ng/ml
4)	Crotonaldehyde	3.09	401686	99.051 ng/mlm
5)	Butyraldehyde	3.64	372831	92.213 ng/mlm
6)	Benzaldehyde	4.48	242805	91.850 ng/mlm
7)	Isovaleraldehyde	4.98	341552	94.492 ng/mlm
8)	Valeraldehyde	5.25	328463	103.109 ng/ml
9)	o-Tolualdehyde	5.72	186724	78.415 ng/mlm
10)	m,p-Tolualdehyde	5.91	413632	191.342 ng/ml
11)	Hexaldehyde	6.88	272471	87.985 ng/ml
12)	2,5-Dimethylbenzaldehyde	7.10	179109	104.874 ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(4) Crotonaldehyde

3.10min 136.431ng/ml

response 553277

(+) = Expected Retention Time

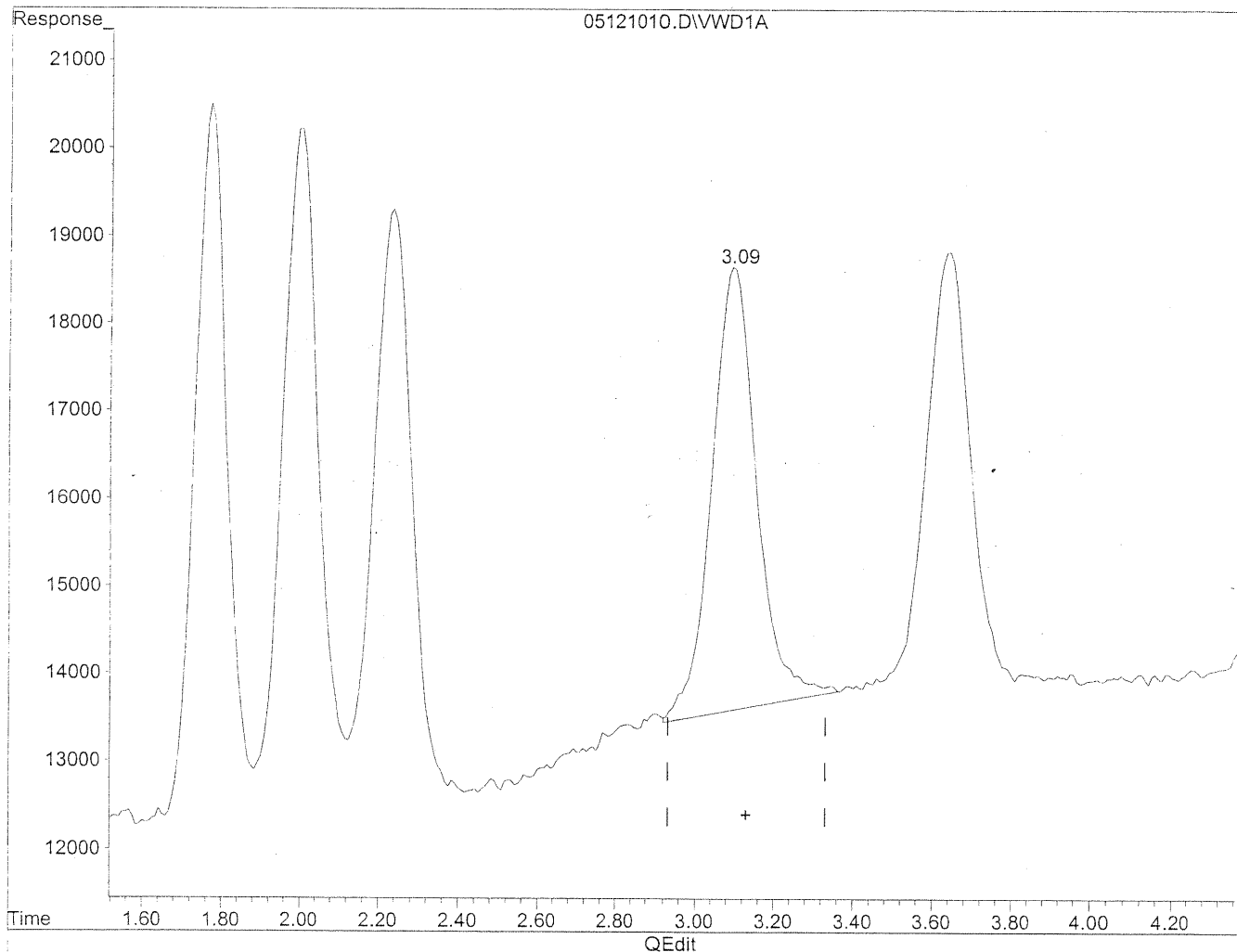
05121010.D TO110510.M

Thu May 13 10:36:20 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(4) Crotonaldehyde
3.09min 99.051ng/ml m
response 401686

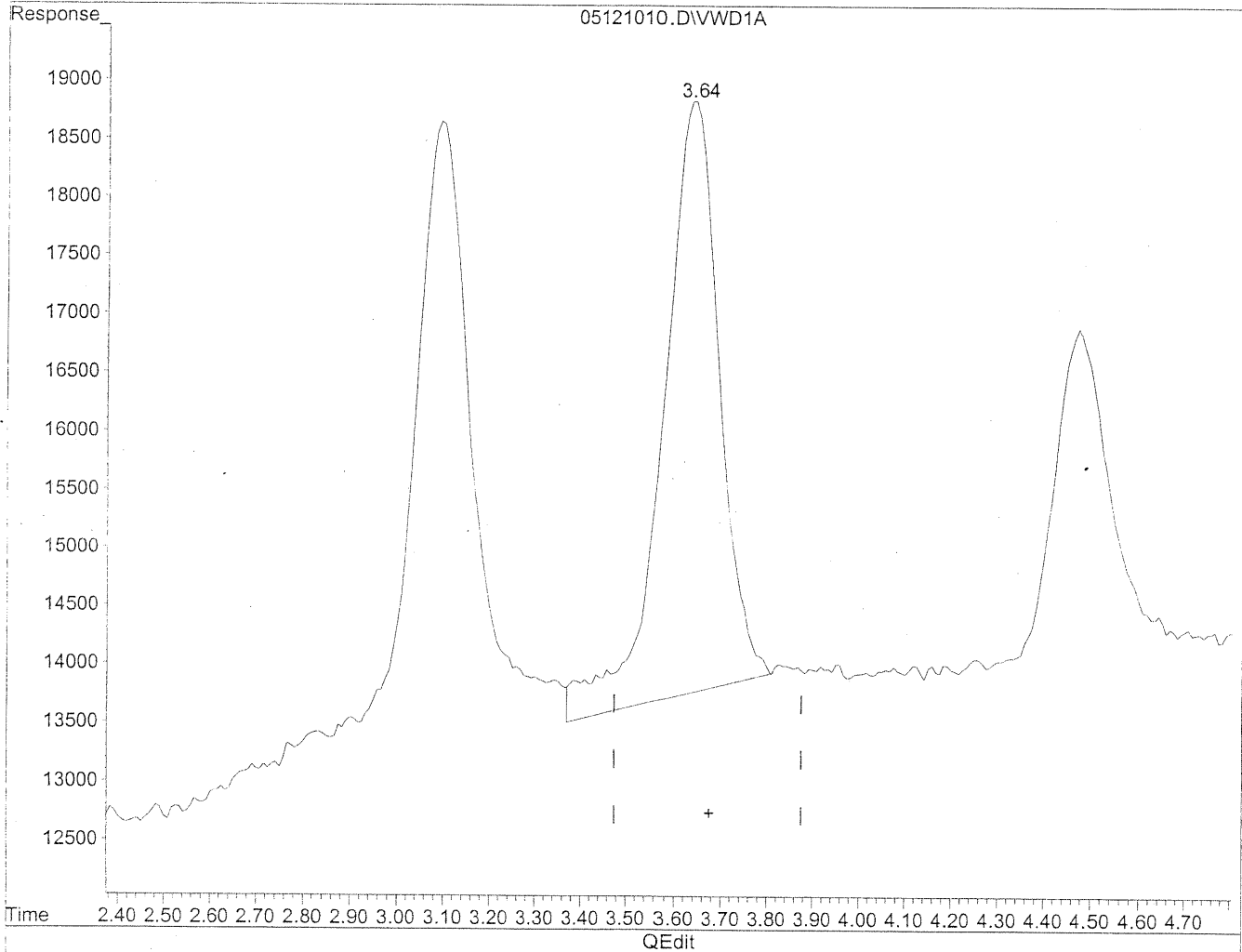
OK
5/19/10

TC
MD
5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.64min 103.815ng/ml

response 419740

(+) = Expected Retention Time

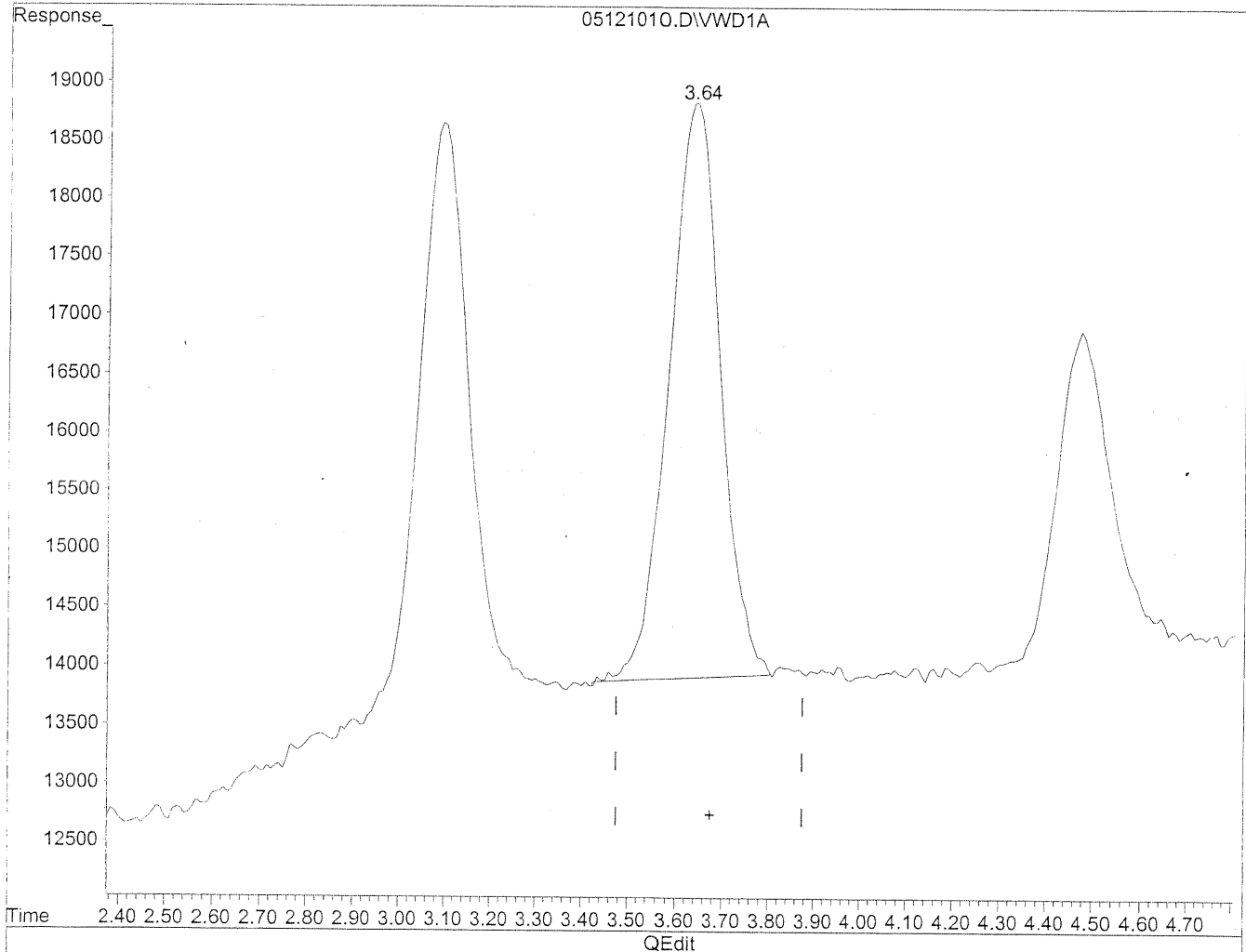
05121010.D TO110510.M

Thu May 13 10:36:28 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde
3.64min 92.213ng/ml m
response 372831

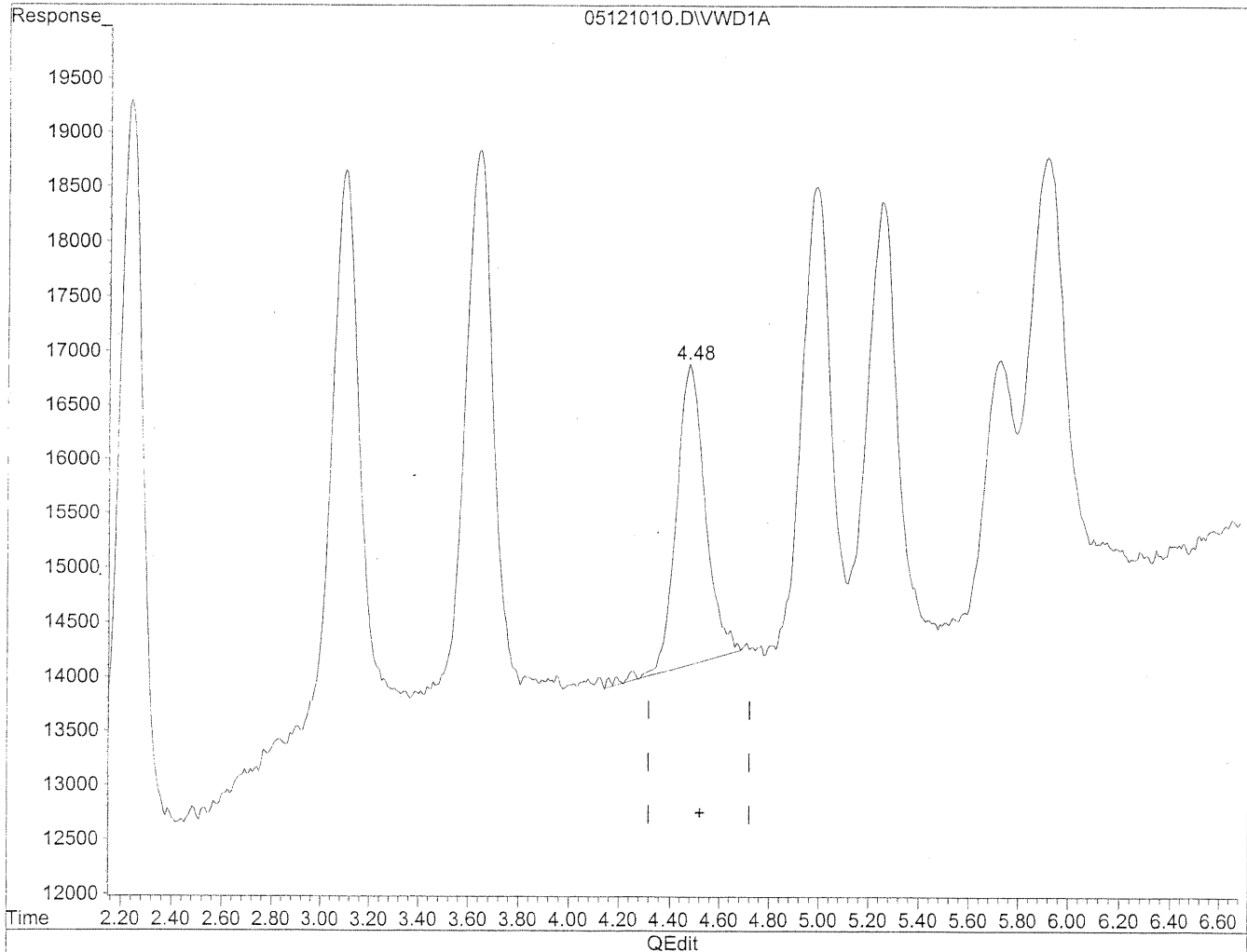
HC 5/19/10

RV
MD 5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:17:16 2010
Response via : Multiple Level Calibration

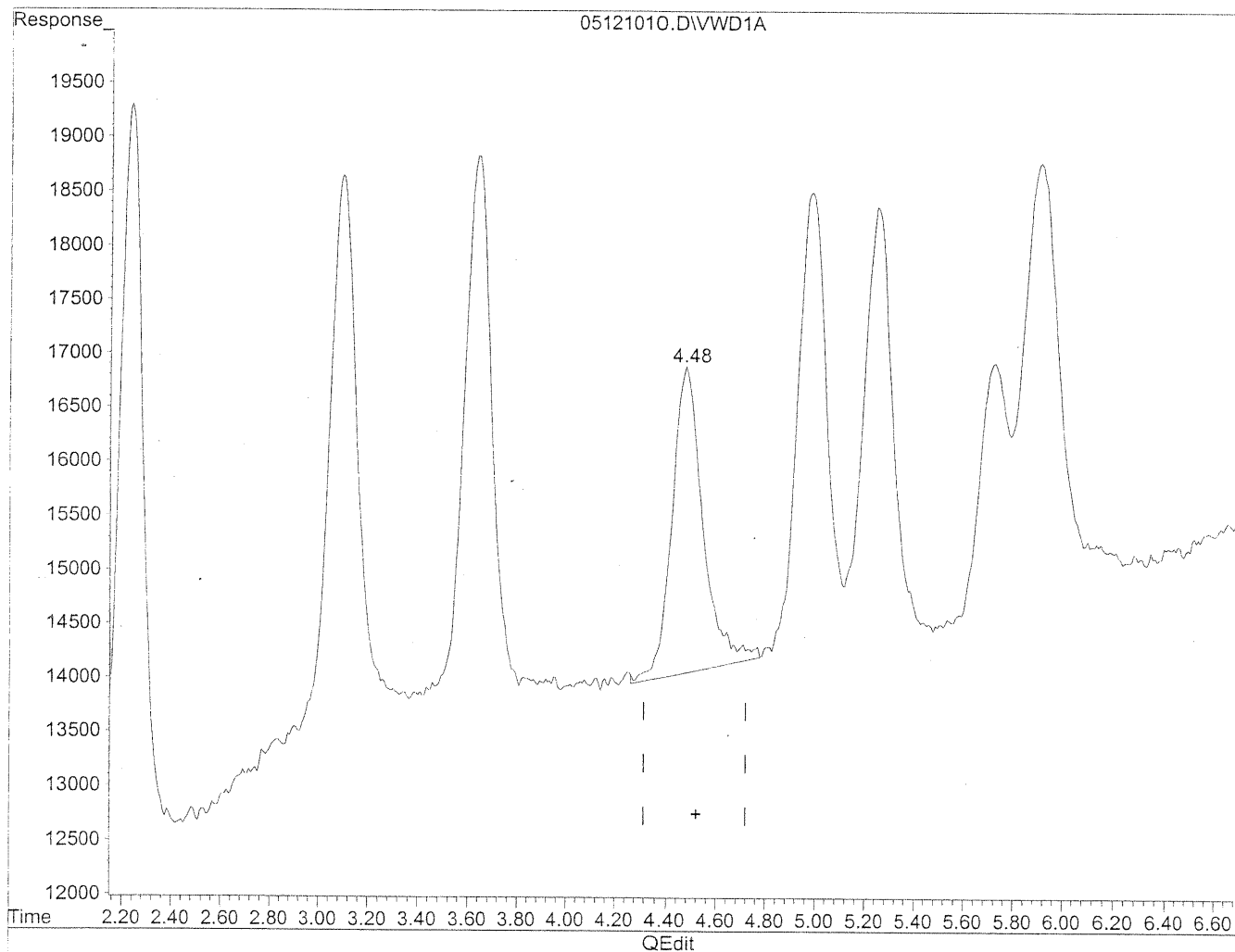


(6) Benzaldehyde
4.48min 84.730ng/ml
response 223983

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:17:16 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.48min 91.850ng/ml m

response 242805

4/19/10

MD

5/13/10

(+) = Expected Retention Time

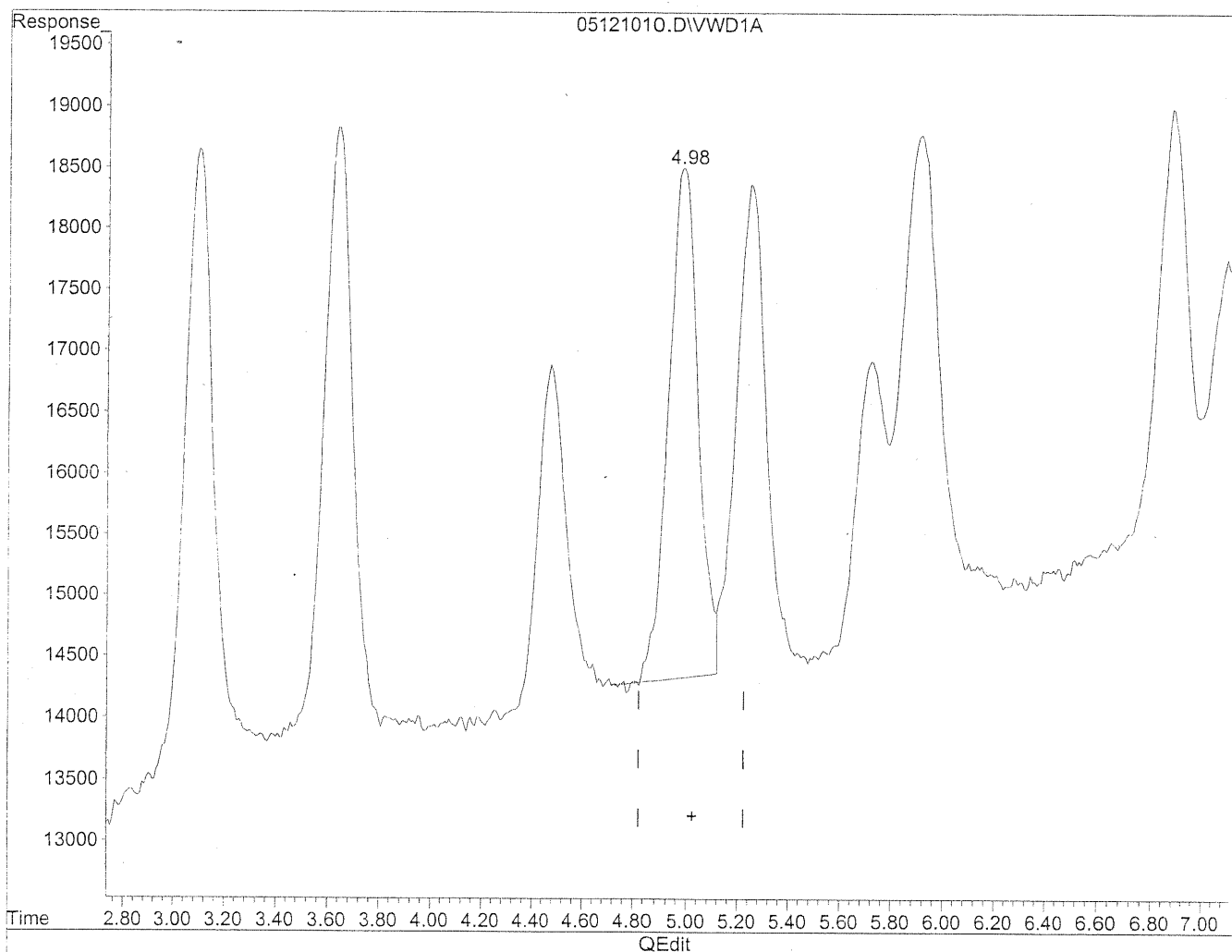
05121010.D TO110510.M

Thu May 13 11:17:44 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.98min 91.641ng/ml

response 331248

(+) = Expected Retention Time

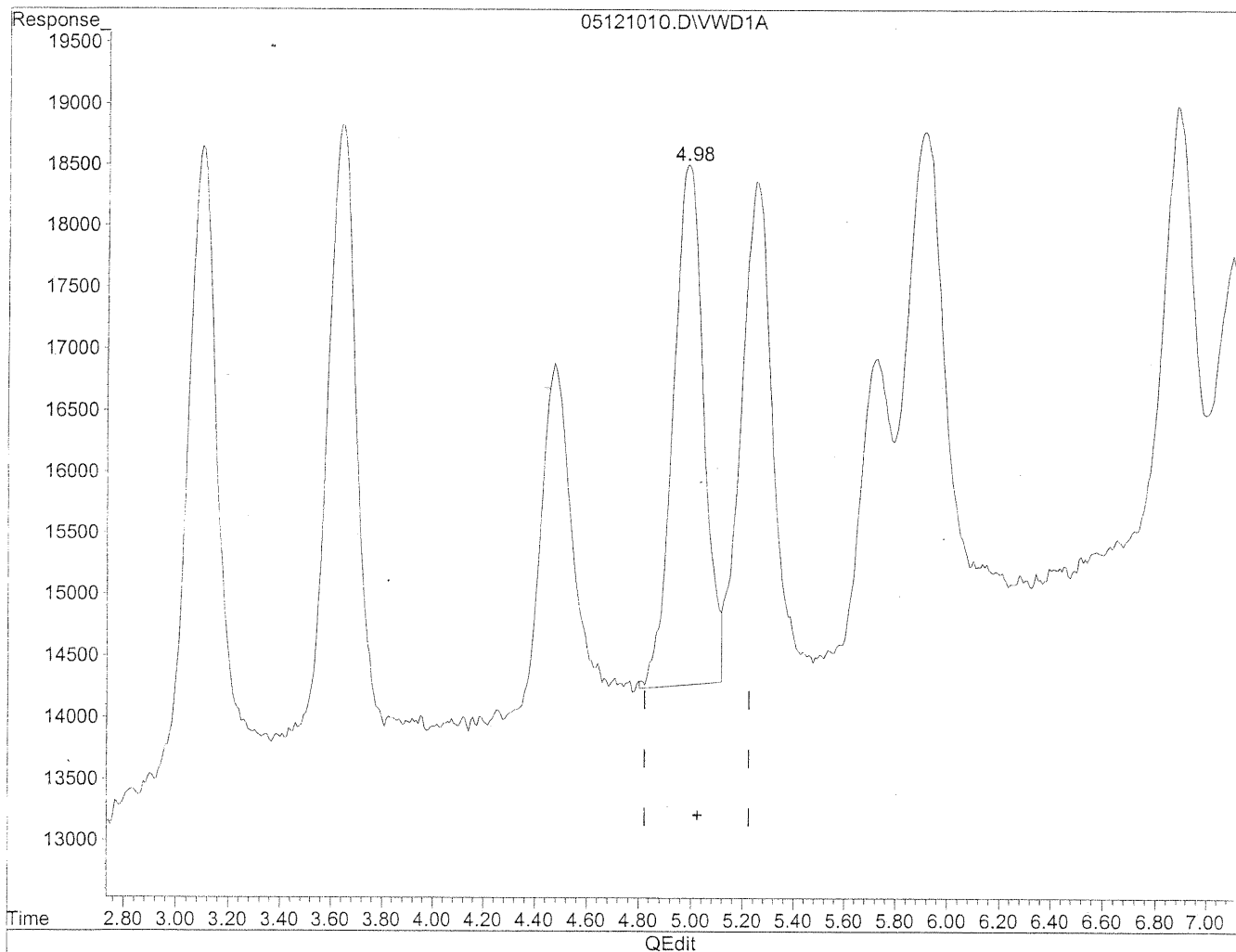
05121010.D TO110510.M

Thu May 13 10:36:40 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
 Acq On : 12-May-2010, 13:50 Operator: MD
 Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



(7) Isovaleraldehyde
 4.98min 94.492ng/ml m
 response 341552

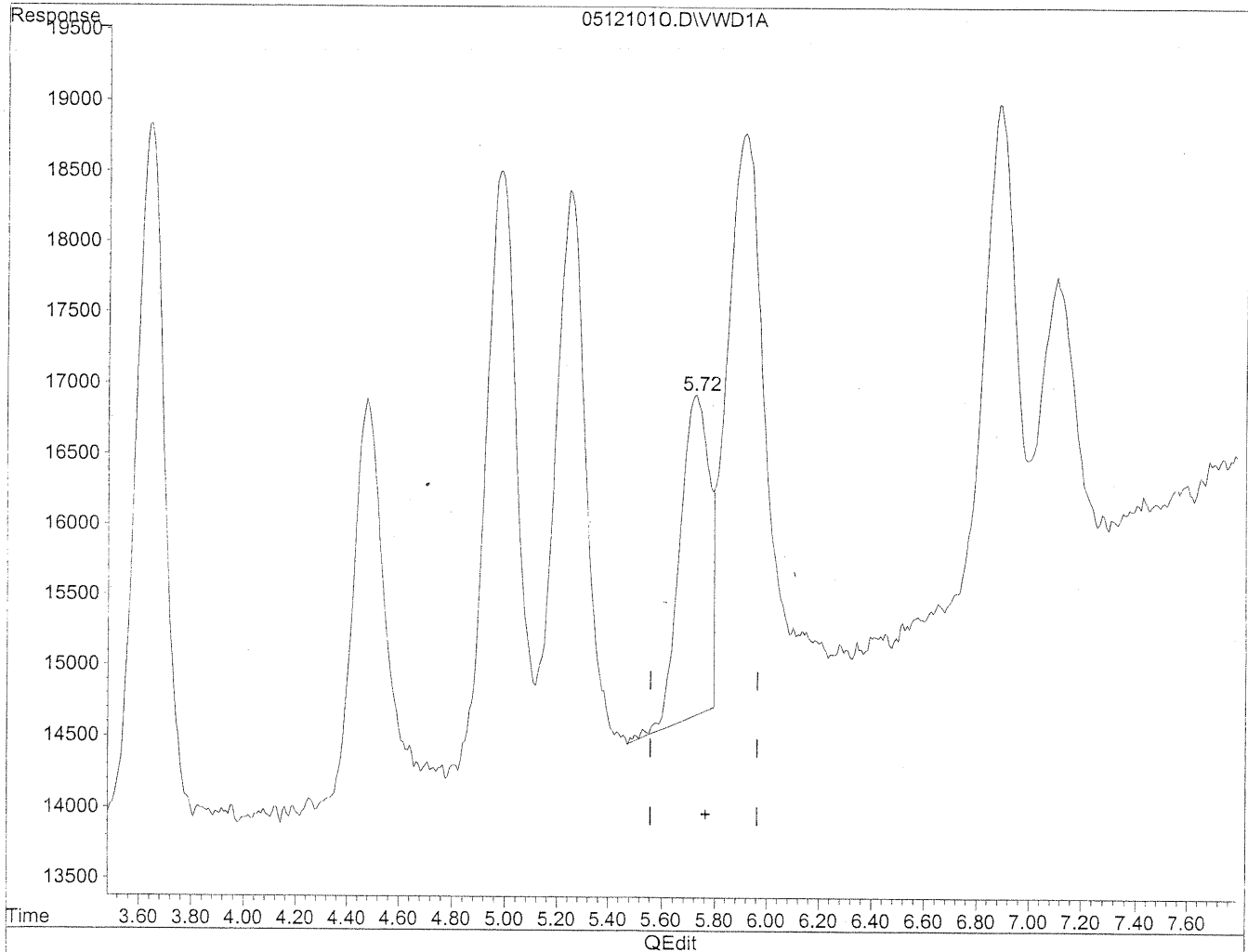
HC 5/19/10

*12
 (M)
 5/13/10*

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:17:16 2010
Response via : Multiple Level Calibration



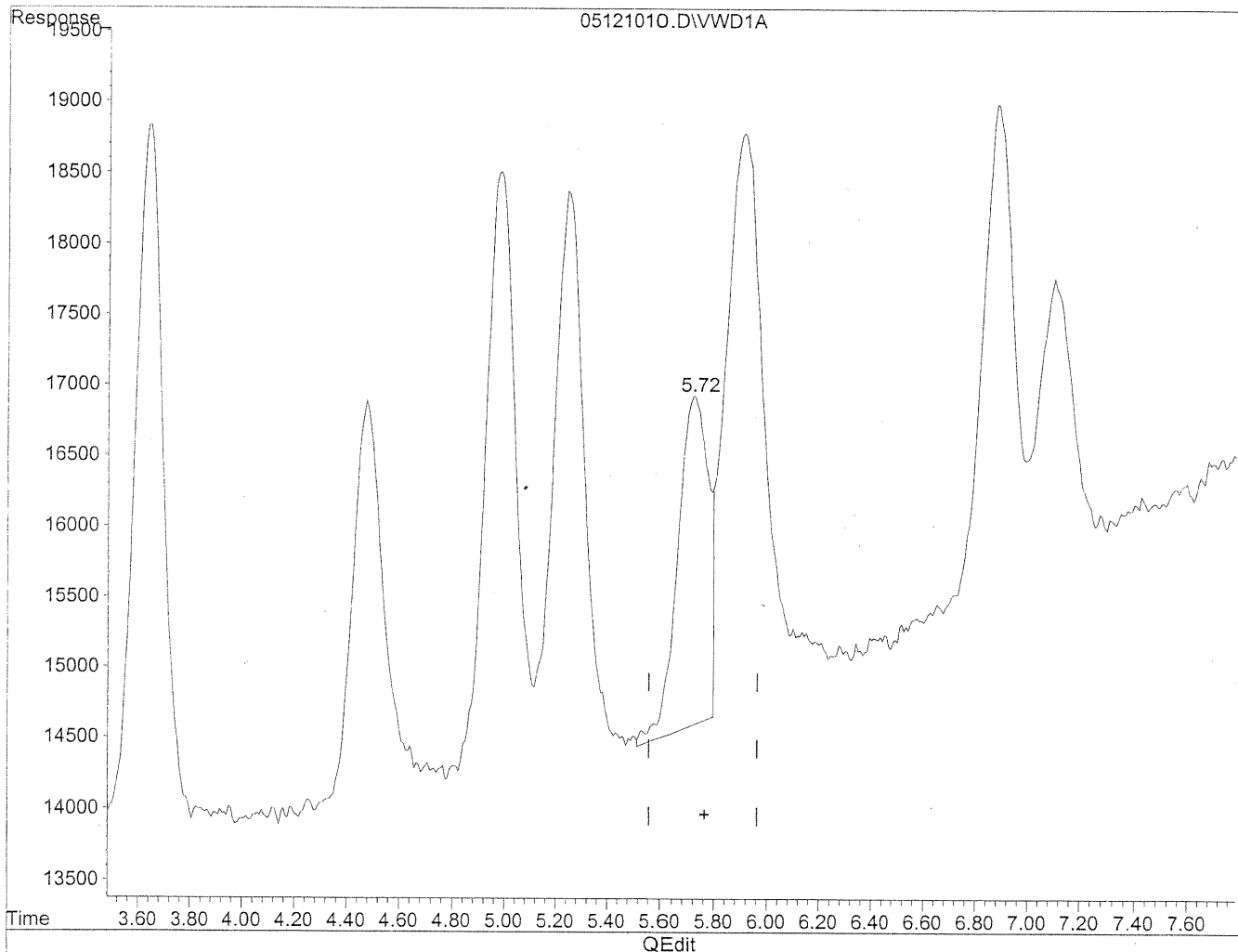
(9) o-Tolualdehyde
5.72min 72.909ng/ml
response 173613

(+) = Expected Retention Time
05121010.D TO110510.M Thu May 13 11:17:50 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:17:16 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

5.72min 78.415ng/ml m

response 186724

pc
5/19/10

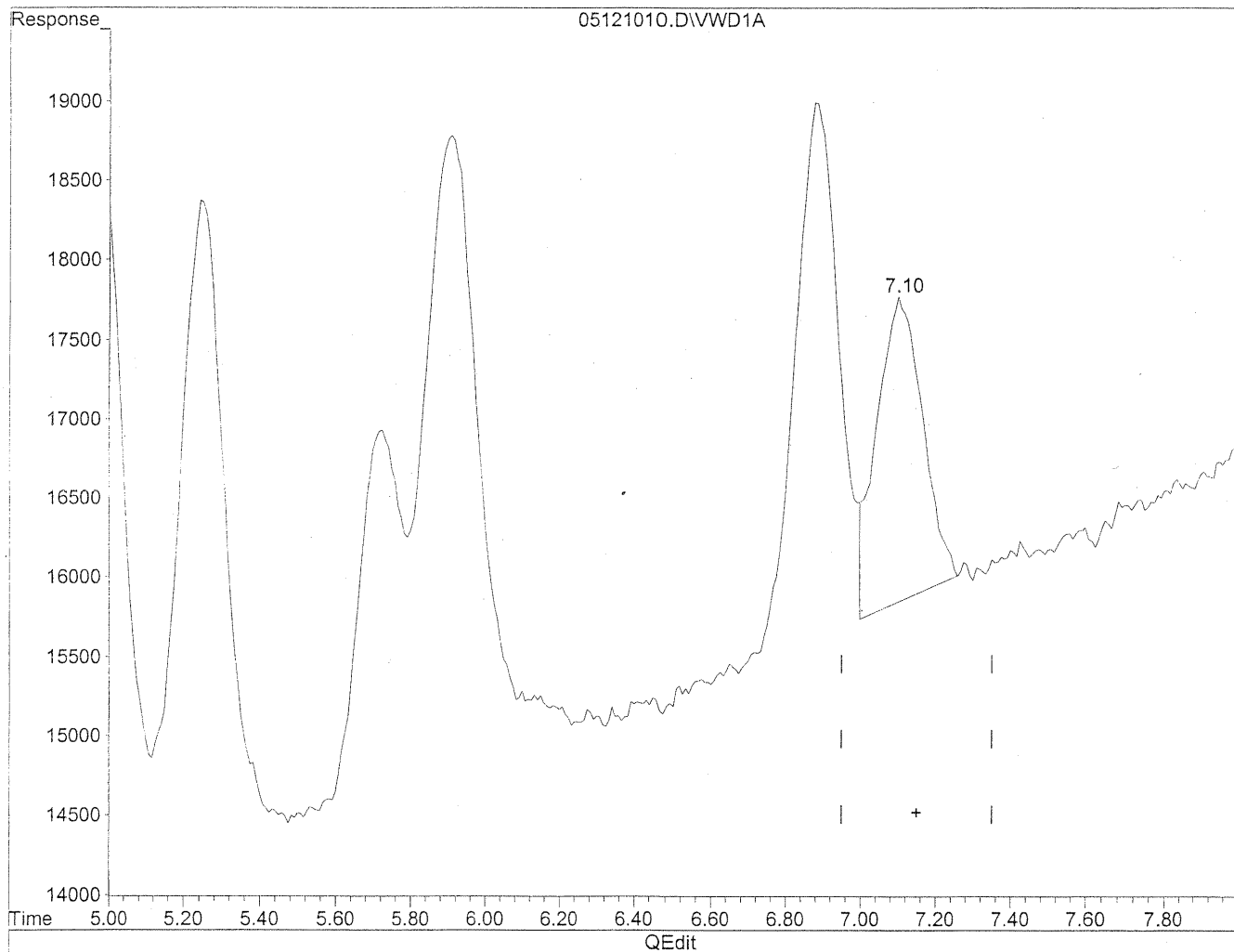
pc
5/13/10

(+) = Expected Retention Time
05121010.D TO110510.M Thu May 13 11:18:00 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
Acq On : 12-May-2010, 13:50 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:17:16 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.10min 97.167ng/ml

response 165947

(+) = Expected Retention Time

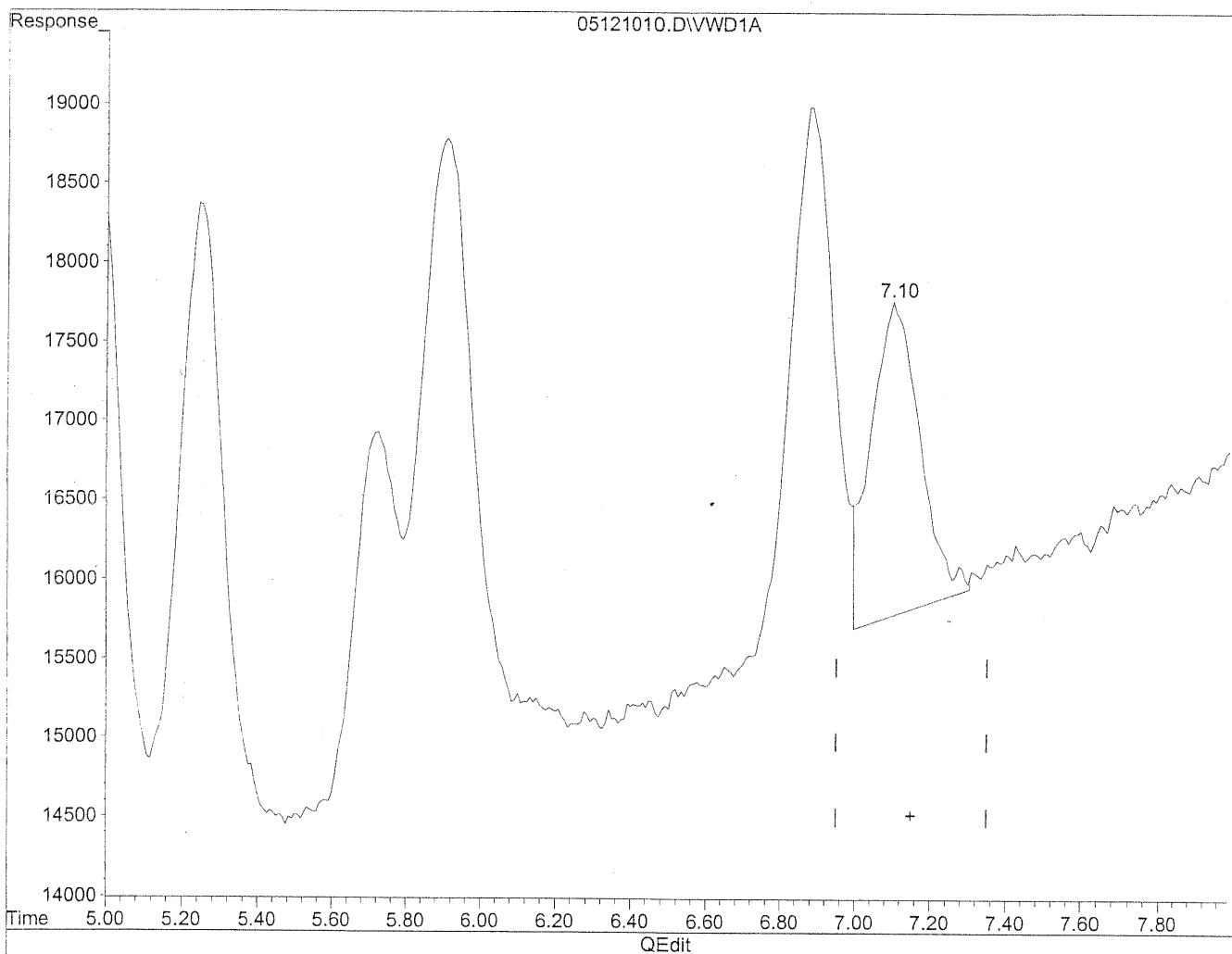
05121010.D TO110510.M

Thu May 13 11:18:13 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121010.D Vial: 127
 Acq On : 12-May-2010, 13:50 Operator: MD
 Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:36 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 11:17:16 2010
 Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.10min 104.874ng/ml m

response 179109

HC
5/19/10

PC
5/13/10

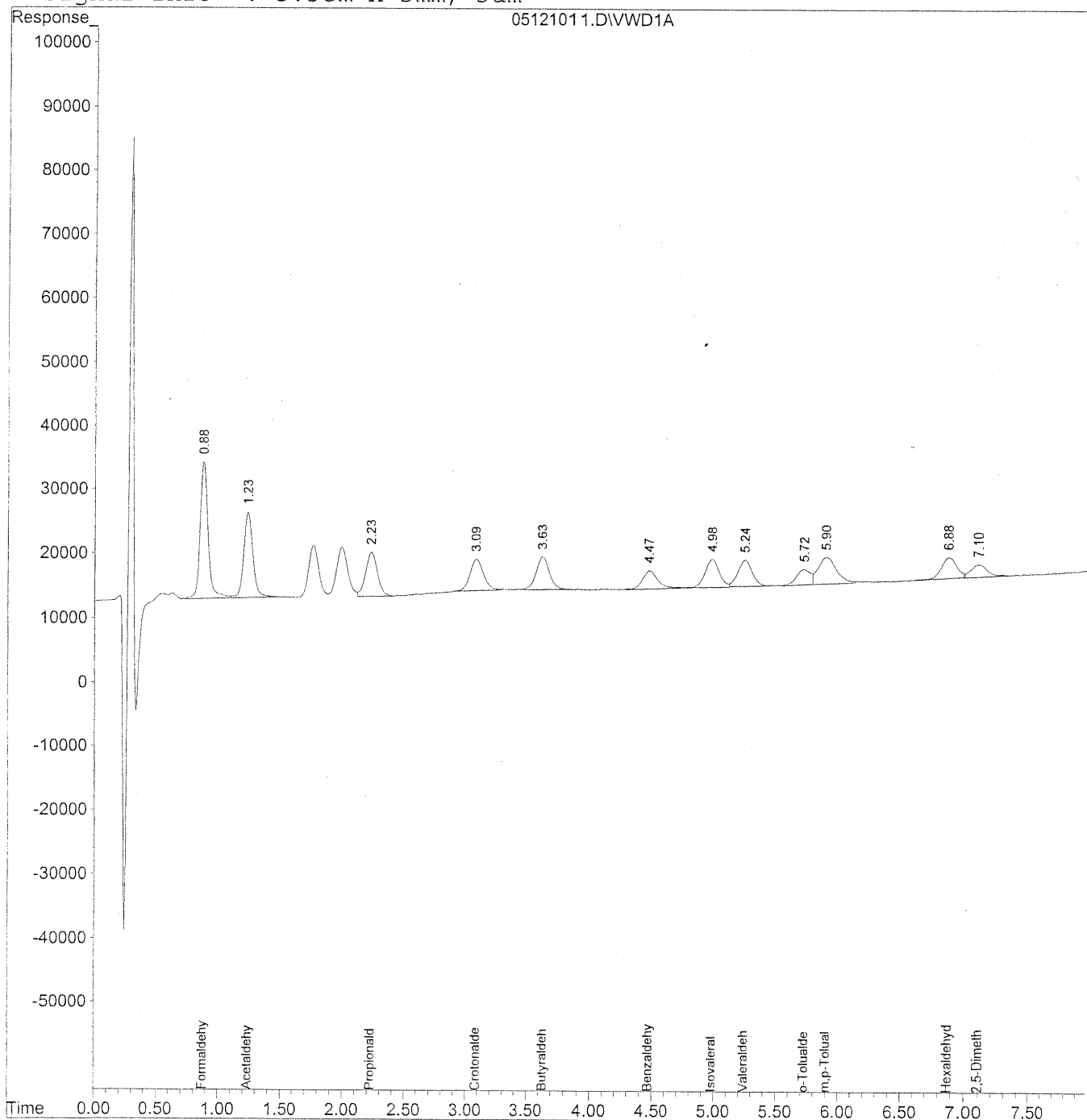
(+) = Expected Retention Time
 05121010.D TO110510.M Thu May 13 11:18:20 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
 Acq On : 12-May-2010, 14:01 Operator: MD
 Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:38 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
Acq On : 12-May-2010, 14:01 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:38 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

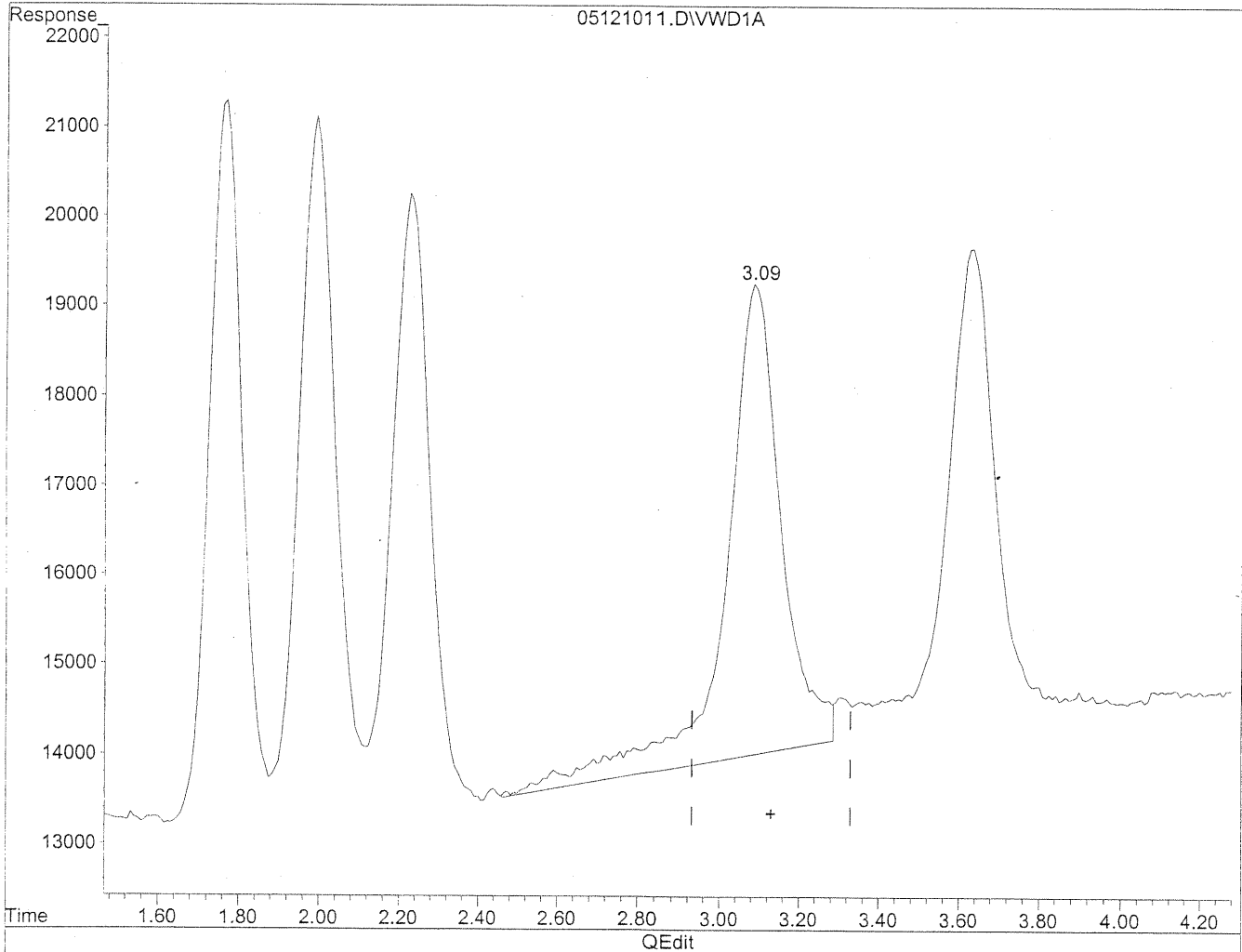
Compound		R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.88	951325	103.772	ng/ml
2)	Acetaldehyde	1.24	670834	101.776	ng/ml
3)	Propionaldehyde	2.23	452686	95.793	ng/ml
4)	Crotonaldehyde	3.09	375949	92.828	ng/mlm
5)	Butyraldehyde	3.63	388508	96.604	ng/mlm
6)	Benzaldehyde	4.47	243134	92.769	ng/mlm
7)	Isovaleraldehyde	4.98	348203	96.526	ng/mlm
8)	Valeraldehyde	5.25	324388	101.829	ng/ml
9)	o-Tolualdehyde	5.72	186168	78.003	ng/ml
10)	m,p-Tolualdehyde	5.90	425466	197.040	ng/ml
11)	Hexaldehyde	6.88	265000	85.649	ng/ml
12)	2,5-Dimethylbenzaldehyde	7.10	171438	99.780	ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
Acq On : 12-May-2010, 14:01 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(4) Crotonaldehyde

3.09min 125.720ng/ml

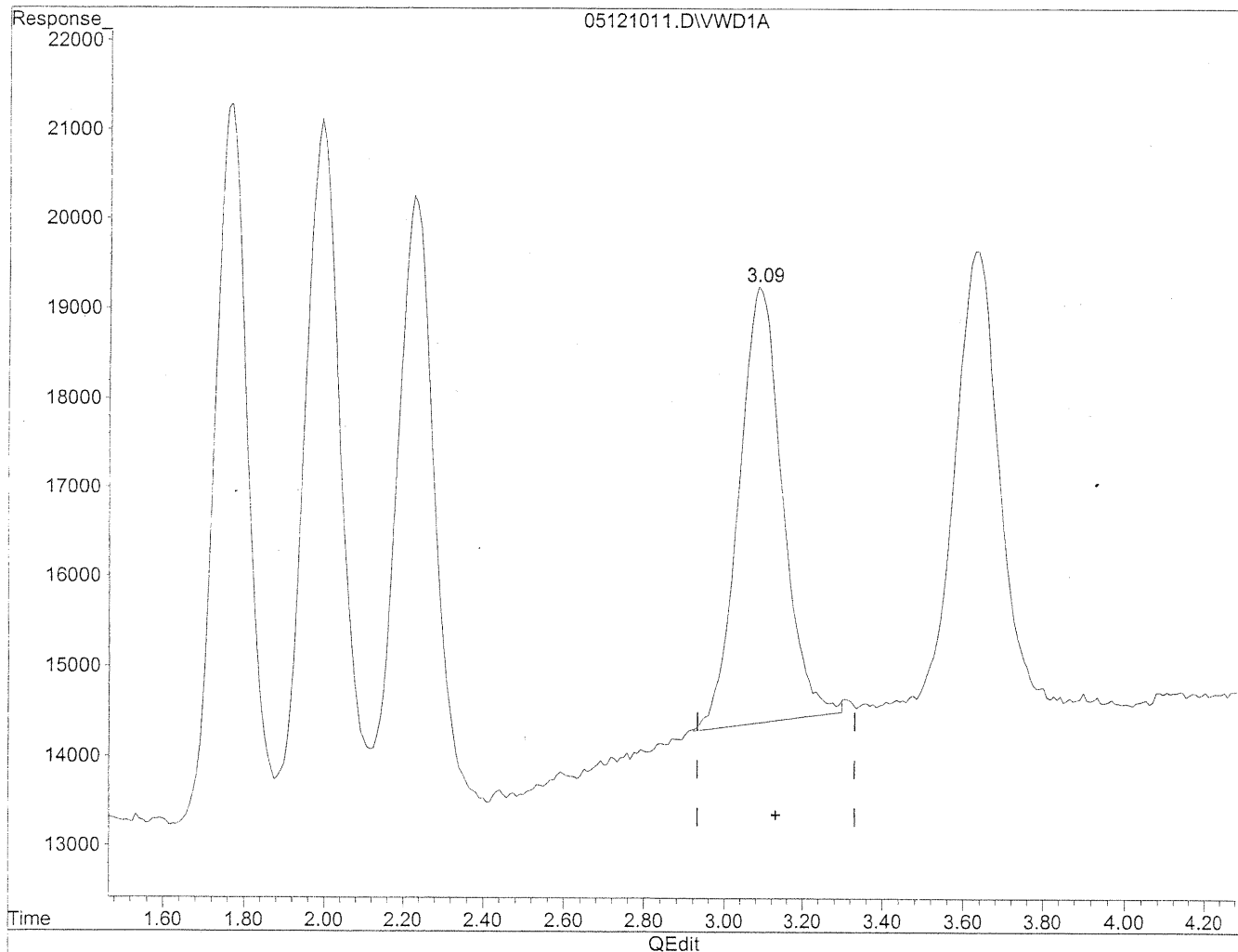
response 509157

(+) = Expected Retention Time
05121011.D TO110510.M Thu May 13 10:37:16 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
 Acq On : 12-May-2010, 14:01 Operator: MD
 Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



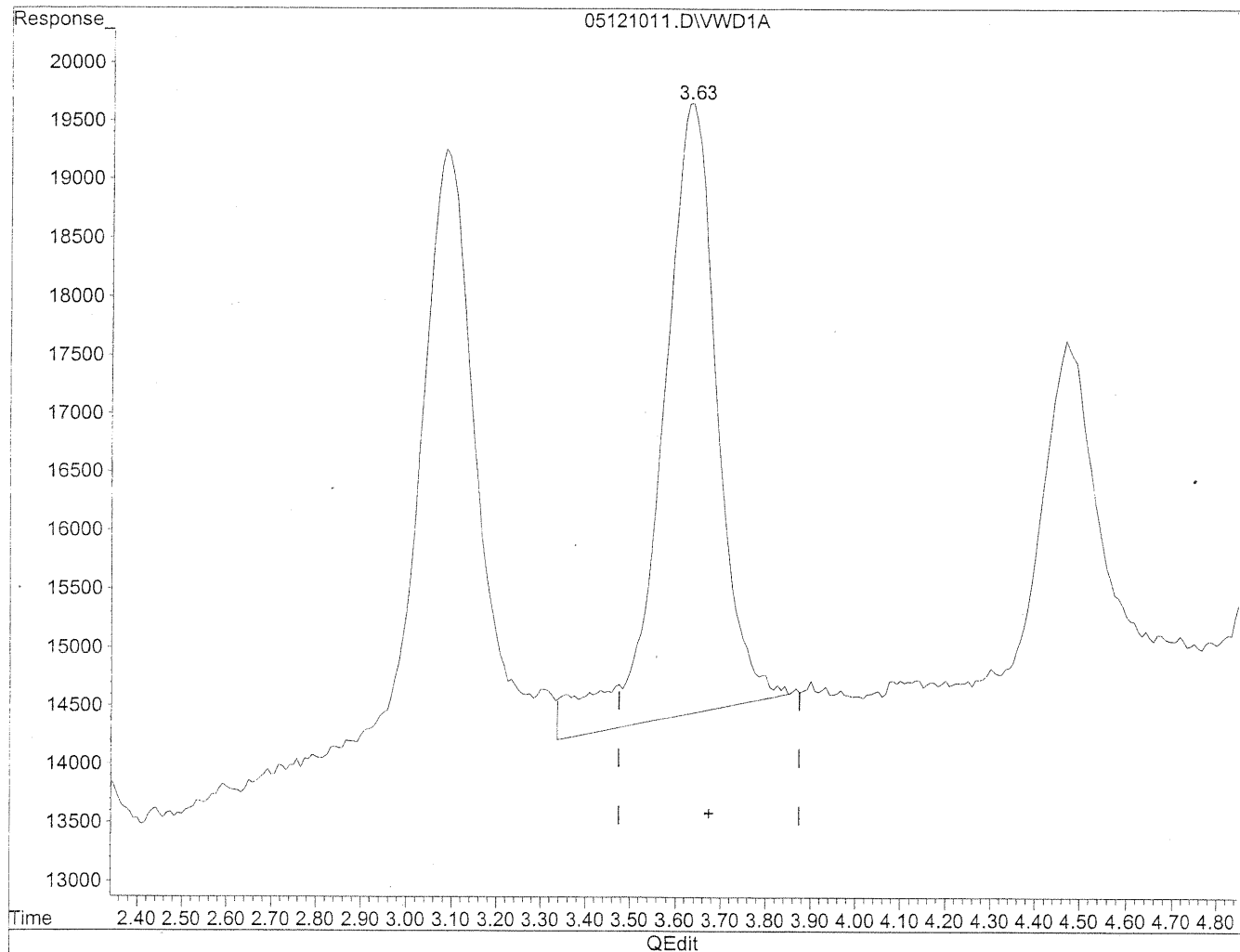
(4) Crotonaldehyde
 3.09min 92.828ng/ml m
 response 375949

Handwritten notes:
 xlc 5/13/10
 72
 (circled) 5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
Acq On : 12-May-2010, 14:01 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.63min 109.814ng/ml

response 441632

(+) = Expected Retention Time

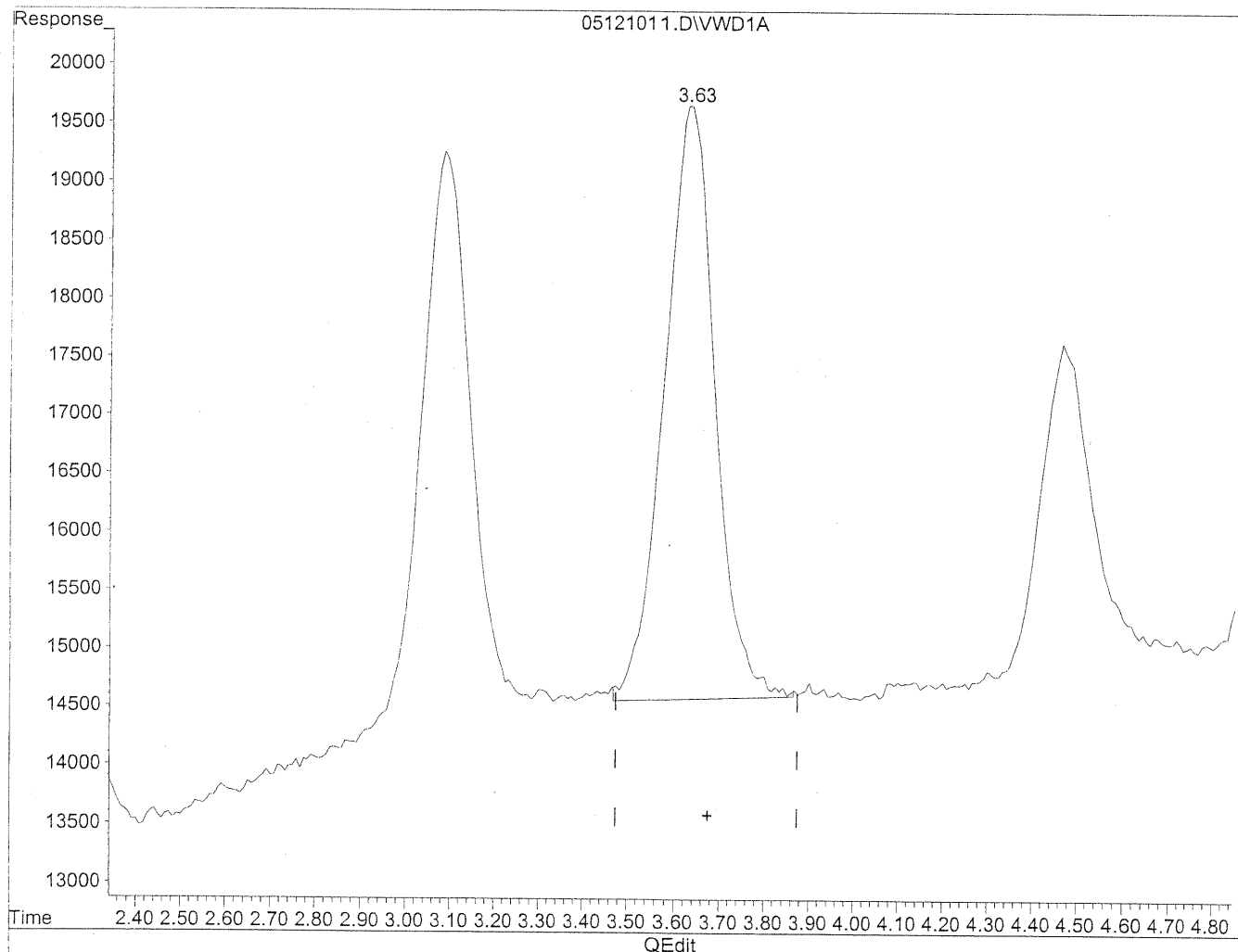
05121011.D TO110510.M

Thu May 13 10:37:23 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
Acq On : 12-May-2010, 14:01 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.63min 96.604ng/ml m

response 388508

HC
5/13/10

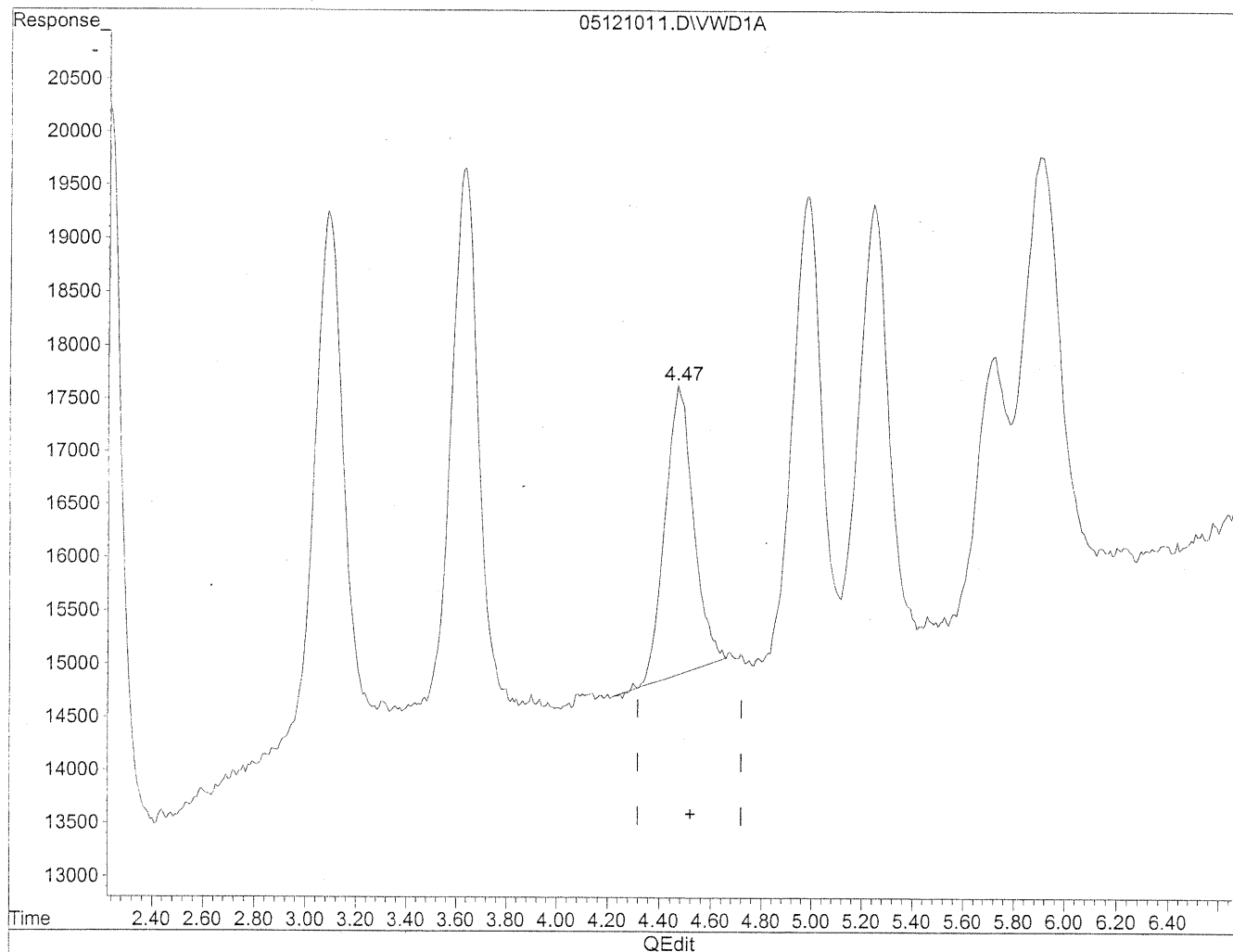
TZ
MD
5/13/10

(+) = Expected Retention Time
05121011.D TO110510.M Thu May 13 10:37:27 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
Acq On : 12-May-2010, 14:01 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.47min 78.712ng/ml

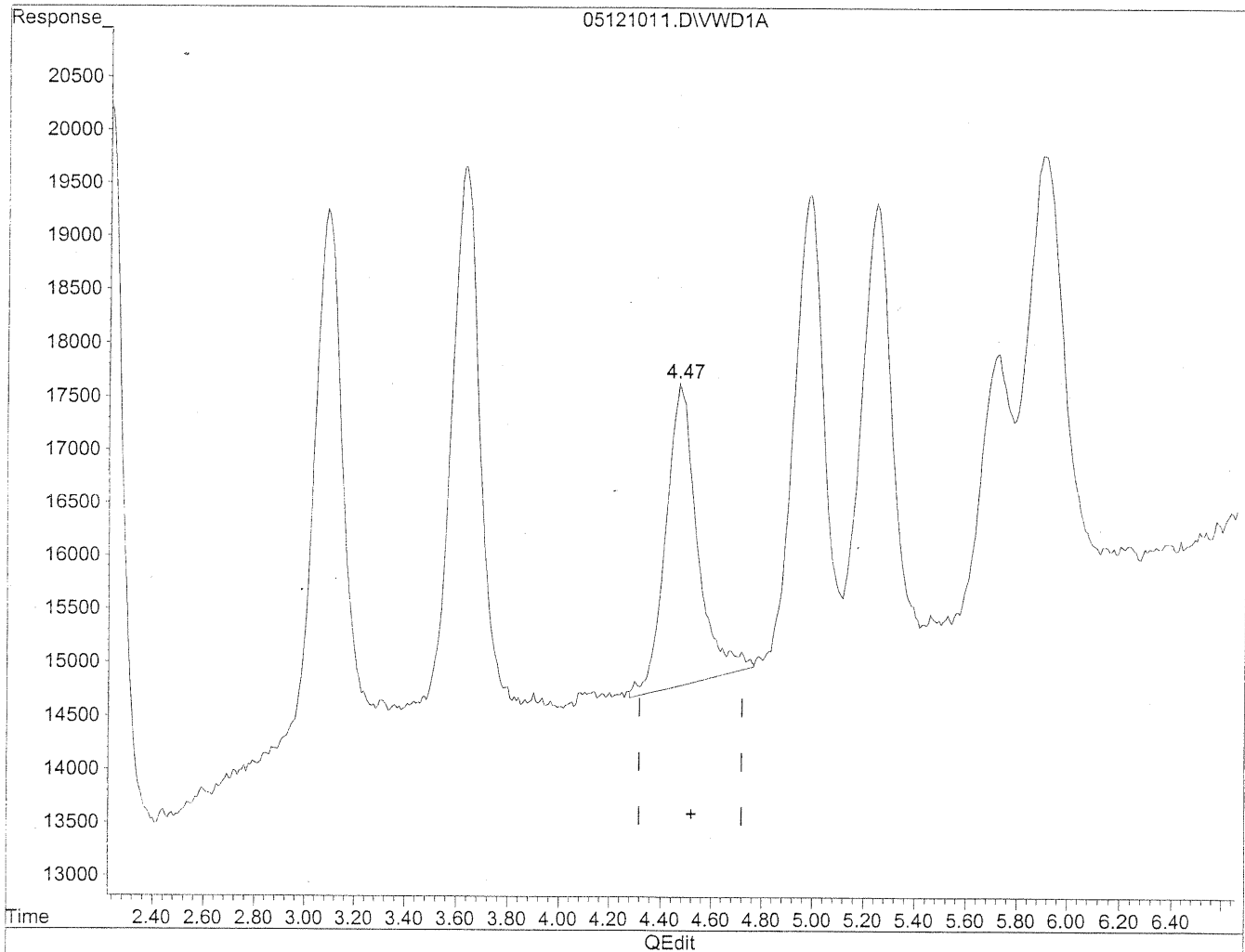
response 206293

(+) = Expected Retention Time
05121011.D TO110510.M Thu May 13 10:37:35 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
Acq On : 12-May-2010, 14:01 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.47min 92.769ng/ml m

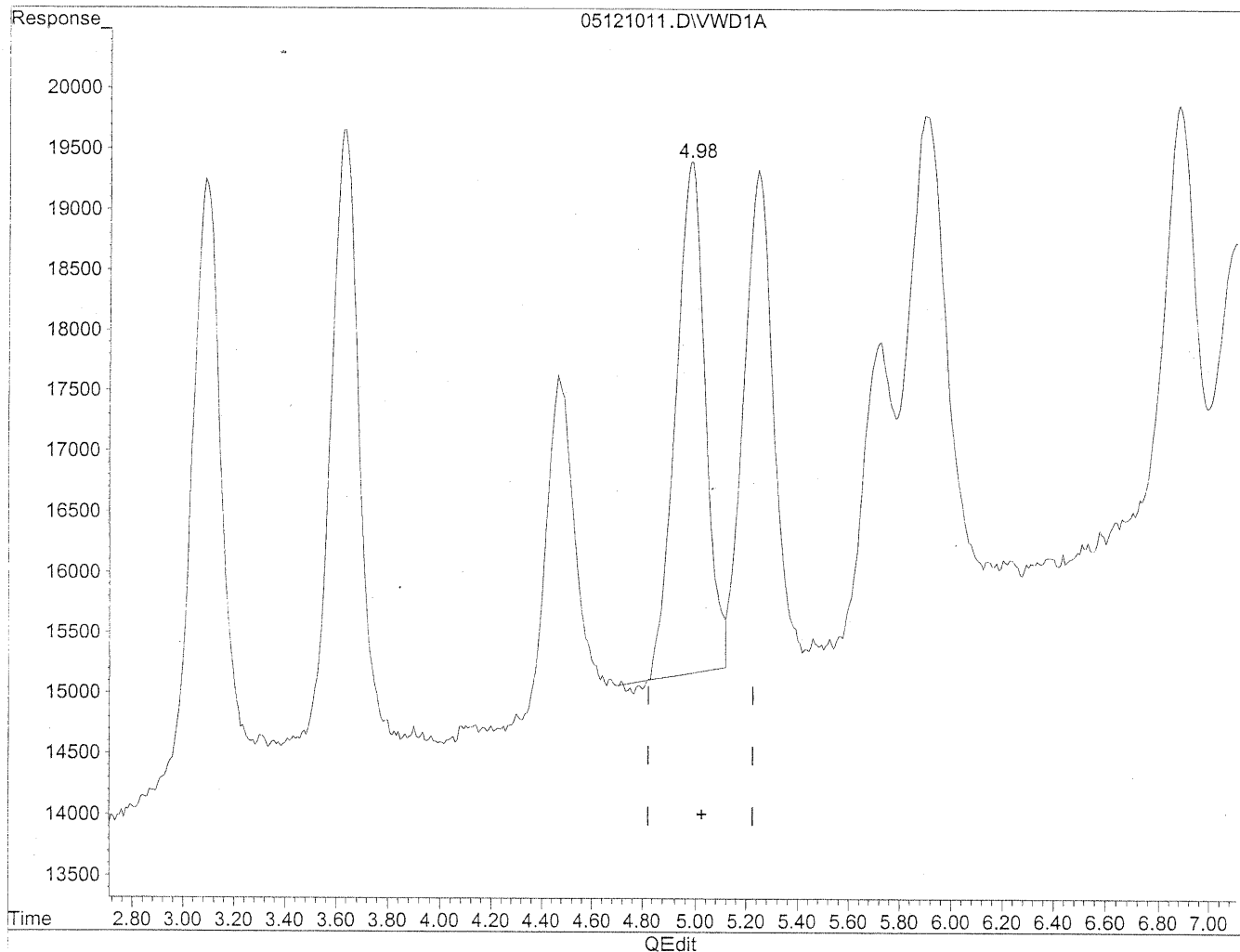
response 243134

Handwritten notes:
12
5/13/10
m
5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
 Acq On : 12-May-2010, 14:01 Operator: MD
 Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



(7) Isovaleraldehyde

4.98min 90.625ng/ml

response 326919

(+) = Expected Retention Time

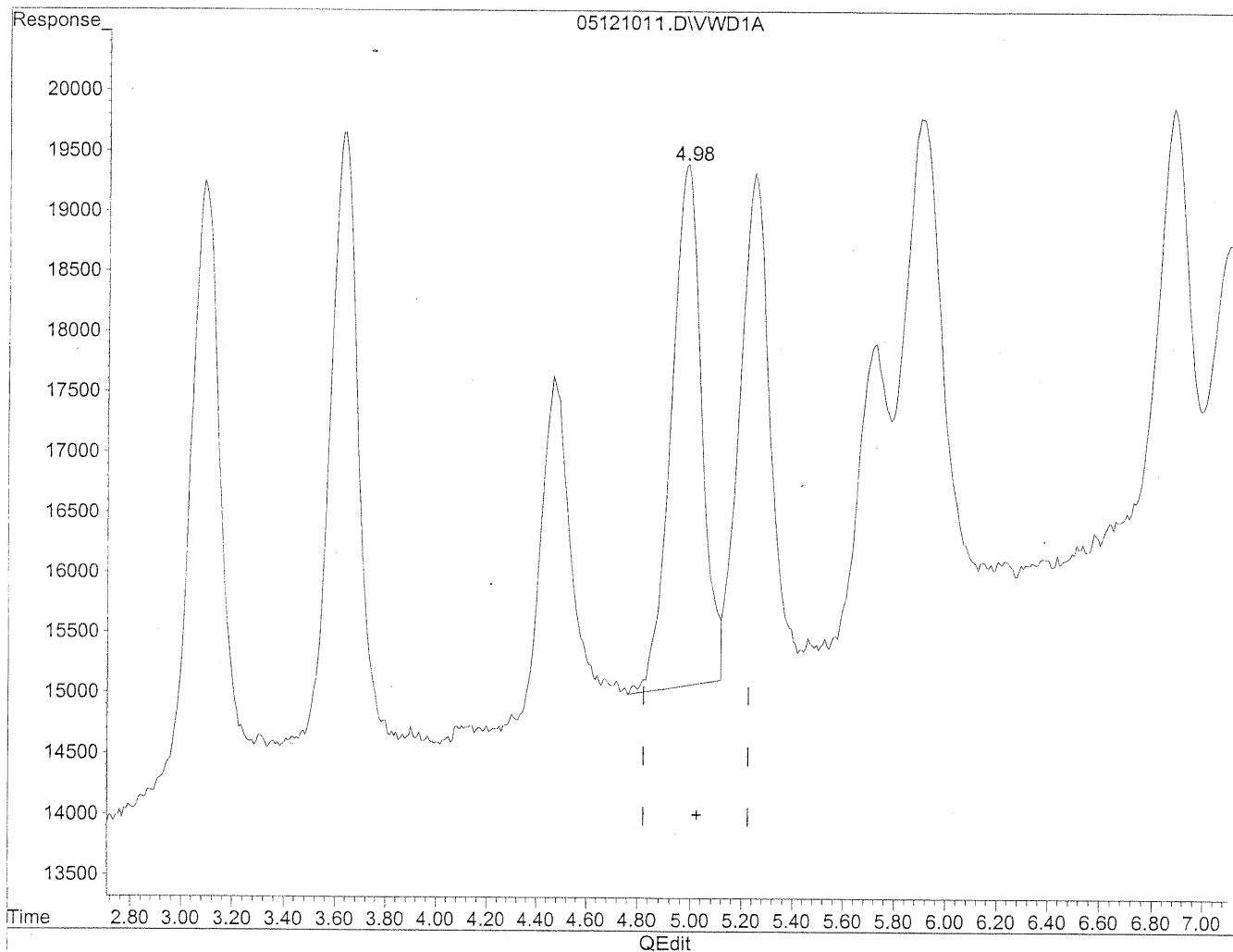
05121011.D TO110510.M

Thu May 13 10:37:45 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
 Acq On : 12-May-2010, 14:01 Operator: MD
 Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 10:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



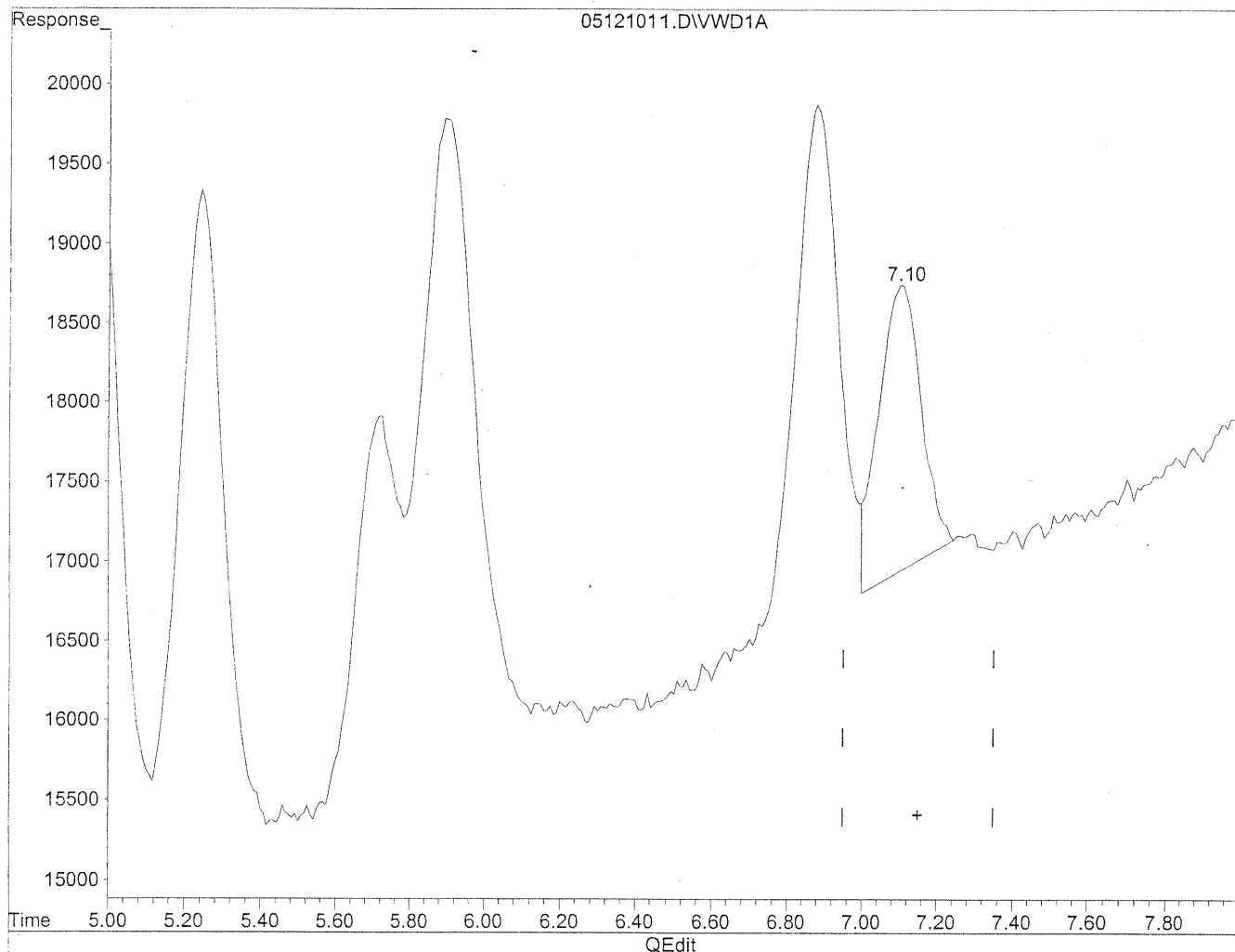
(7) Isovaleraldehyde
 4.98min 96.526ng/ml m
 response 348203

Handwritten notes:
 HC 7/19/10
 R2
 (mm)
 5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
Acq On : 12-May-2010, 14:01 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.11min 83.492ng/ml

response 143452

(+) = Expected Retention Time

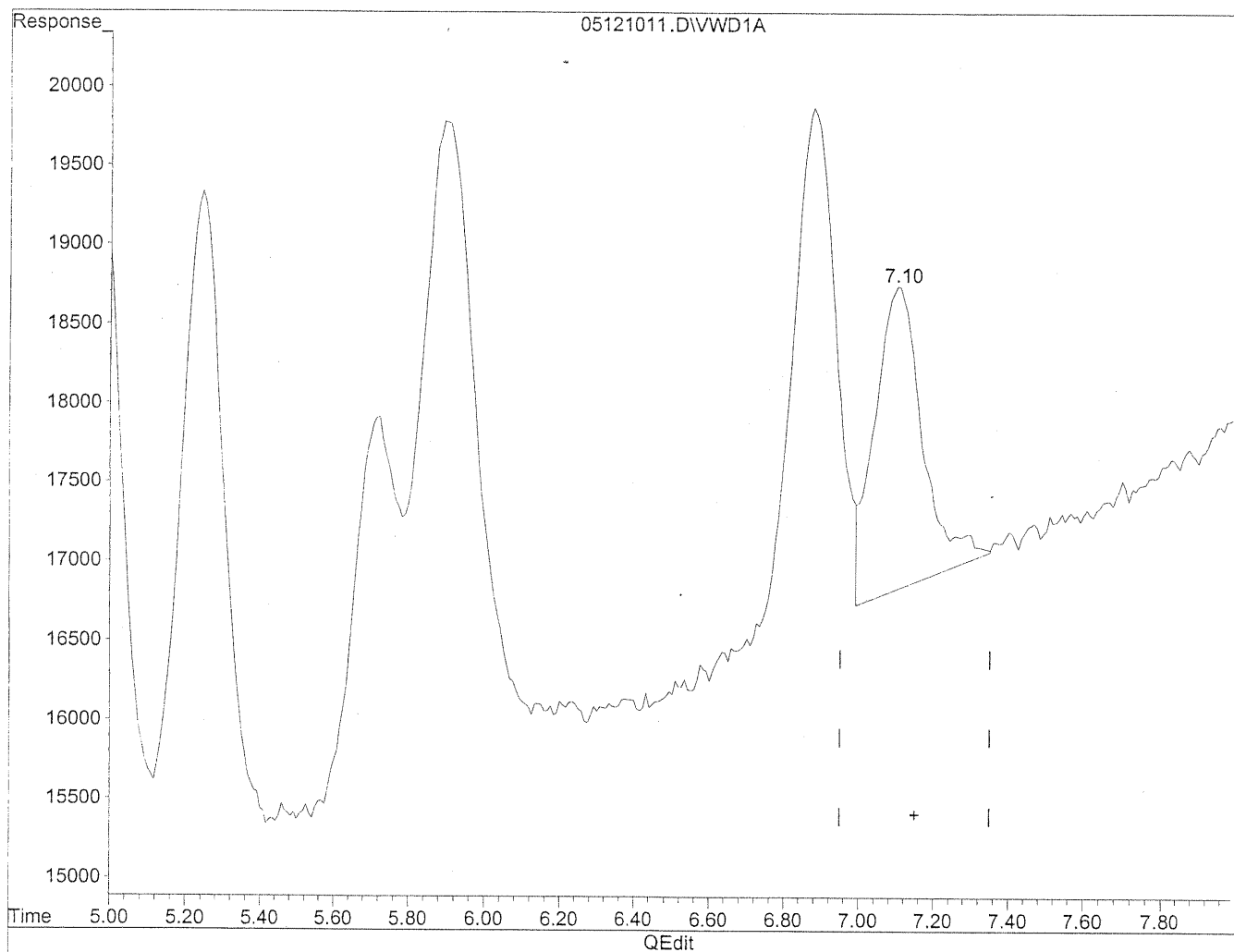
05121011.D TO110510.M

Thu May 13 10:38:04 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121011.D Vial: 127
Acq On : 12-May-2010, 14:01 Operator: MD
Sample : 100ng/ml TO-11A S21-03091009 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 10:37 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.10min 99.780ng/ml m

response 171438

He
5/17/10

RV
MD
5/13/10

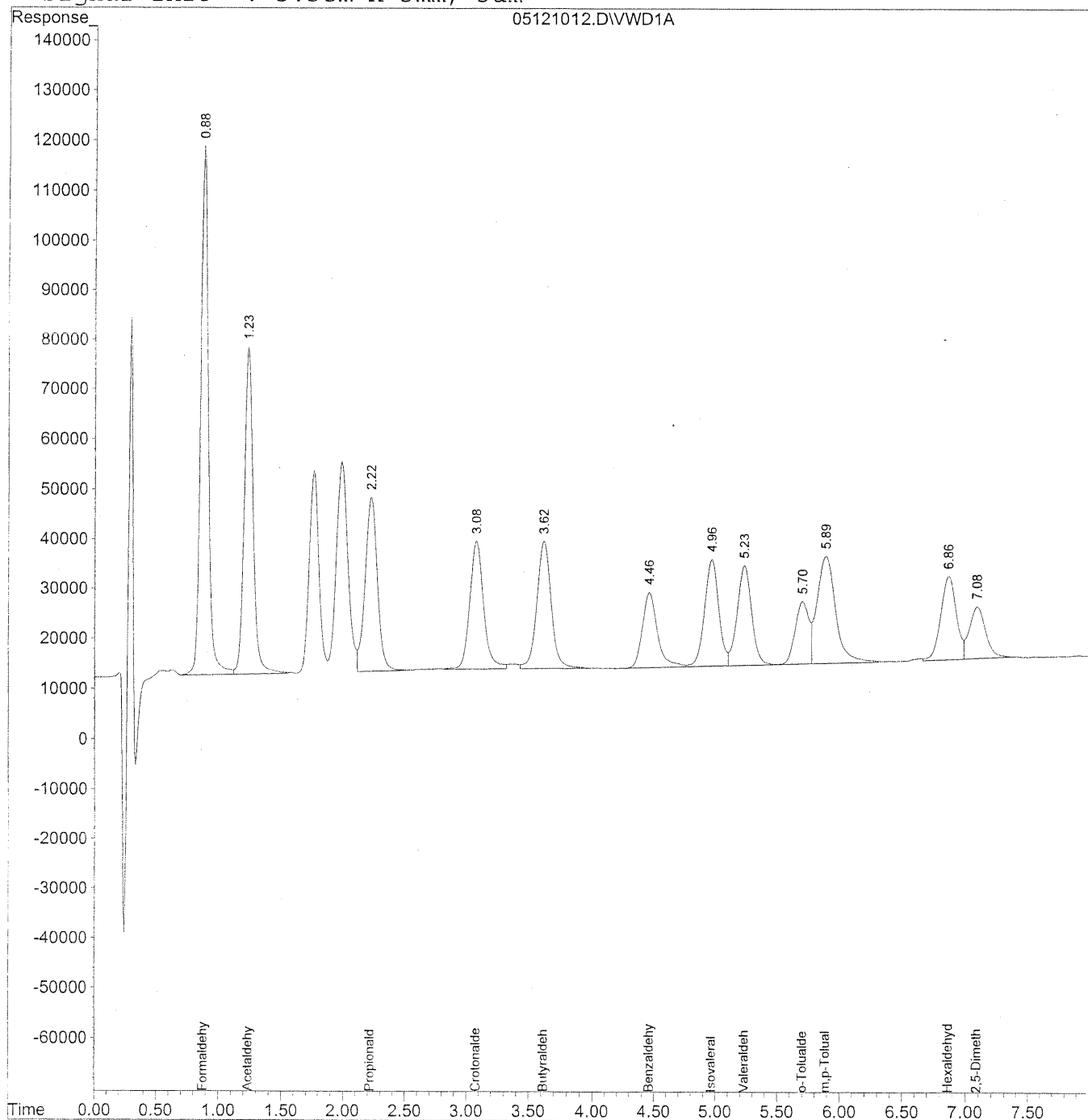
(+) = Expected Retention Time
05121011.D TO110510.M Thu May 13 10:38:12 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121012.D Vial: 128
 Acq On : 12-May-2010, 14:11 Operator: MD
 Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:22 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121012.D Vial: 128
Acq On : 12-May-2010, 14:11 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:22 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

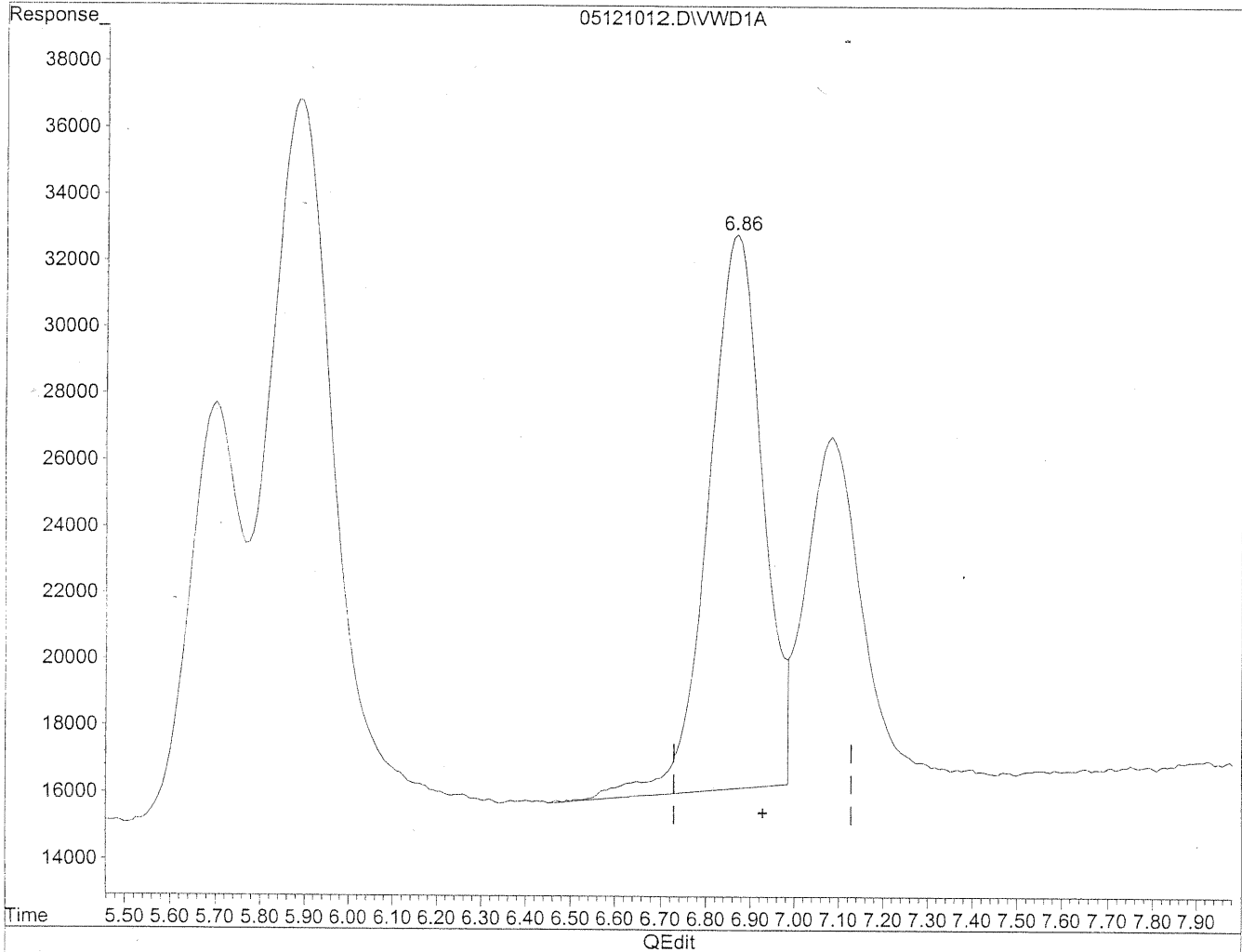
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	4495617	481.698 ng/ml
2) Acetaldehyde	1.23	3259809	483.998 ng/ml
3) Propionaldehyde	2.22	2404725	494.618 ng/ml
4) Crotonaldehyde	3.08	2002003	491.187 ng/ml
5) Butyraldehyde	3.62	2023401	502.392 ng/ml
6) Benzaldehyde	4.46	1278175	477.723 ng/ml
7) Isovaleraldehyde	4.97	1711547	482.803 ng/ml
8) Valeraldehyde	5.23	1638320	489.078 ng/ml
9) o-Tolualdehyde	5.70	938923	463.756 ng/ml
10) m,p-Tolualdehyde	5.89	2231369	955.961 ng/ml
11) Hexaldehyde	6.86	1388874	484.457 ng/mlm
12) 2,5-Dimethylbenzaldehyde	7.09	900771	472.160 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121012.D Vial: 128
Acq On : 12-May-2010, 14:11 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.87min 492.780ng/ml

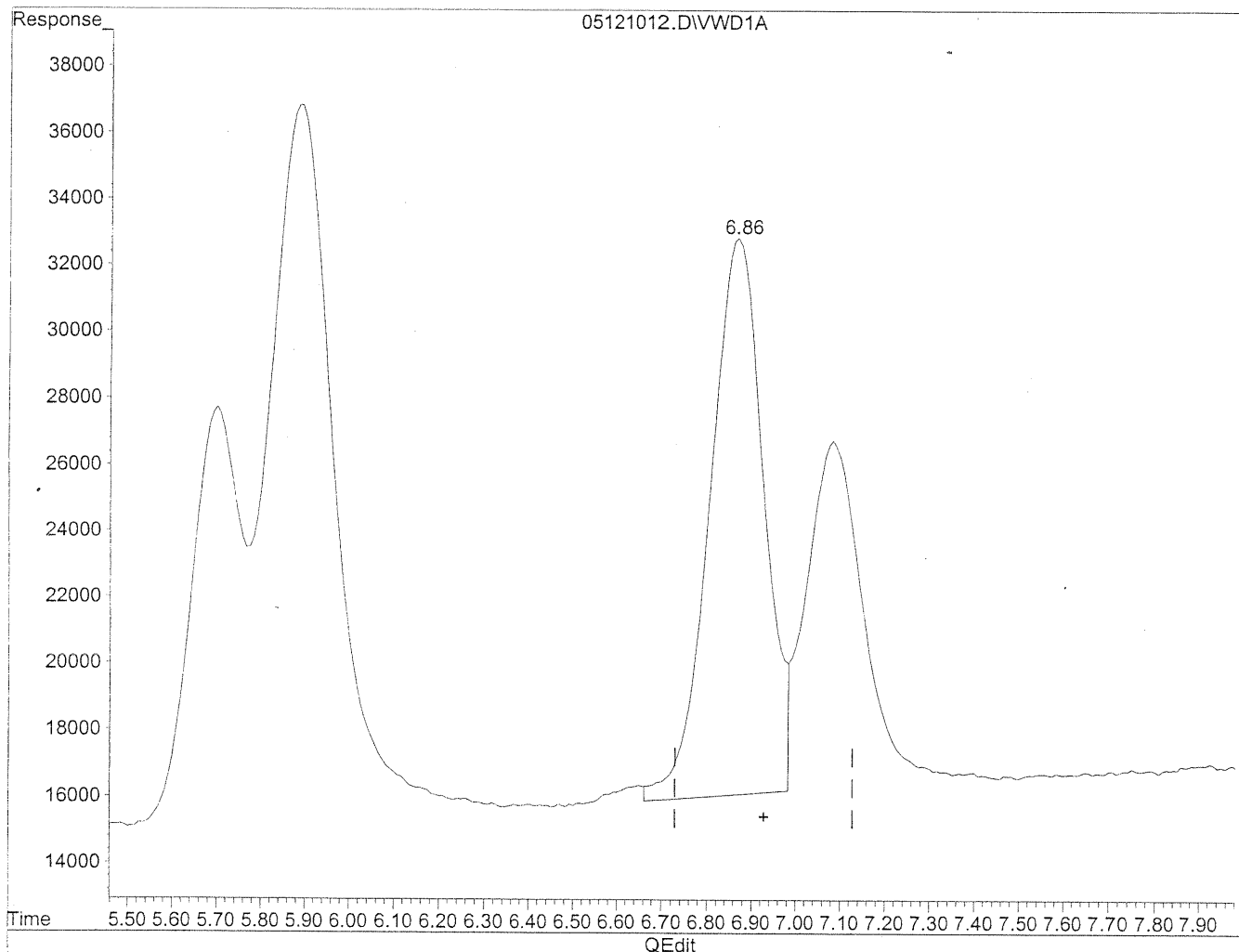
response 1412737

(+) = Expected Retention Time
05121012.D TO110510.M Thu May 13 11:21:56 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121012.D Vial: 128
Acq On : 12-May-2010, 14:11 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:21 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.86min 484.457ng/ml m

response 1388874

HC
5/19/10

dh
5/13/10

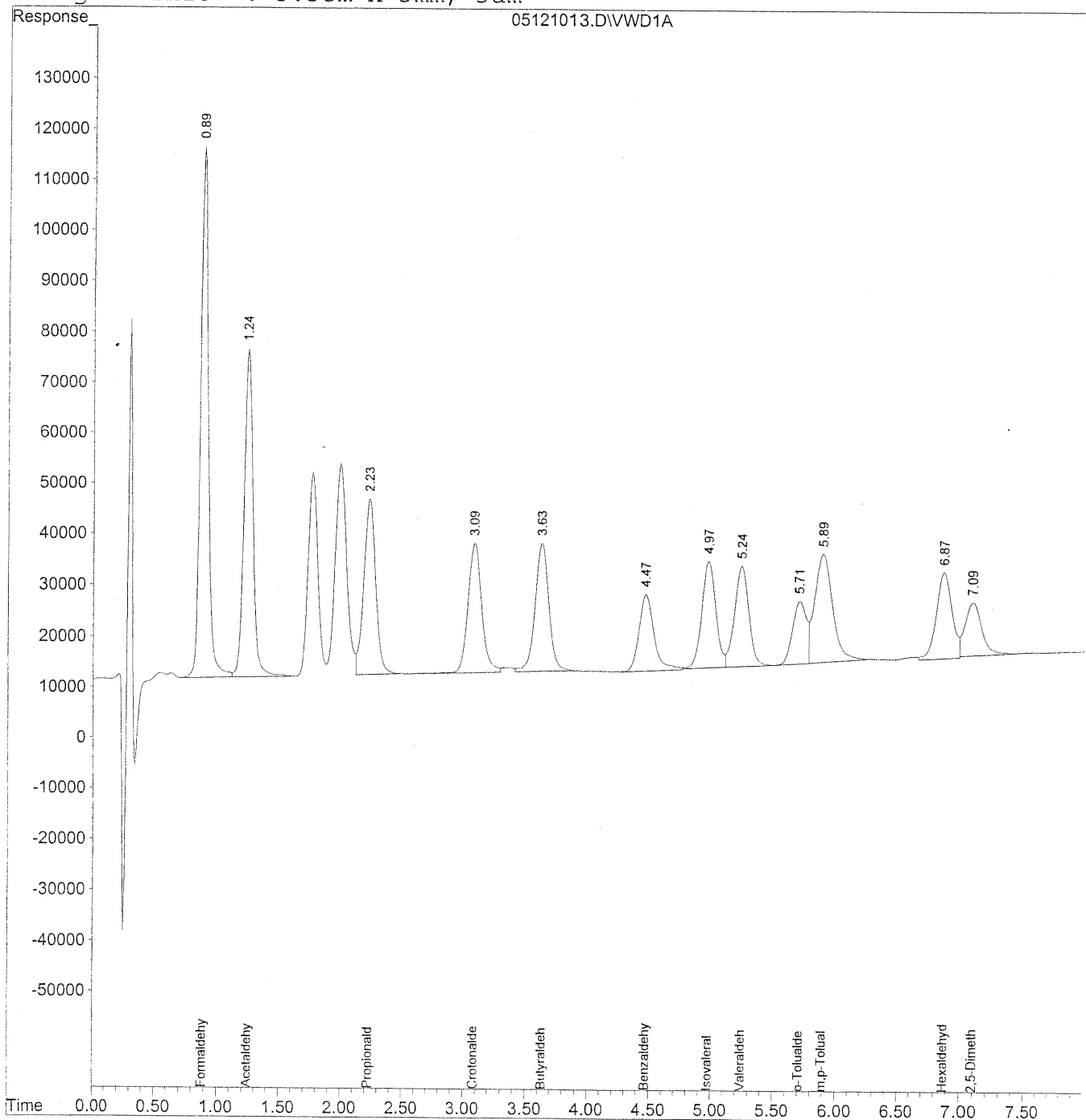
(+) = Expected Retention Time
05121012.D TO110510.M Thu May 13 11:22:06 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121013.D Vial: 128
 Acq On : 12-May-2010, 14:22 Operator: MD
 Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:22 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121013.D Vial: 128
Acq On : 12-May-2010, 14:22 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:22 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

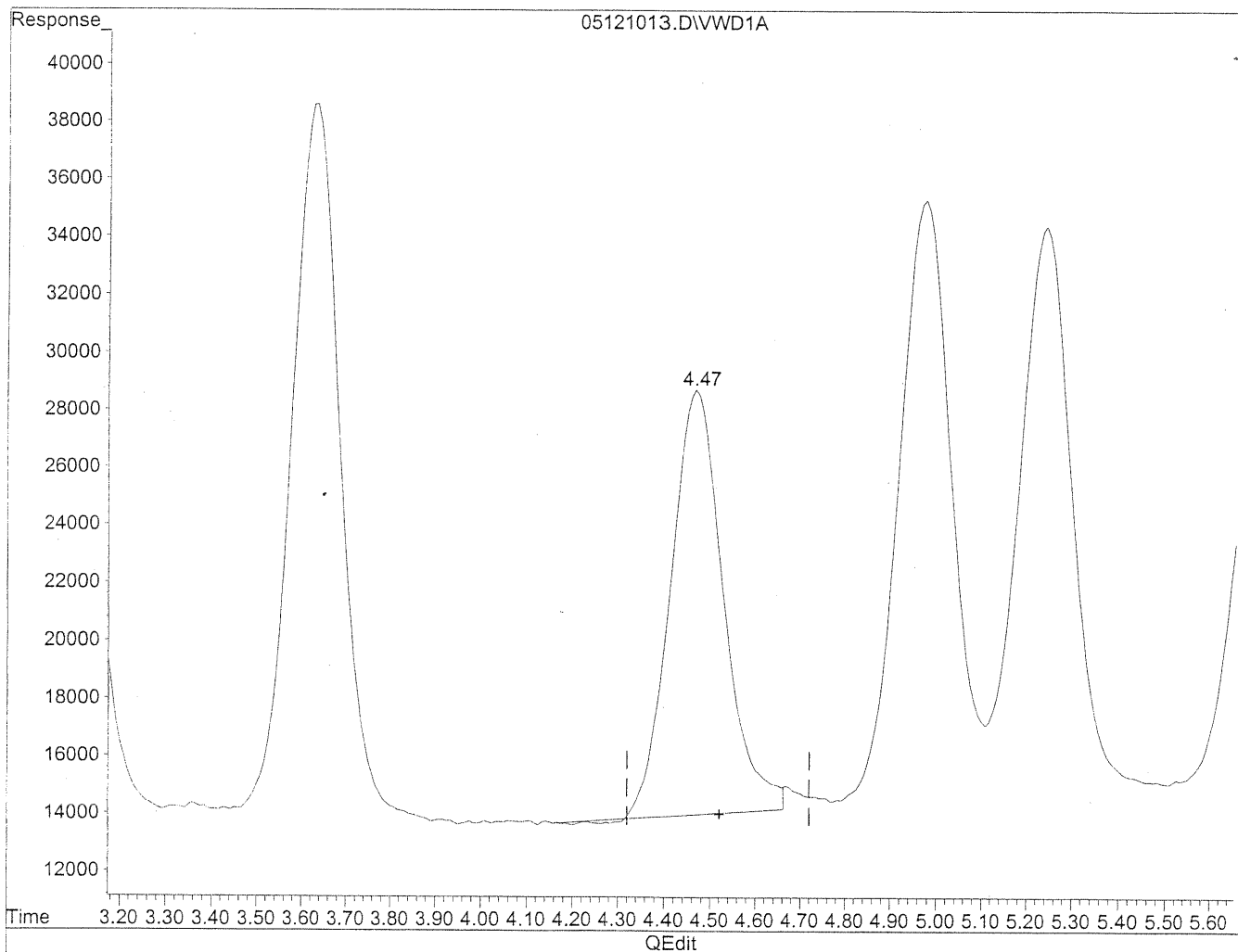
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	4417710	472.938 ng/ml
2) Acetaldehyde	1.24	3209279	475.809 ng/ml
3) Propionaldehyde	2.23	2333955	479.242 ng/ml
4) Crotonaldehyde	3.09	1948793	477.568 ng/ml
5) Butyraldehyde	3.63	1961887	486.262 ng/ml
6) Benzaldehyde	4.47	1268692	472.481 ng/mlm
7) Isovaleraldehyde	4.98	1654372	466.210 ng/ml
8) Valeraldehyde	5.24	1590849	474.318 ng/ml
9) o-Tolualdehyde	5.71	924147	456.346 ng/ml
10) m,p-Tolualdehyde	5.90	2119427	905.681 ng/ml
11) Hexaldehyde	6.87	1443384	504.020 ng/mlm
12) 2,5-Dimethylbenzaldehyde	7.09	923075	484.998 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121013.D Vial: 128
 Acq On : 12-May-2010, 14:22 Operator: MD
 Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:22 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration

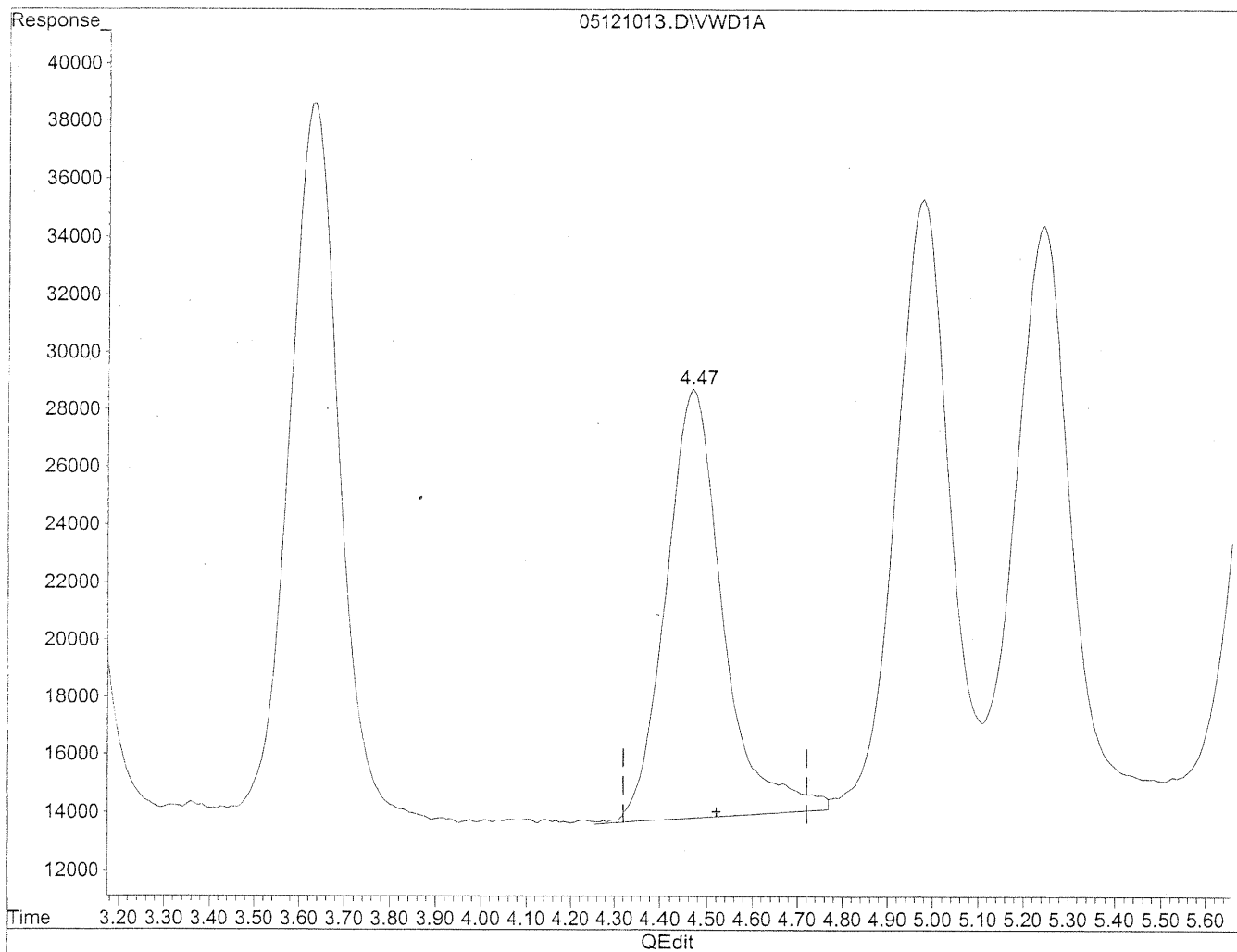


(6) Benzaldehyde
 4.47min 437.841ng/ml
 response 1175677

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121013.D Vial: 128
Acq On : 12-May-2010, 14:22 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:22 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.47min 472.481ng/ml m

response 1268692

He
5/13/10

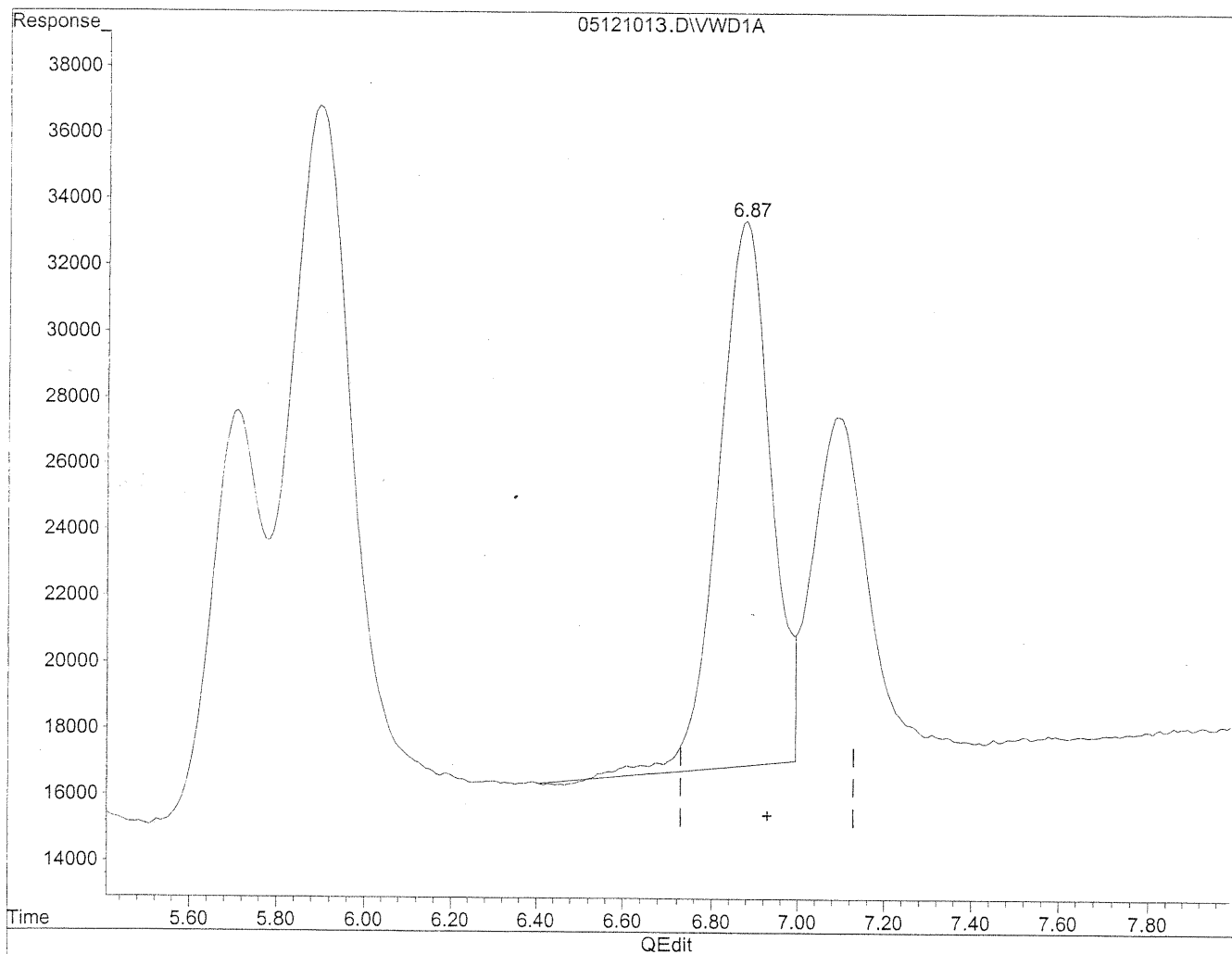
12
MD
5/13/10

(+) = Expected Retention Time
05121013.D TO110510.M Thu May 13 11:22:36 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121013.D Vial: 128
Acq On : 12-May-2010, 14:22 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:22 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde
6.88min 482.590ng/ml
response 1382016

(+) = Expected Retention Time

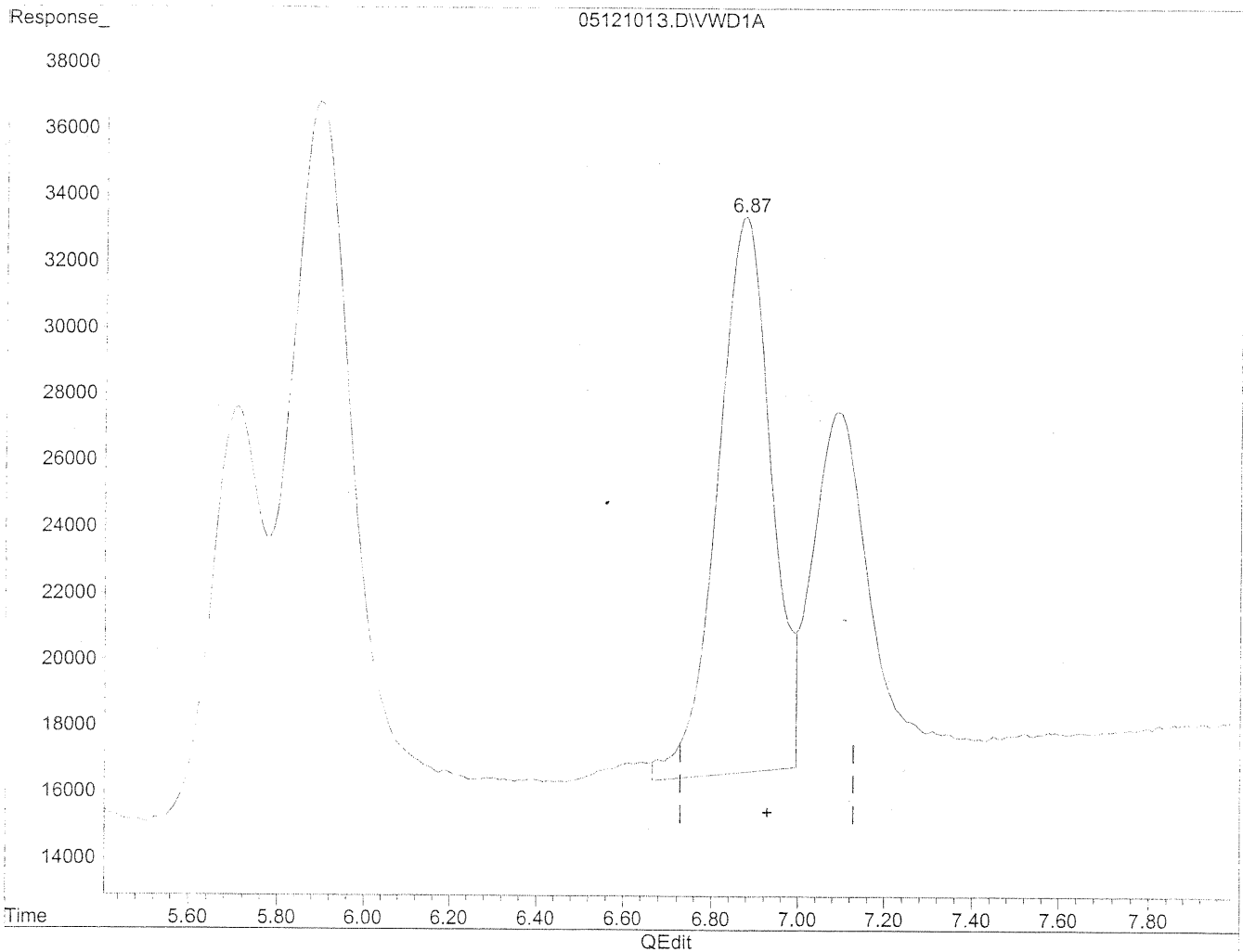
05121013.D TO110510.M

Thu May 13 11:22:48 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121013.D Vial: 128
Acq On : 12-May-2010, 14:22 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:22 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.87min 504.020ng/ml m

response 1443384

Handwritten notes:
Sh, BC
6/13/10
slaps
HC

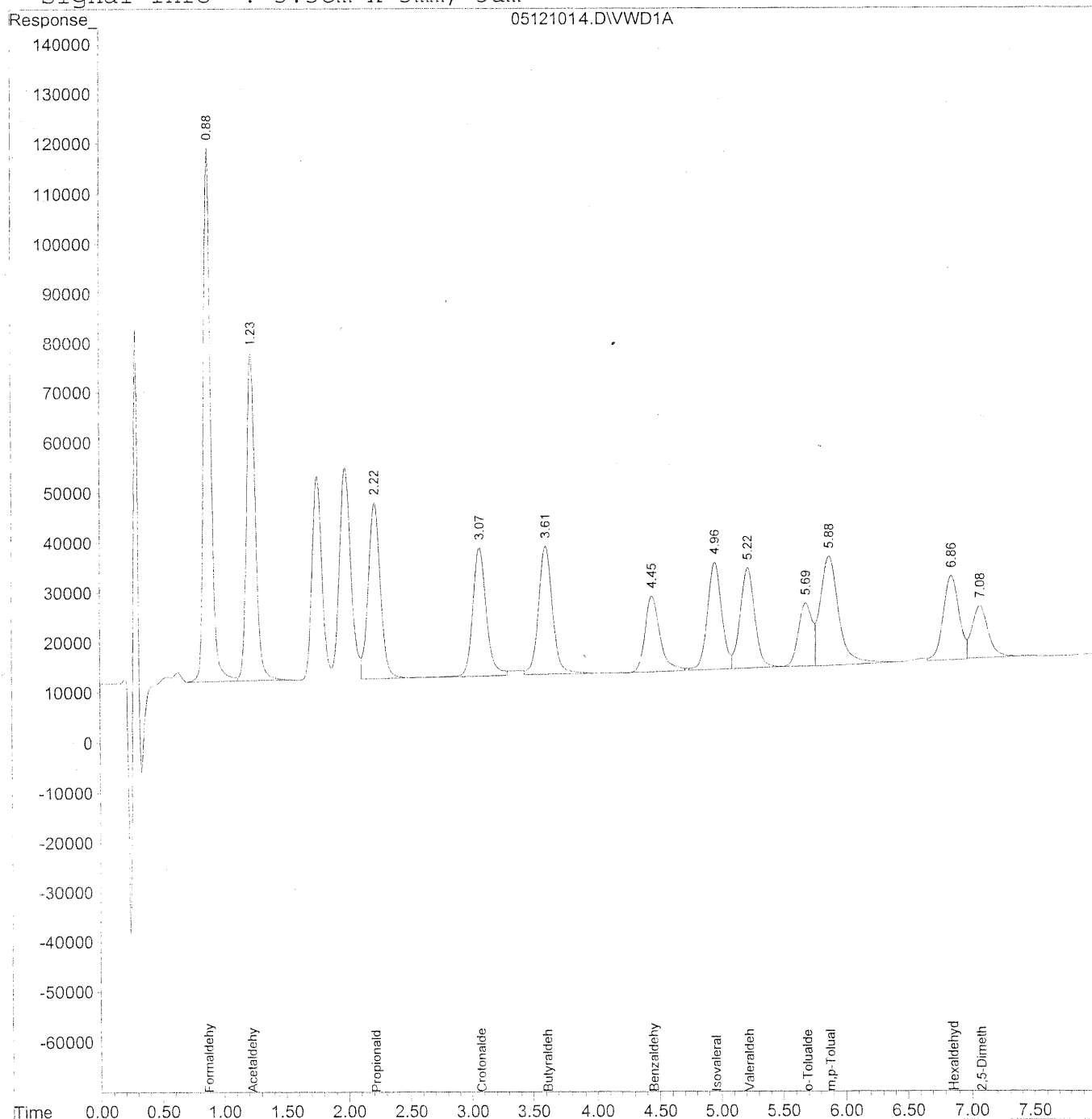
(+) = Expected Retention Time
05121013.D TO110510.M Thu May 13 11:22:52 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121014.D Vial: 128
 Acq On : 12-May-2010, 14:33 Operator: MD
 Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:23 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121014.D Vial: 128
Acq On : 12-May-2010, 14:33 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:23 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

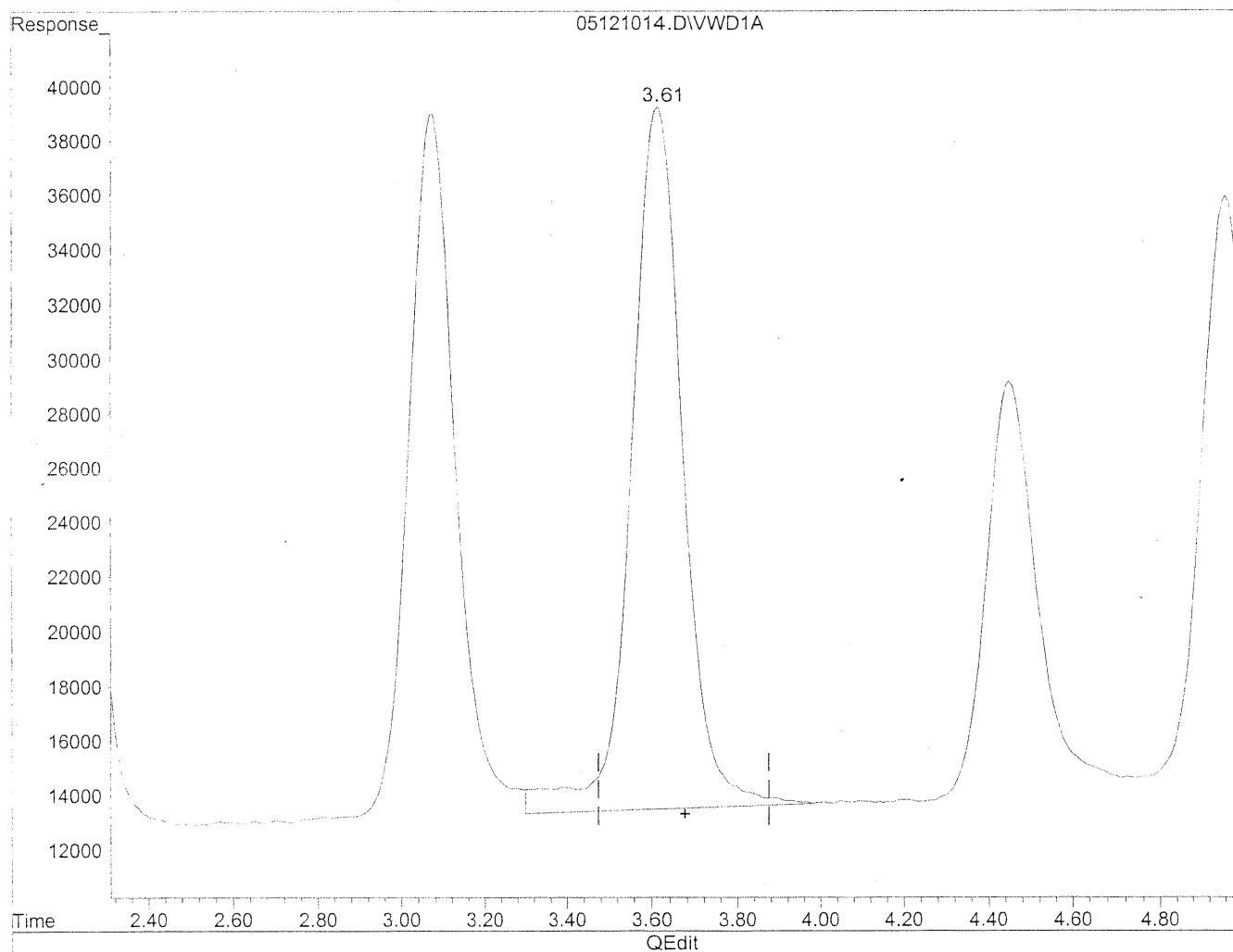
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	4500287	482.449 ng/ml
2) Acetaldehyde	1.23	3222875	478.422 ng/ml
3) Propionaldehyde	2.22	2400632	494.130 ng/ml
4) Crotonaldehyde	3.07	2011898	494.107 ng/ml
5) Butyraldehyde	3.61	2033218	505.226 ng/mlm
6) Benzaldehyde	4.45	1264097	471.047 ng/ml
7) Isovaleraldehyde	4.96	1737363	490.915 ng/ml
8) Valeraldehyde	5.23	1649238	492.889 ng/ml
9) o-Tolualdehyde	5.69	1012766	500.715 ng/mlm
10) m,p-Tolualdehyde	5.88	2266322	972.328 ng/mlm
11) Hexaldehyde	6.86	1439322	501.012 ng/mlm
12) 2,5-Dimethylbenzaldehyde	7.08	915366	480.011 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121014.D Vial: 128
Acq On : 12-May-2010, 14:33 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:23 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.62min 524.491ng/ml

response 2110749

(+) = Expected Retention Time

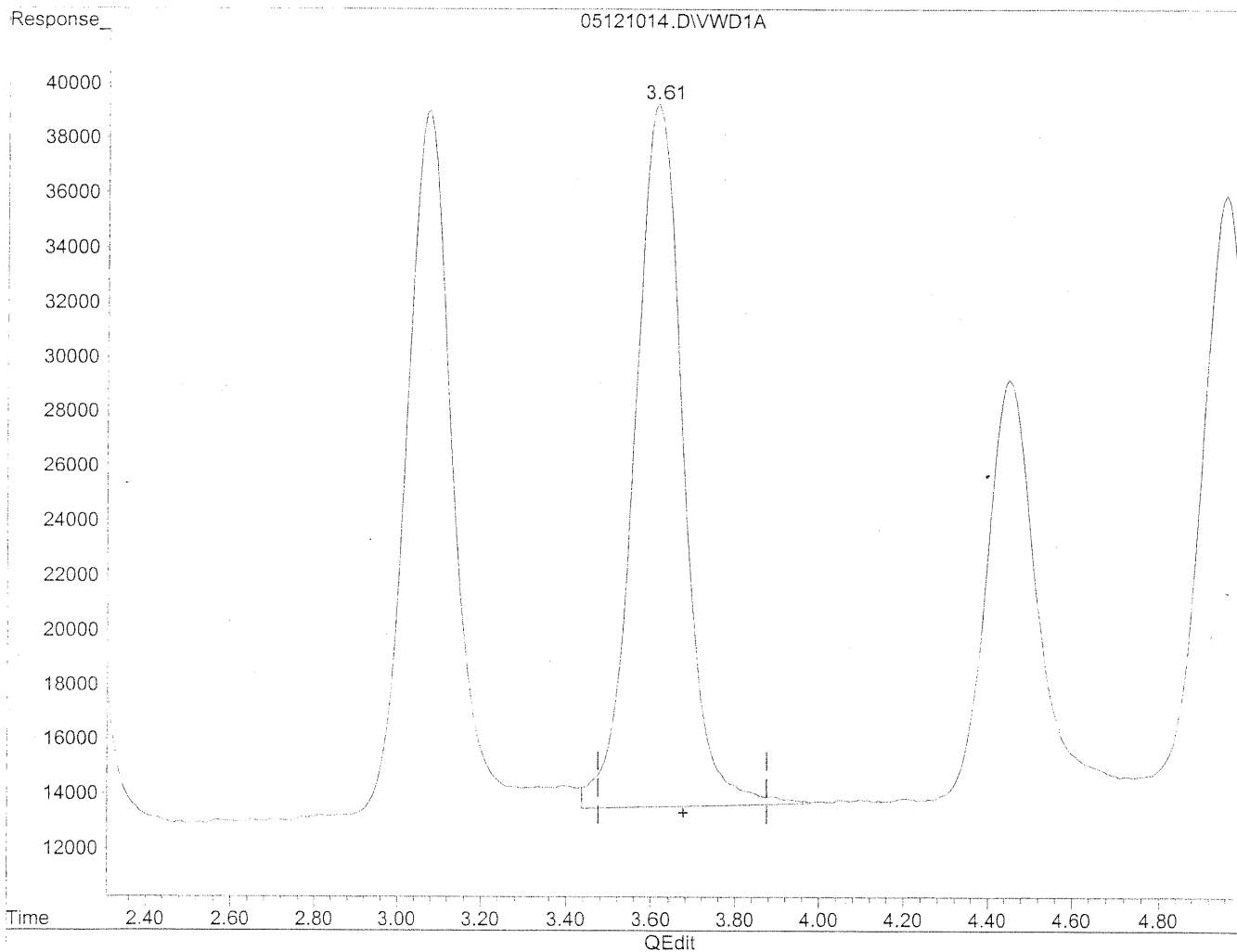
05121014.D TO110510.M

Thu May 13 11:23:13 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121014.D Vial: 128
Acq On : 12-May-2010, 14:33 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:23 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(5) Butyraldehyde

3.61min 505.226ng/ml m

response 2033218

(+) = Expected Retention Time

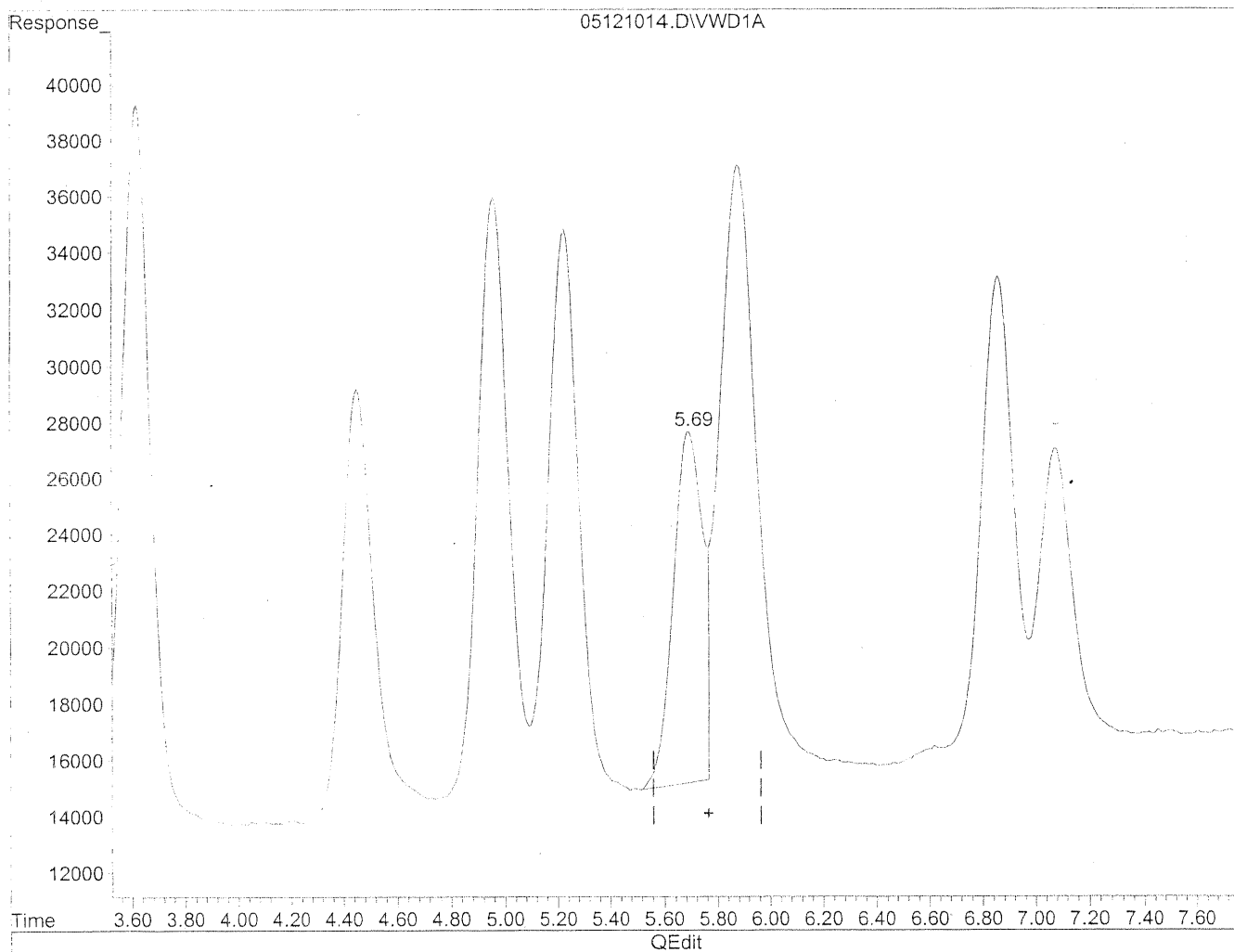
05121014.D TO110510.M

Thu May 13 11:23:17 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121014.D Vial: 128
Acq On : 12-May-2010, 14:33 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:23 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

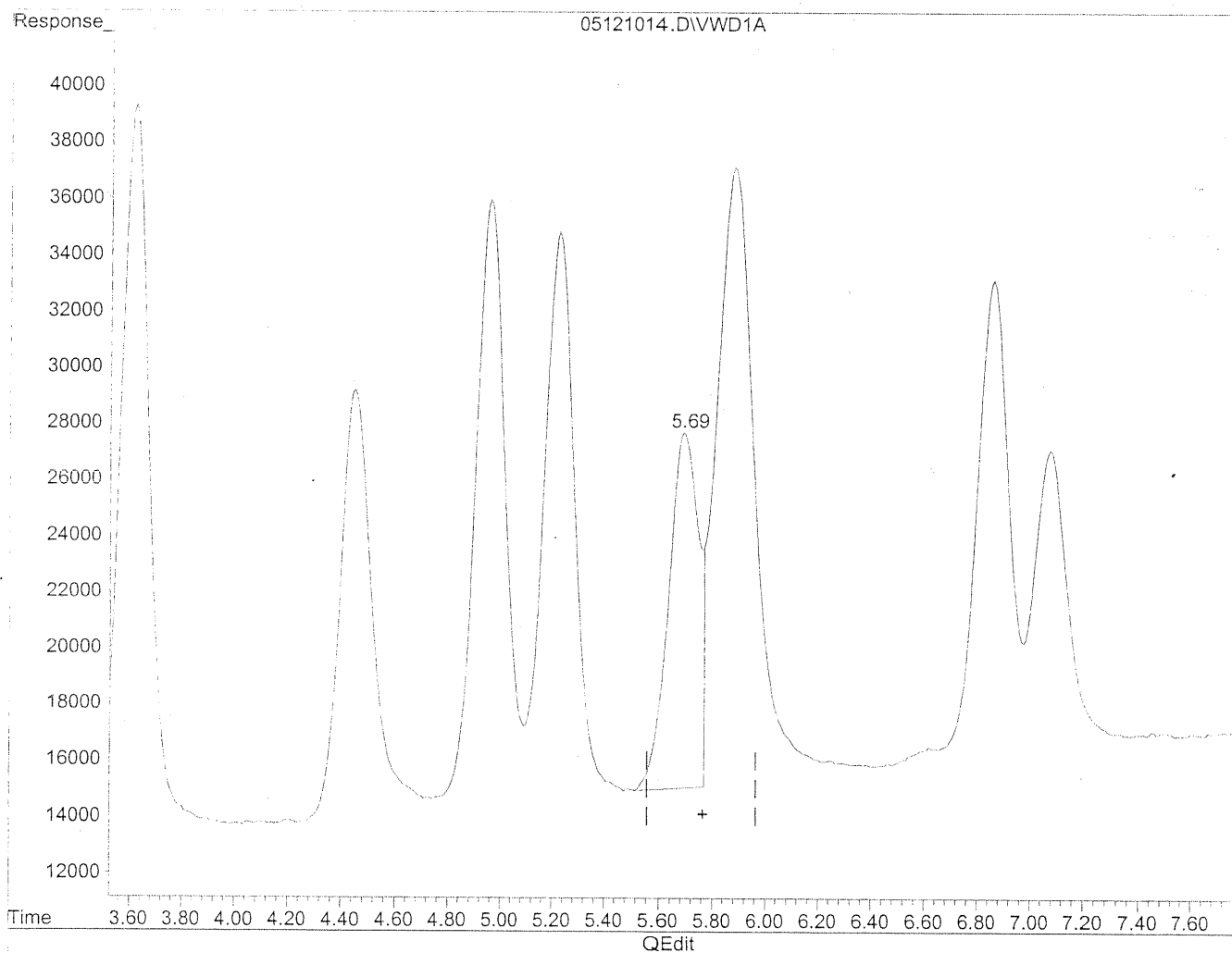
5.69min 465.689ng/ml

response 941921

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121014.D Vial: 128
Acq On : 12-May-2010, 14:33 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:23 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

5.69min 500.715ng/ml m

response 1012766

Handwritten: 5/19/10

Handwritten: 5/19/10

(+) = Expected Retention Time

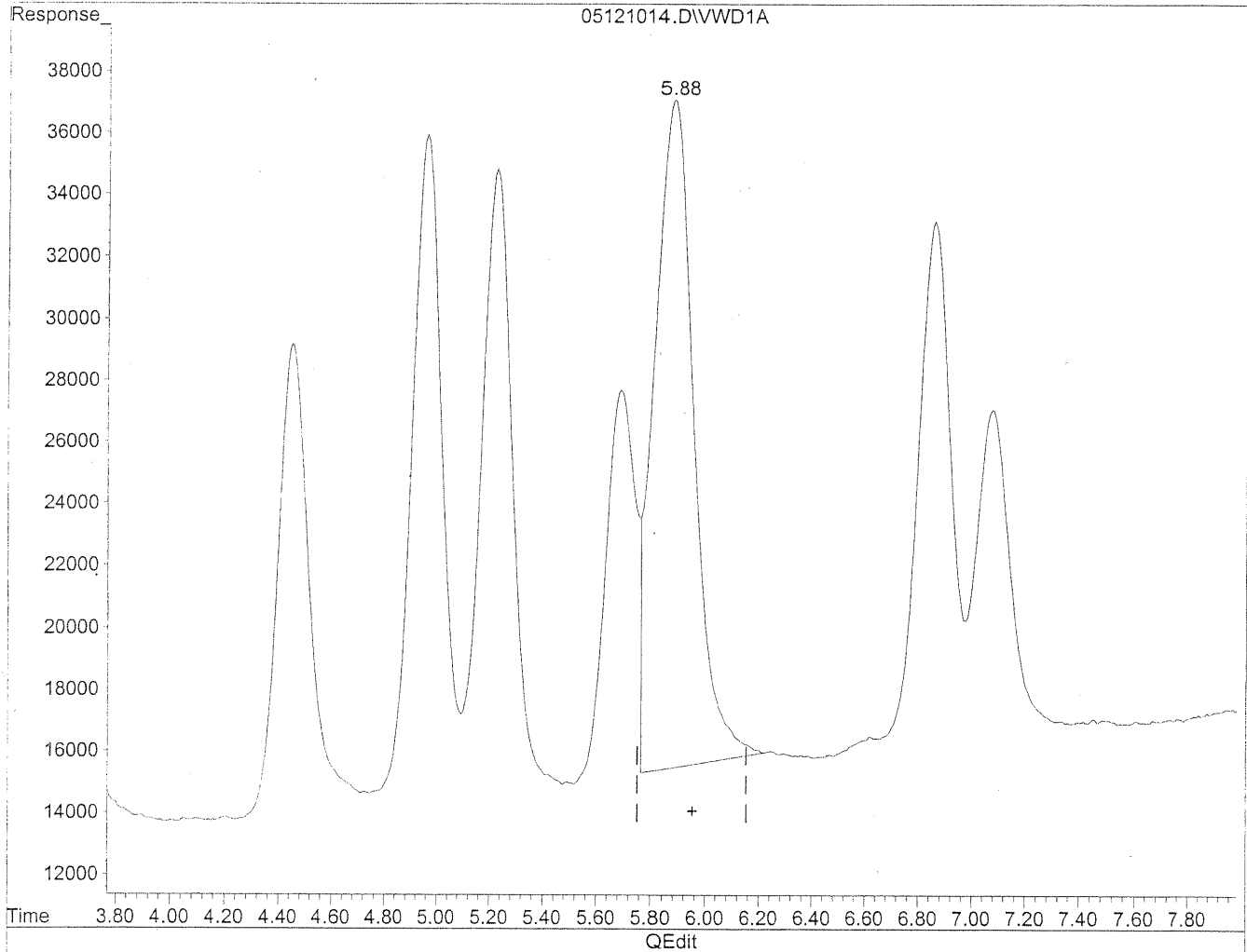
05121014.D TO110510.M

Thu May 13 11:23:34 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121014.D Vial: 128
Acq On : 12-May-2010, 14:33 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:23 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

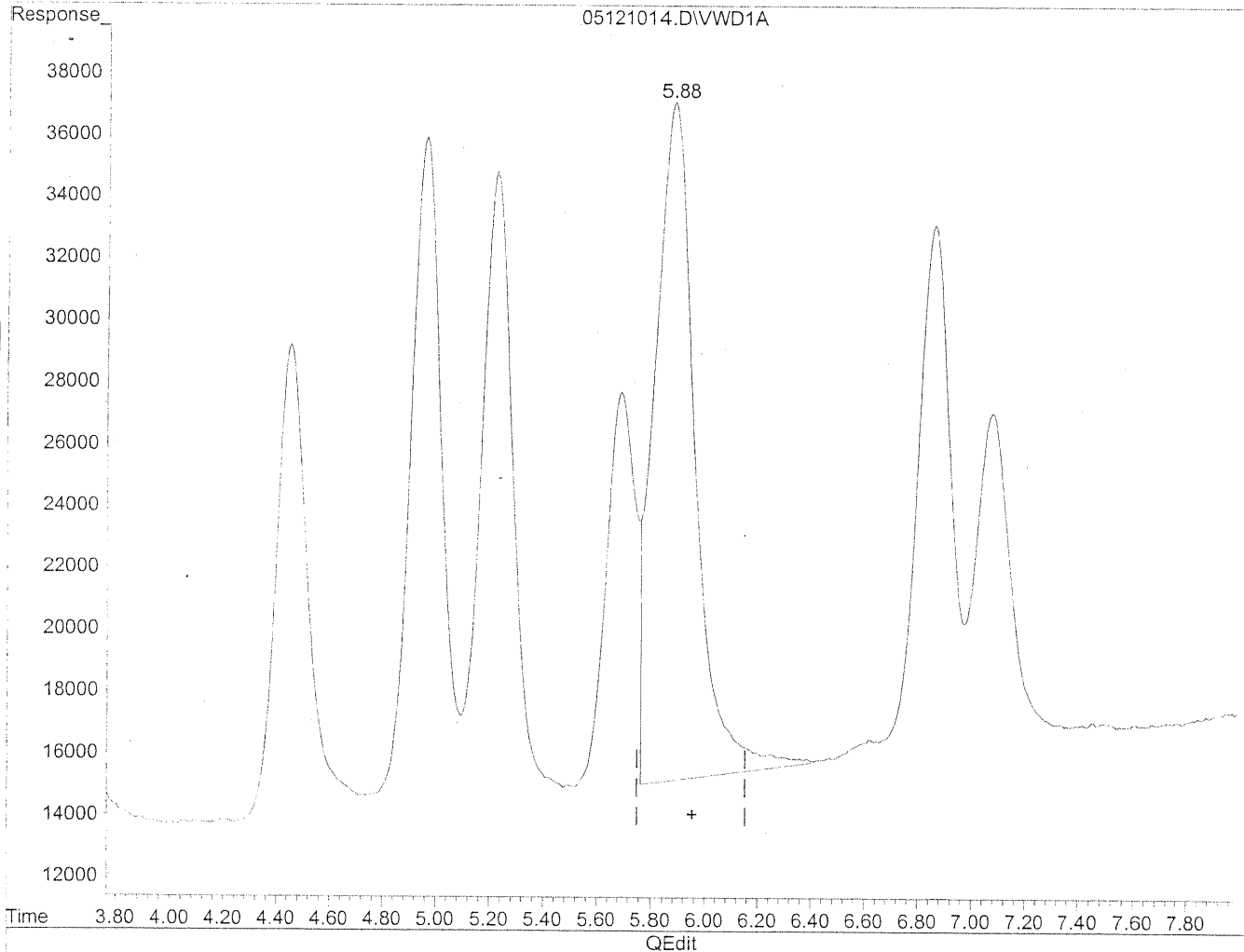
5.88min 929.010ng/ml

response 2165353

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121014.D Vial: 128
Acq On : 12-May-2010, 14:33 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:23 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

5.88min 972.328ng/ml m

response 2266322

Be
into
5/13/10

HC
5/19/10

(+) = Expected Retention Time

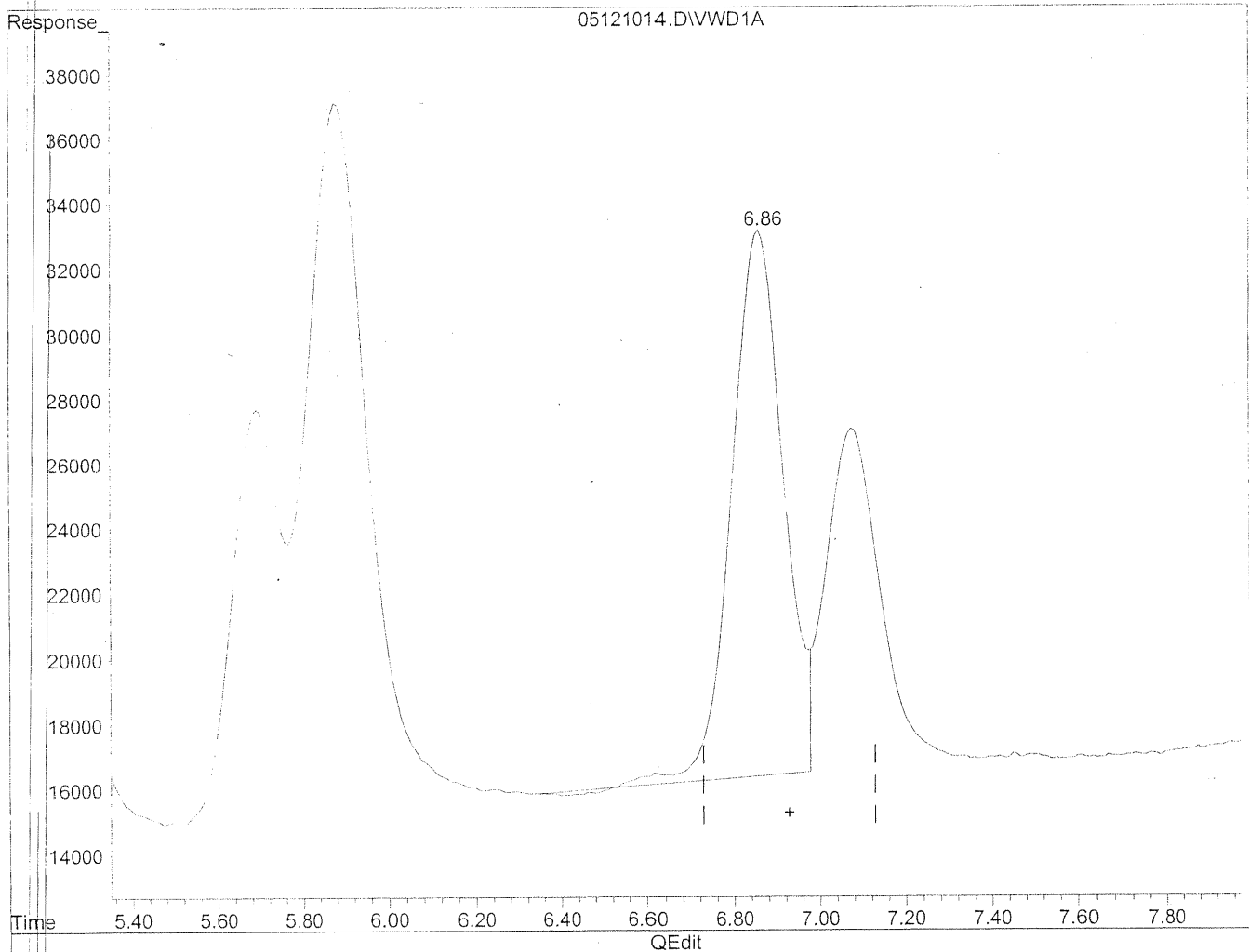
05121014.D TO110510.M

Thu May 13 11:23:46 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121014.D Vial: 128
Acq On : 12-May-2010, 14:33 Operator: MD
Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:23 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.86min 484.721ng/ml

response 1392521

(+) = Expected Retention Time

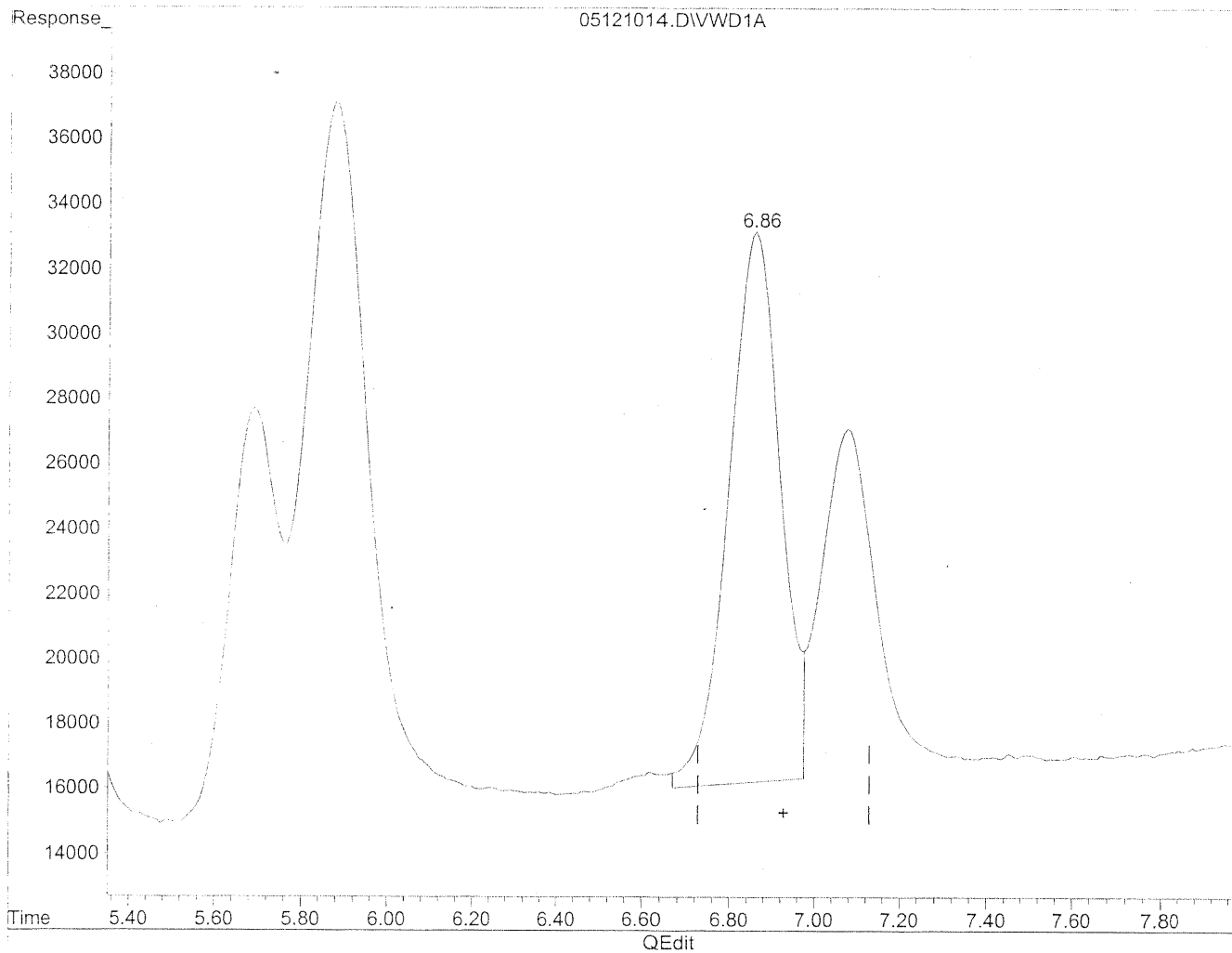
05121014.D TO110510.M

Thu May 13 11:23:50 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121014.D Vial: 128
 Acq On : 12-May-2010, 14:33 Operator: MD
 Sample : 500ng/ml TO-11A S21-03091008 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:23 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



(11) Hexaldehyde

6.86min 501.012ng/ml m

response 1439322

Handwritten notes:
 OK
 5/19/10
 ON
 OK
 5/19/10

(+) = Expected Retention Time

05121014.D TO110510.M

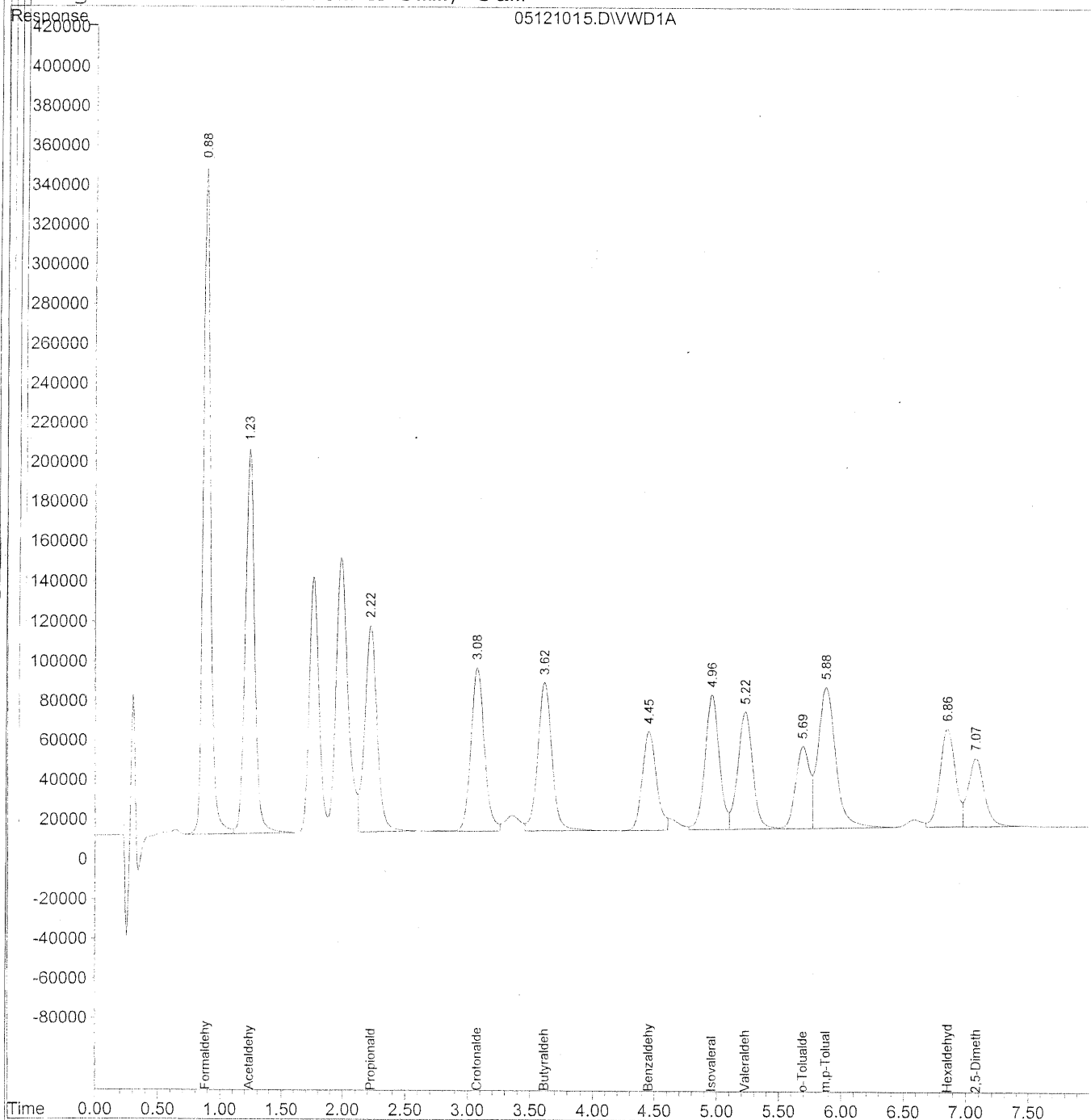
Thu May 13 11:23:54 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121015.D Vial: 129
 Acq On : 12-May-2010, 14:43 Operator: MD
 Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:24 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Quantitation Report

(QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121015.D Vial: 129
Acq On : 12-May-2010, 14:43 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:24 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

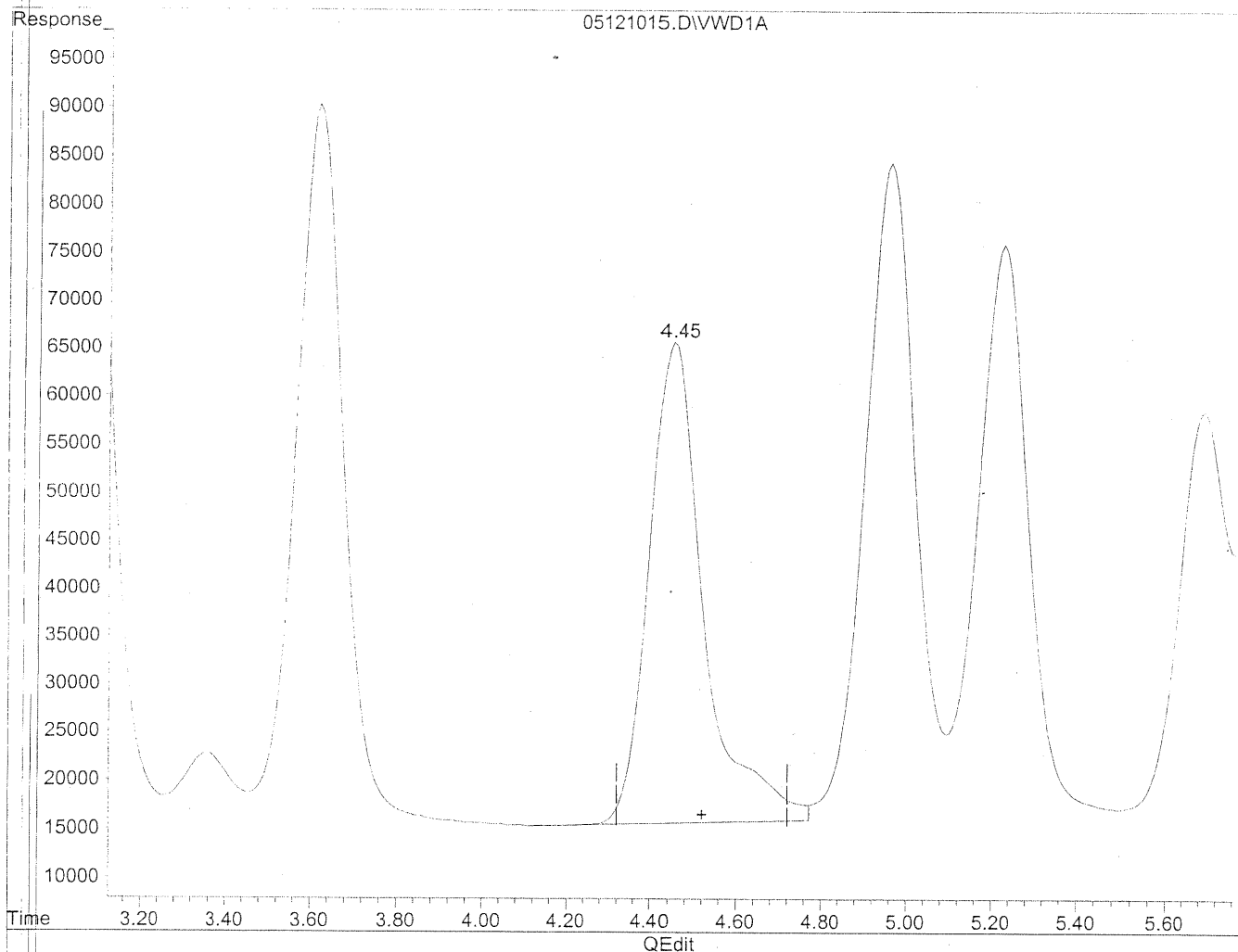
Compound		R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.89	13999341	1500.006 ng/ml
2)	Acetaldehyde	1.24	10223963	1517.997 ng/ml
3)	Propionaldehyde	2.22	7284521	1498.324 ng/ml
4)	Crotonaldehyde	3.08	6216075	1525.101 ng/ml
5)	Butyraldehyde	3.62	5951623	1477.239 ng/ml
6)	Benzaldehyde	4.45	4014948	1496.690 ng/mlm
7)	Isovaleraldehyde	4.96	5545667	1564.331 ng/ml
8)	Valeraldehyde	5.23	4908691	1465.320 ng/ml
9)	o-Tolualdehyde	5.69	3190358	1570.316 ng/ml
10)	m,p-Tolualdehyde	5.88	7206275	3085.049 ng/ml
11)	Hexaldehyde	6.86	4163357	1447.919 ng/ml
12)	2,5-Dimethylbenzaldehyde	7.08	3013354	1579.862 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121015.D Vial: 129
Acq On : 12-May-2010, 14:43 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:24 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

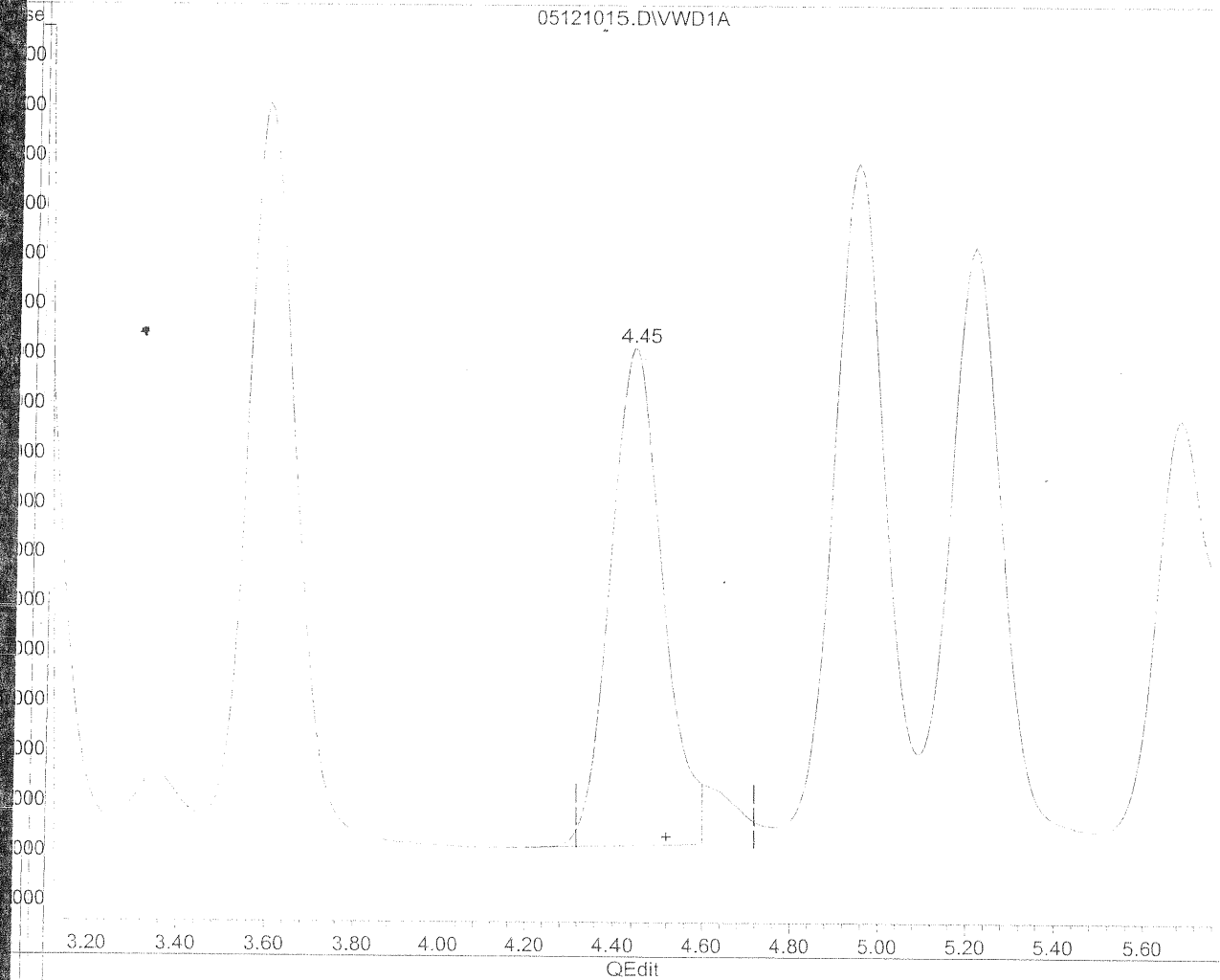
4.45min 1622.568ng/ml

response 4352620

Quantitation Report

File : J:\LC02\DATA\TO11A\2010_05\12\05121015.D Vial: 129
On : 12-May-2010, 14:43 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
SC : Multiplr: 1.00
File : events.e
Time: May 13 11:24 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.45min 1496.690ng/ml m

response 4014948

) = Expected Retention Time

21015.D TO110510.M

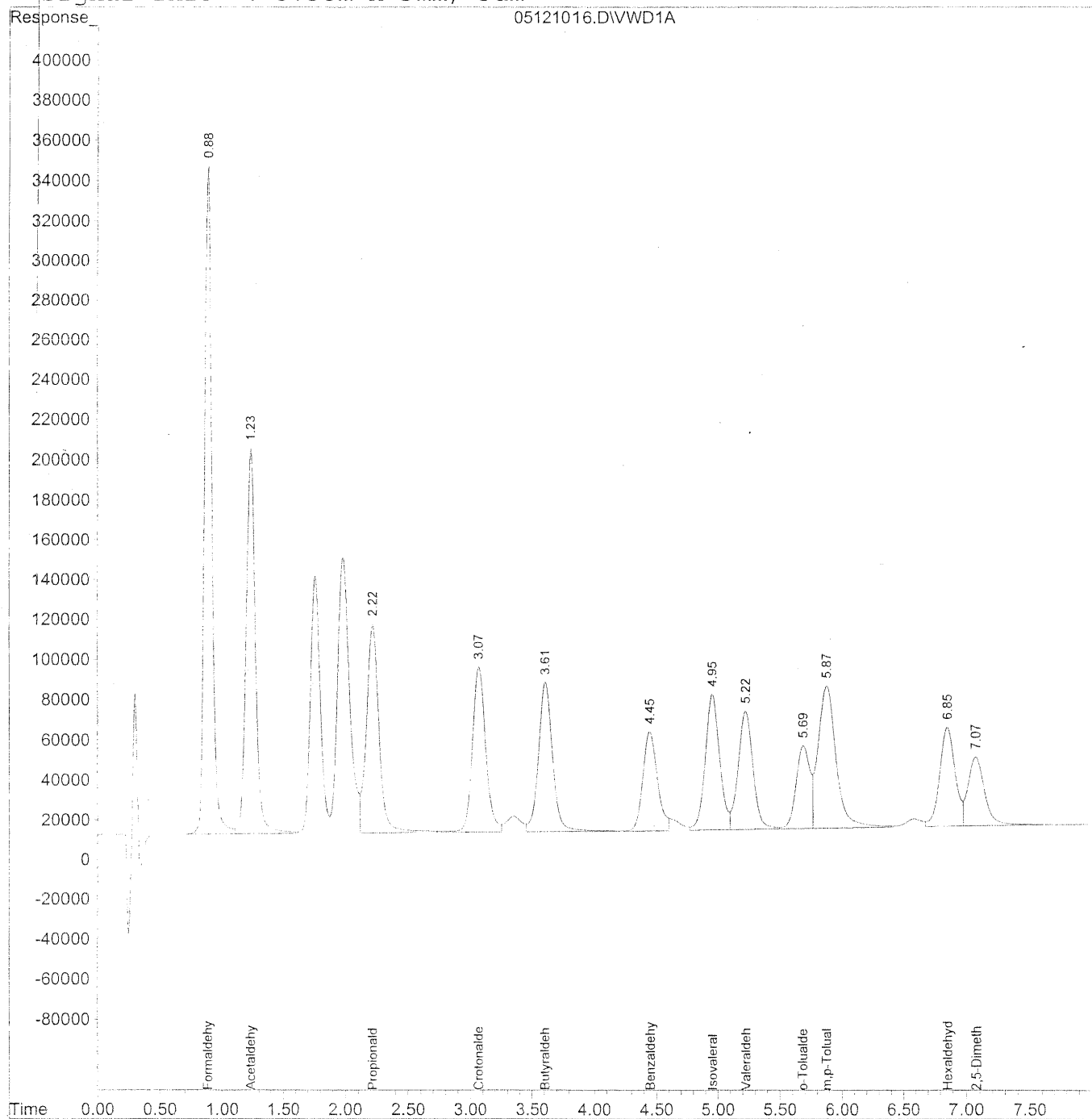
Thu May 13 11:24:38 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121016.D Vial: 129
 Acq On : 12-May-2010, 14:54 Operator: MD
 Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:25 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Quantitation Report

(QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121016.D Vial: 129
Acq On : 12-May-2010, 14:54 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:25 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

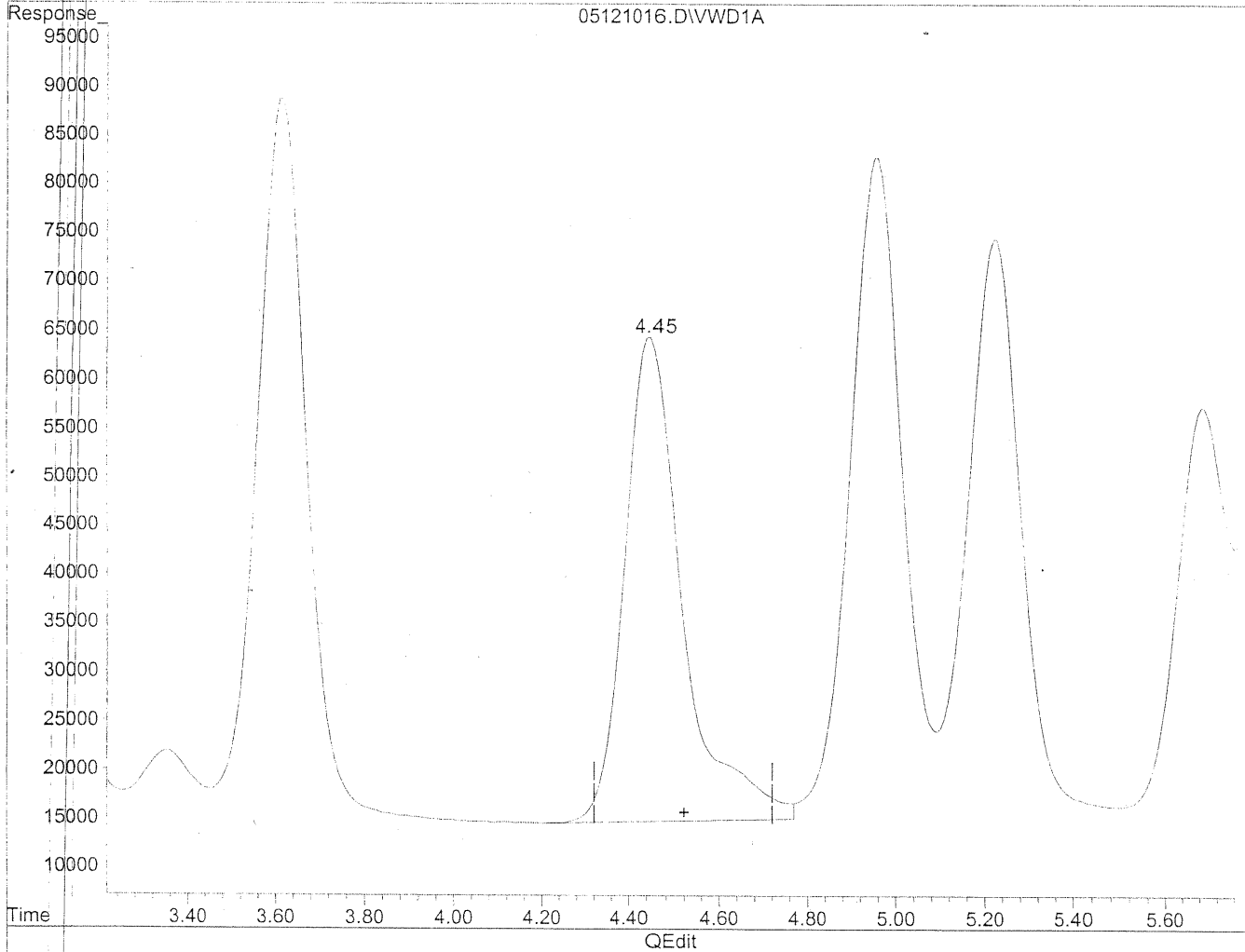
	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.89	13920129	1490.345 ng/ml
2)	Acetaldehyde	1.23	10226975	1517.794 ng/ml
3)	Propionaldehyde	2.22	7416669	1526.210 ng/ml
4)	Crotonaldehyde	3.07	6289446	1543.072 ng/ml
5)	Butyraldehyde	3.62	5960039	1477.974 ng/ml
6)	Benzaldehyde	4.45	3993221	1489.382 ng/mlm
7)	Isovaleraldehyde	4.96	5523160	1556.836 ng/ml
8)	Valeraldehyde	5.22	4897059	1460.383 ng/ml
9)	o-Tolualdehyde	5.69	3181168	1563.869 ng/ml
10)	m,p-Tolualdehyde	5.88	7222715	3089.890 ng/ml
11)	Hexaldehyde	6.86	4177519	1451.819 ng/ml
12)	2,5-Dimethylbenzaldehyde	7.07	3110373	1630.041 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121016.D Vial: 129
Acq On : 12-May-2010, 14:54 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:25 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

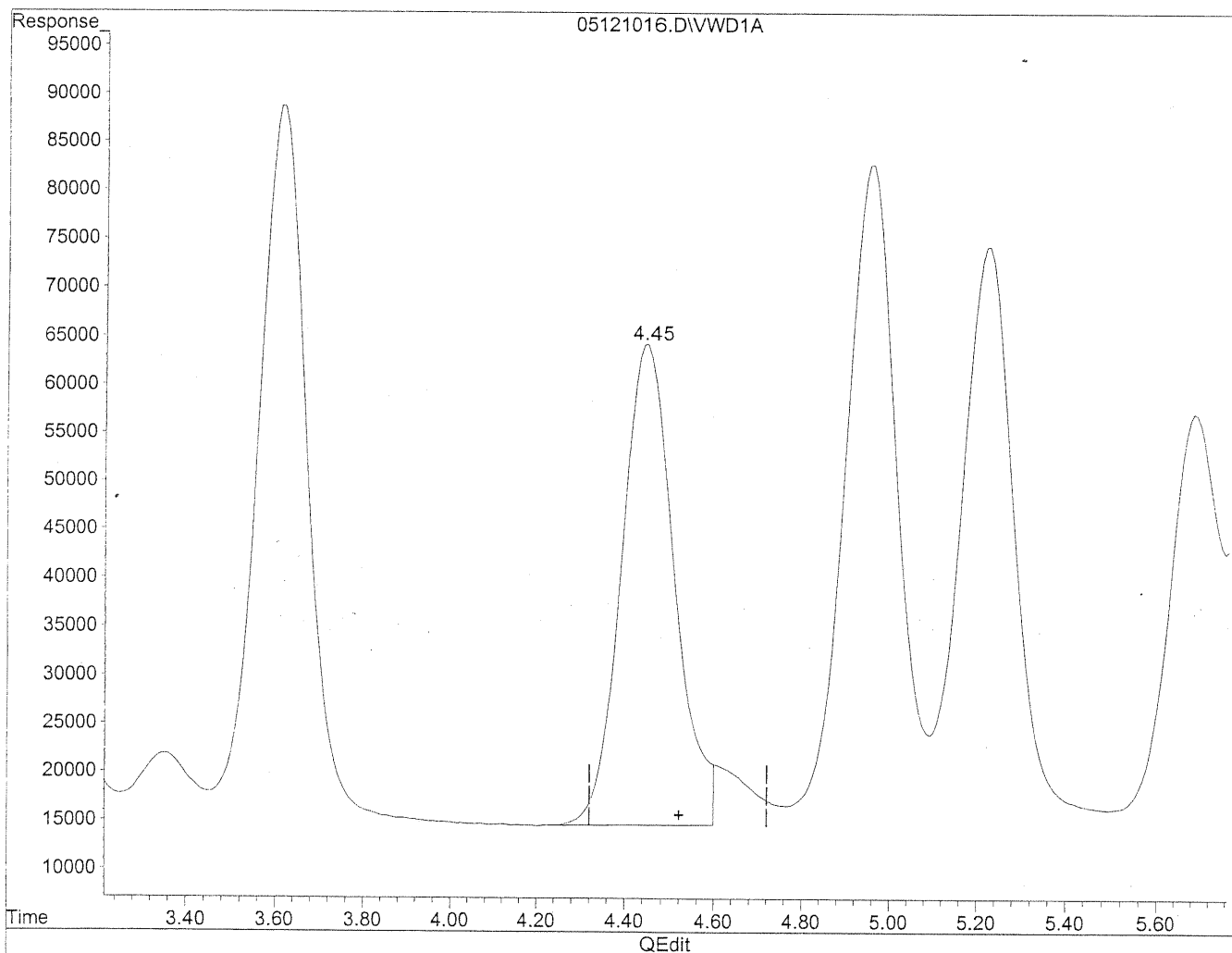
4.45min 1625.490ng/ml

response 4358145

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121016.D Vial: 129
Acq On : 12-May-2010, 14:54 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:25 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.45min 1489.382ng/ml m

response 3993221

Hc
5/19/10

Sh
5/13/10

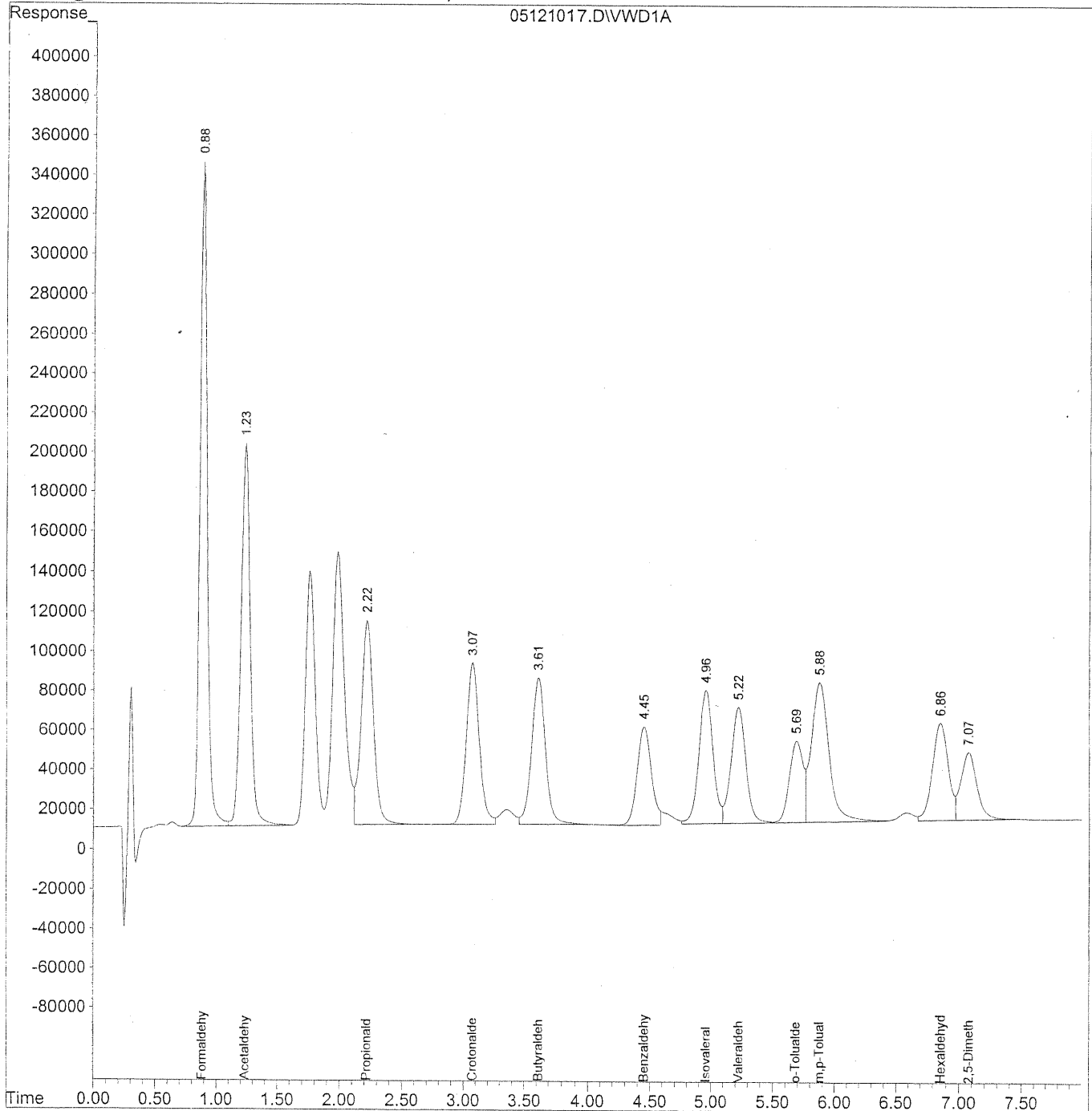
(+) = Expected Retention Time
05121016.D TO110510.M Thu May 13 11:25:20 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121017.D Vial: 129
Acq On : 12-May-2010, 15:04 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:25 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Quantitation Report

(QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121017.D Vial: 129
Acq On : 12-May-2010, 15:04 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:25 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

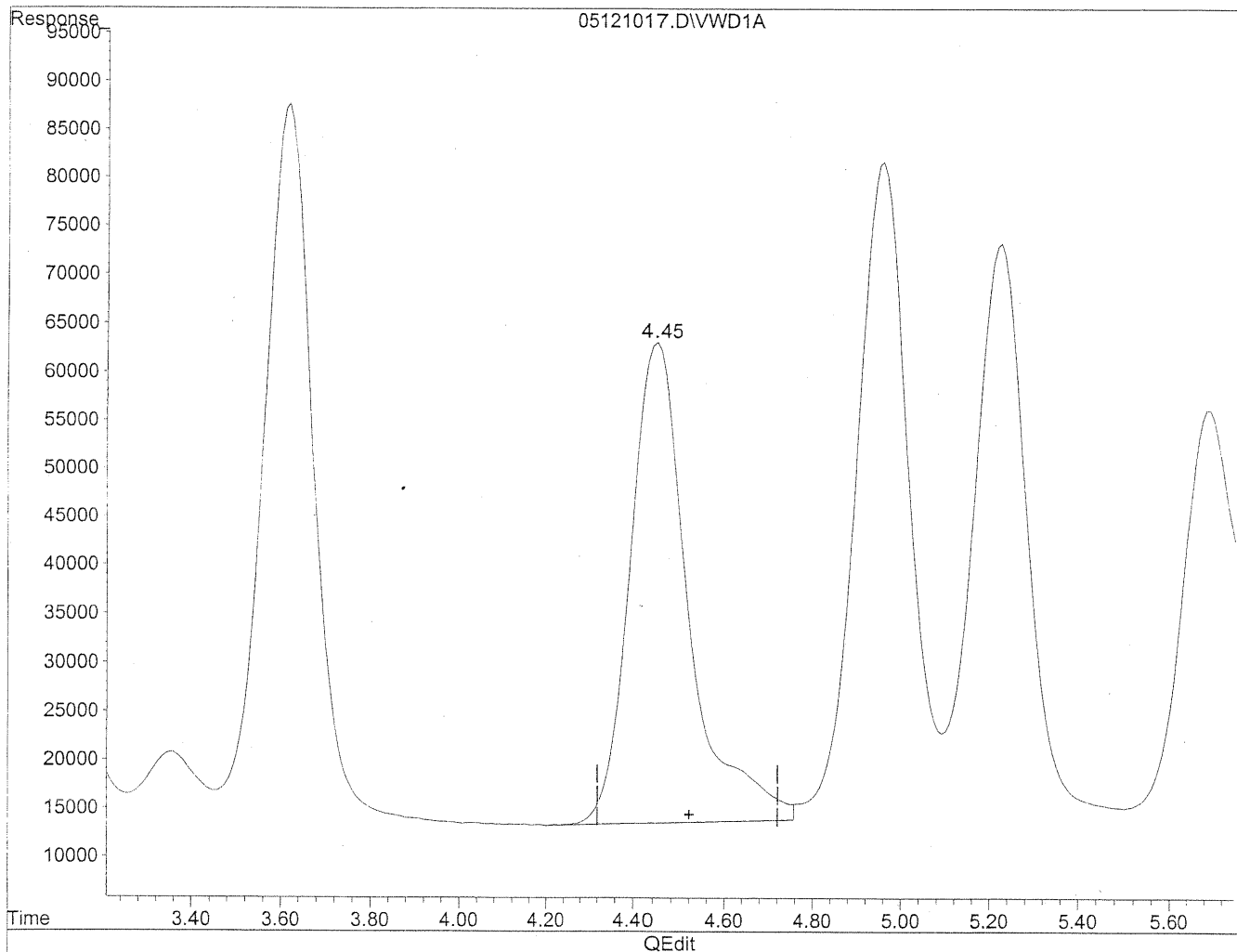
	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.89	13880198	1486.770	ng/ml
2)	Acetaldehyde	1.24	10143044	1505.300	ng/ml
3)	Propionaldehyde	2.22	7213023	1482.065	ng/ml
4)	Crotonaldehyde	3.08	6140533	1505.032	ng/ml
5)	Butyraldehyde	3.62	5843556	1448.920	ng/ml
6)	Benzaldehyde	4.45	3948746	1473.457	ng/mlm
7)	Isovaleraldehyde	4.96	5511869	1554.201	ng/ml
8)	Valeraldehyde	5.23	4855903	1448.388	ng/ml
9)	o-Tolualdehyde	5.69	3151083	1549.468	ng/ml
10)	m,p-Tolualdehyde	5.88	7177715	3070.039	ng/ml
11)	Hexaldehyde	6.86	4141107	1438.771	ng/ml
12)	2,5-Dimethylbenzaldehyde	7.08	2995490	1565.413	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121017.D Vial: 129
Acq On : 12-May-2010, 15:04 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:25 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.45min 1614.770ng/ml

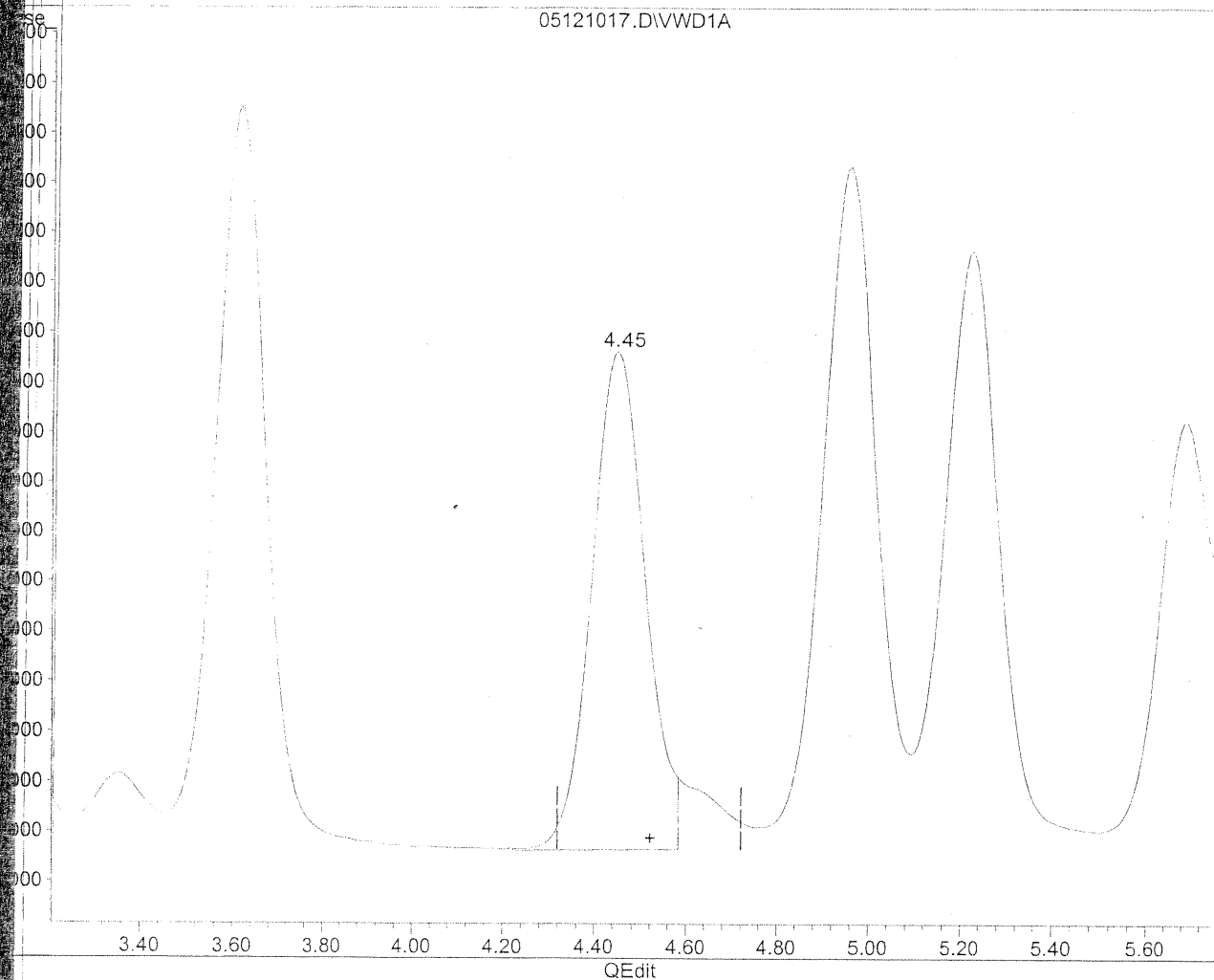
response 4327454

(+) = Expected Retention Time
05121017.D TO110510.M Thu May 13 11:25:52 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121017.D Vial: 129
Acq On : 12-May-2010, 15:04 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Disc : Multiplr: 1.00
Data File : events.e
Acq Time: May 13 11:25 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(6) Benzaldehyde

4.45min 1473.457ng/ml m

response 3948746

Handwritten notes:
Sh
6/12/10
4
5/12/10

= Expected Retention Time

21017.D TO110510.M

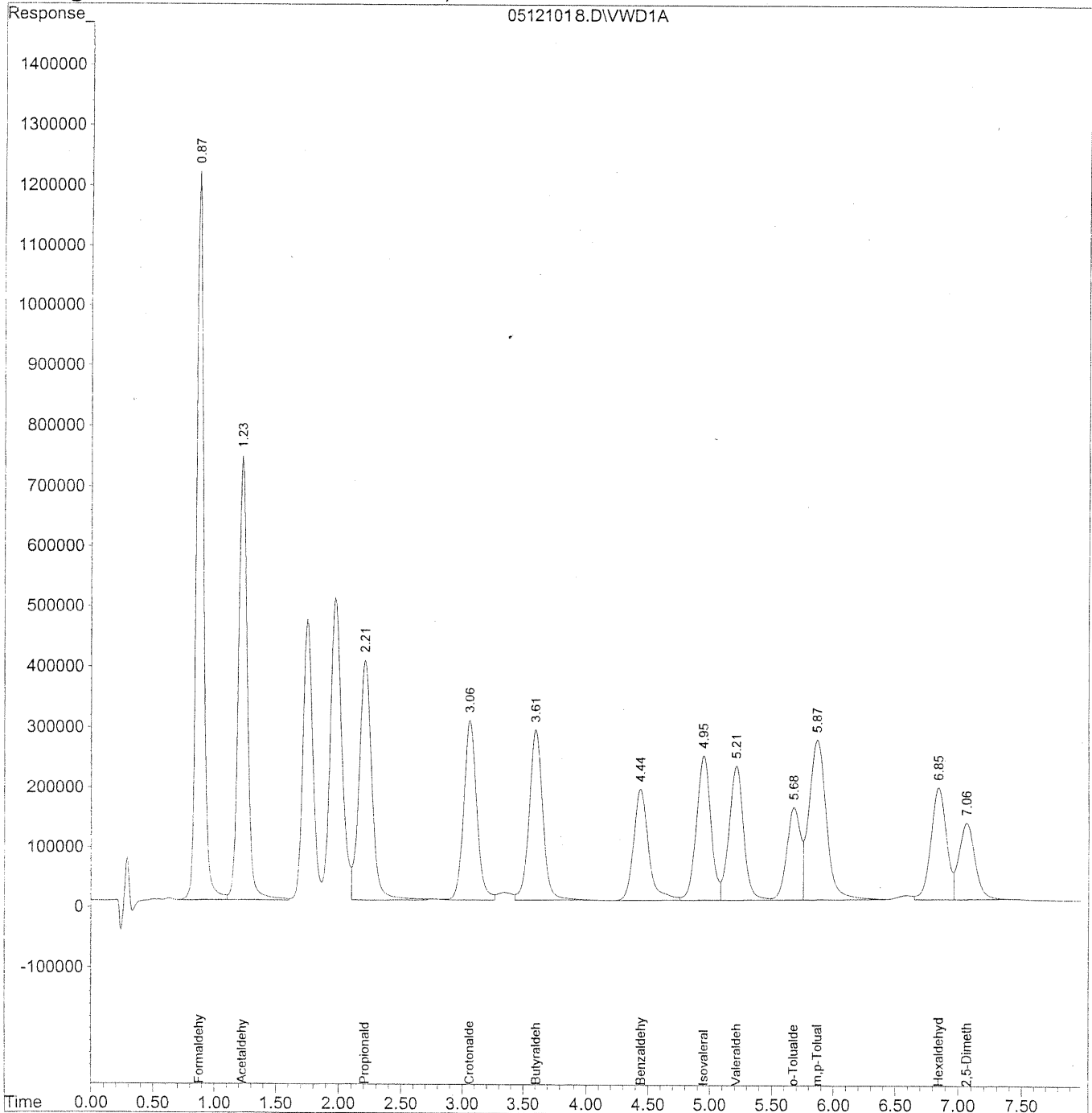
Thu May 13 11:25:59 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121018.D Vial: 130
Acq On : 12-May-2010, 15:15 Operator: MD
Sample : 5000ng/ml TO-11A S21-03091001 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:26 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121018.D Vial: 130
Acq On : 12-May-2010, 15:15 Operator: MD
Sample : 5000ng/ml TO-11A S21-03091001 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:26 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc Units

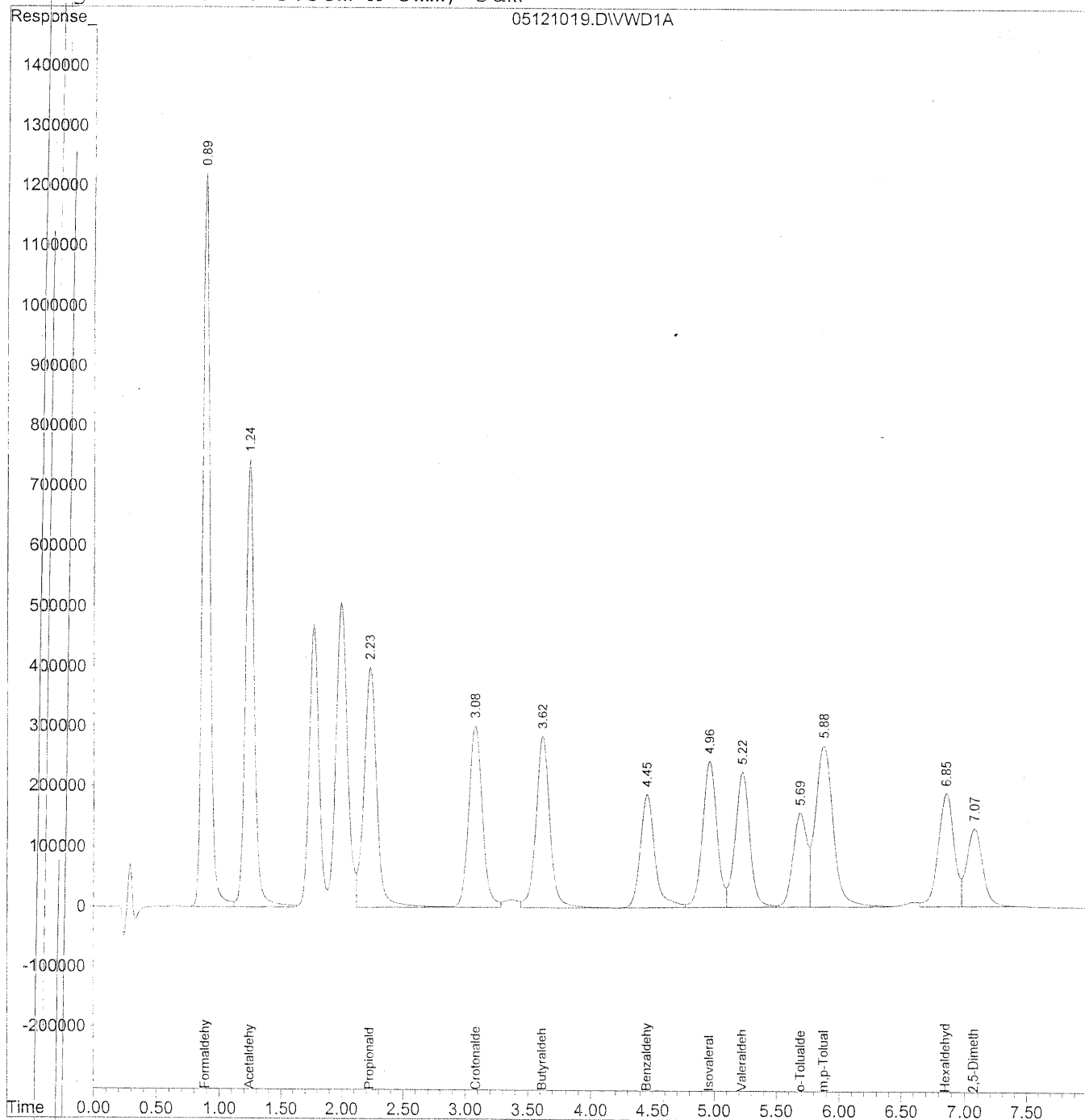
Target Compounds				
1)	Formaldehyde	0.88	49980790	5355.356 ng/ml
2)	Acetaldehyde	1.23	36771790	5459.670 ng/ml
3)	Propionaldehyde	2.21	28171144	5794.411 ng/ml
4)	Crotonaldehyde	3.07	22456169	5509.574 ng/ml
5)	Butyraldehyde	3.61	22281068	5530.334 ng/ml
6)	Benzaldehyde	4.44	15502410	5789.083 ng/ml
7)	Isovaleraldehyde	4.95	19526448	5507.238 ng/ml
8)	Valeraldehyde	5.22	18553441	5536.877 ng/ml
9)	o-Tolualdehyde	5.68	11996880	5902.899 ng/ml
10)	m,p-Tolualdehyde	5.87	26379068	11286.094 ng/ml
11)	Hexaldehyde	6.85	15727653	5466.423 ng/ml
12)	2,5-Dimethylbenzaldehyde	7.07	11069374	5792.185 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121019.D Vial: 130
 Acq On : 12-May-2010, 15:55 Operator: MD
 Sample : 5000ng/ml TO-11A S21-03091001 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:26 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121019.D Vial: 130
Acq On : 12-May-2010, 15:55 Operator: MD
Sample : 5000ng/ml TO-11A S21-03091001 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:26 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

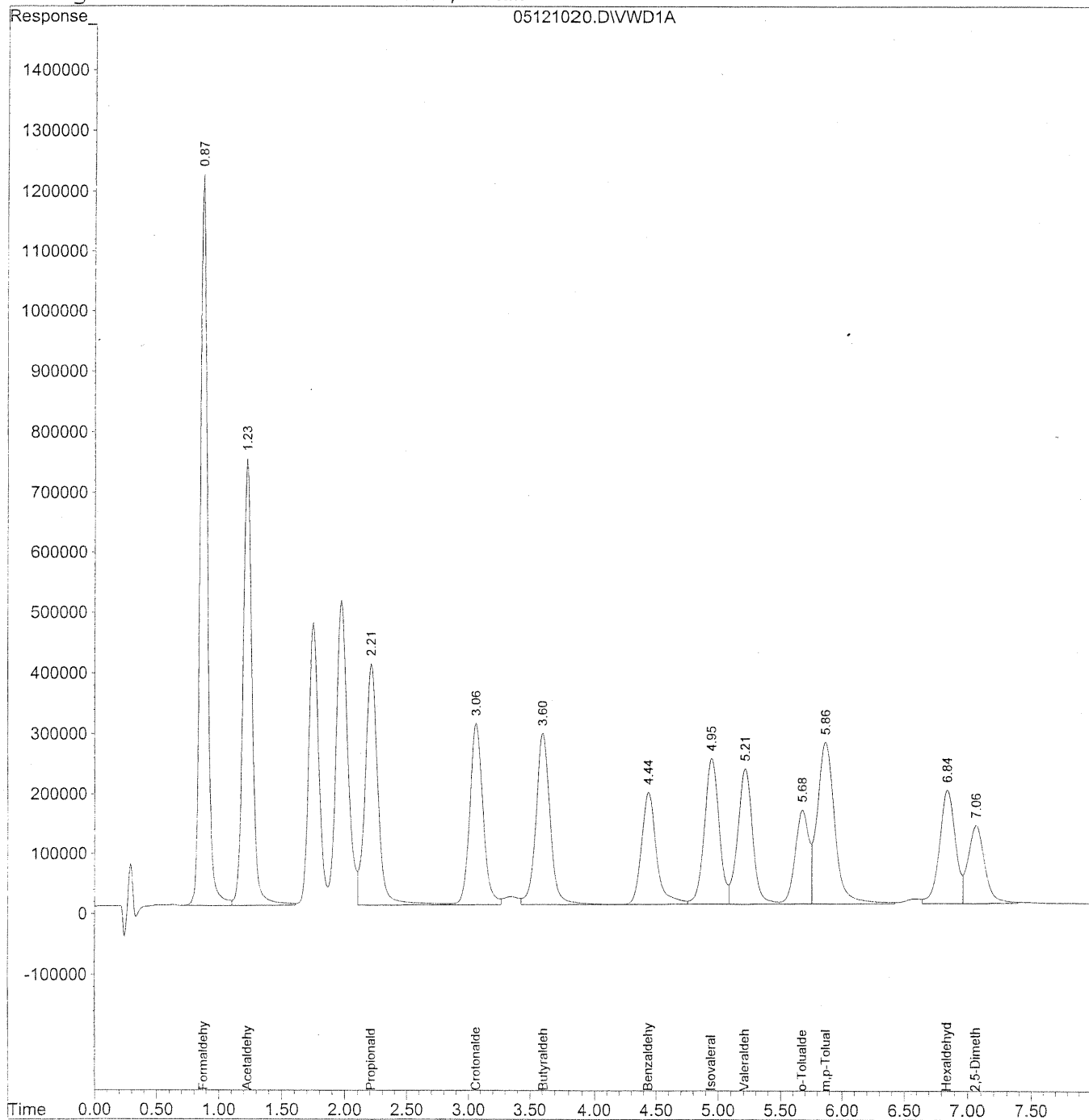
Target Compounds			
1) Formaldehyde	0.89	50223054	5385.515 ng/ml
2) Acetaldehyde	1.24	37132798	5520.107 ng/ml
3) Propionaldehyde	2.23	28599753	5896.787 ng/ml
4) Crotonaldehyde	3.08	22549780	5538.912 ng/ml
5) Butyraldehyde	3.62	22489469	5590.384 ng/ml
6) Benzaldehyde	4.45	15578511	5821.798 ng/ml
7) Isovaleraldehyde	4.96	19643023	5544.916 ng/ml
8) Valeraldehyde	5.23	18591208	5552.388 ng/ml
9) o-Tolualdehyde	5.69	12054706	5937.495 ng/ml
10) m,p-Tolualdehyde	5.88	26529991	11365.707 ng/ml
11) Hexaldehyde	6.86	15876497	5526.796 ng/ml
12) 2,5-Dimethylbenzaldehyde	7.07	11117624	5830.839 ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121020.D Vial: 130
 Acq On : 12-May-2010, 16:05 Operator: MD
 Sample : 5000ng/ml TO-11A S21-03091001 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:27 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121020.D Vial: 130
Acq On : 12-May-2010, 16:05 Operator: MD
Sample : 5000ng/ml TO-11A S21-03091001 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:27 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

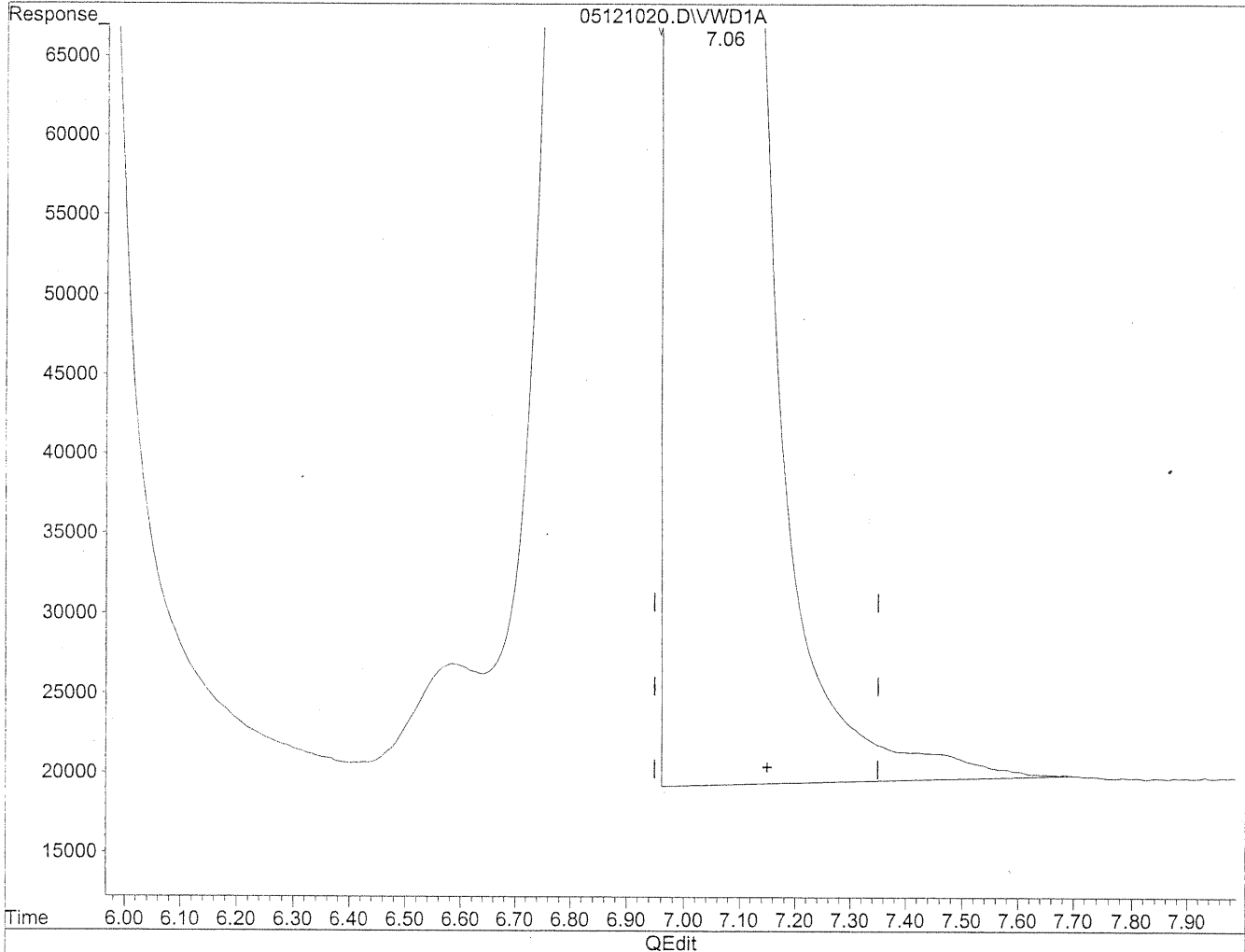
Compound		R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.88	50395021	5401.617	ng/ml
2)	Acetaldehyde	1.23	37166980	5520.251	ng/ml
3)	Propionaldehyde	2.21	28819385	5933.332	ng/ml
4)	Crotonaldehyde	3.07	22800716	5598.404	ng/ml
5)	Butyraldehyde	3.61	22650396	5625.529	ng/ml
6)	Benzaldehyde	4.44	15658234	5848.819	ng/ml
7)	Isovaleraldehyde	4.95	19734320	5567.634	ng/ml
8)	Valeraldehyde	5.21	18822519	5620.414	ng/ml
9)	o-Tolualdehyde	5.68	12188940	6000.763	ng/ml
10)	m,p-Tolualdehyde	5.87	26974841	11550.062	ng/ml
11)	Hexaldehyde	6.85	16102054	5600.478	ng/ml
12)	2,5-Dimethylbenzaldehyde	7.06	11477886	6017.247	ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121020.D Vial: 130
Acq On : 12-May-2010, 16:05 Operator: MD
Sample : 5000ng/ml TO-11A S21-03091001 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:27 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.06min 6127.547ng/ml

response 11688282

(+) = Expected Retention Time

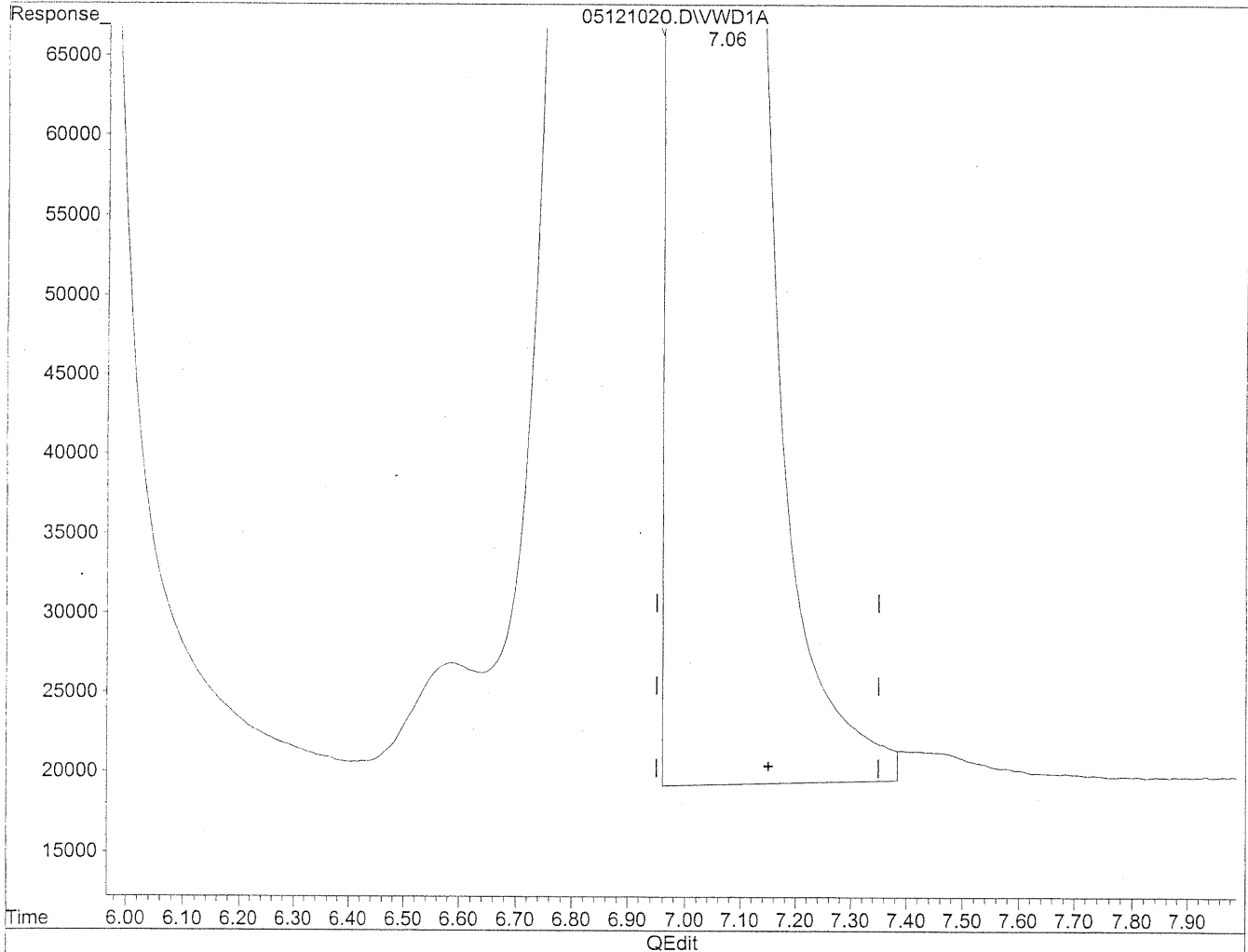
05121020.D TO110510.M

Thu May 13 11:27:33 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121020.D Vial: 130
Acq On : 12-May-2010, 16:05 Operator: MD
Sample : 5000ng/ml TO-11A S21-03091001 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:27 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.06min 6017.247ng/ml m

response 11477886

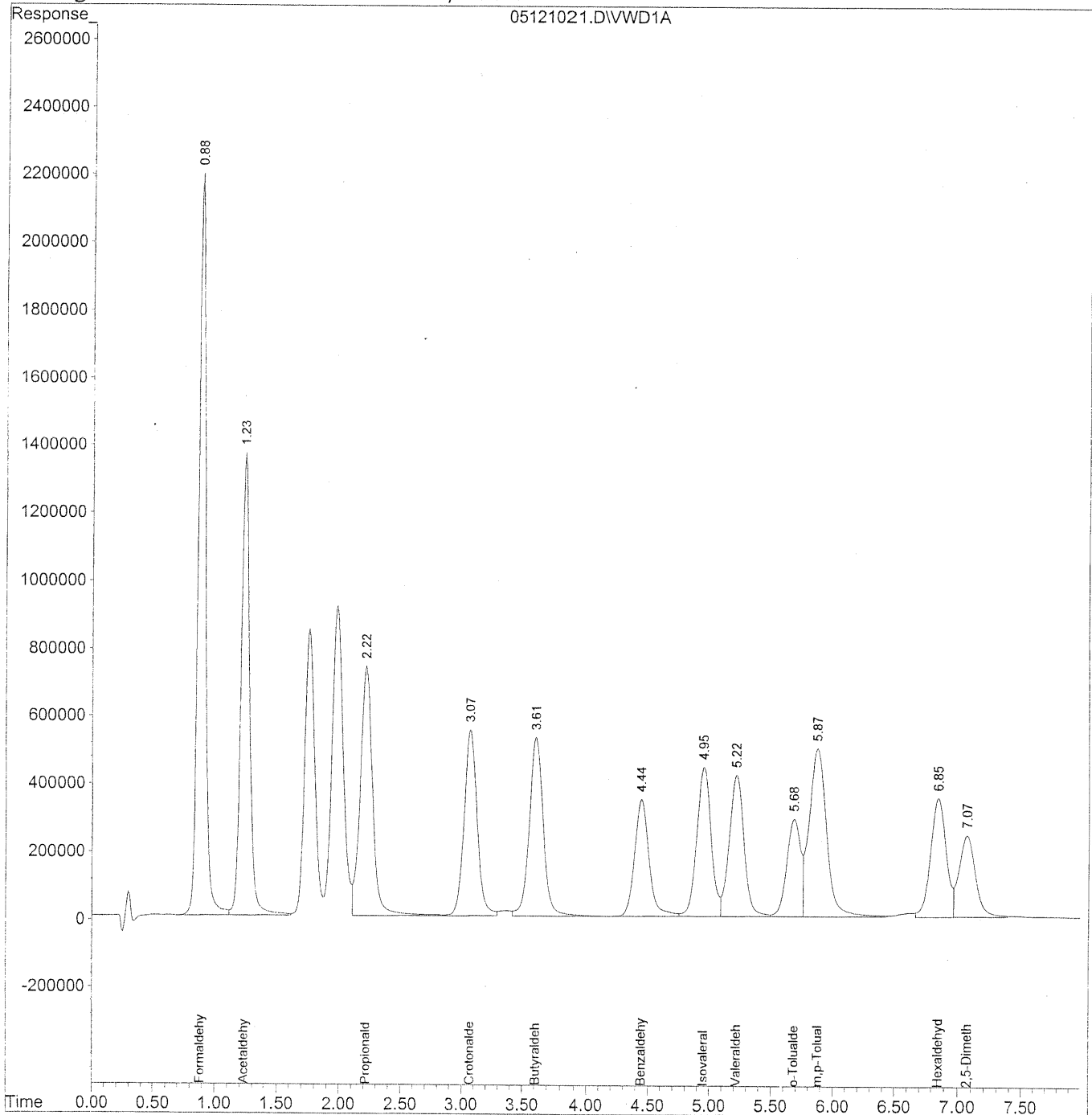
Sh
MD 5/13/10
HC 5/19/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121021.D Vial: 131
Acq On : 12-May-2010, 16:16 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:28 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121021.D Vial: 131
Acq On : 12-May-2010, 16:16 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:28 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

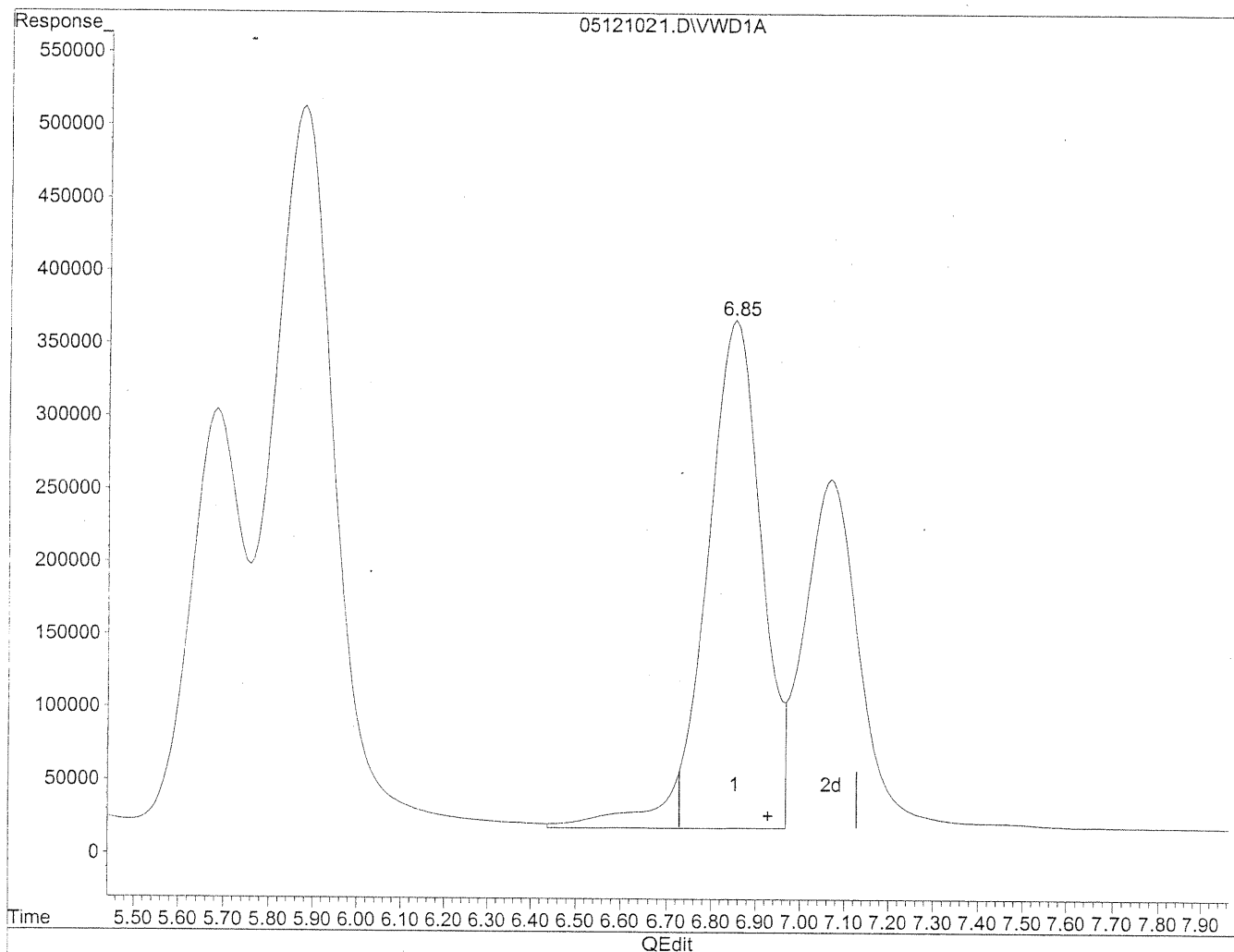
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	90709672	9719.371 ng/ml
2) Acetaldehyde	1.24	66890029	9931.369 ng/ml
3) Propionaldehyde	2.22	52244063	10745.336 ng/ml
4) Crotonaldehyde	3.07	41174859	10101.717 ng/ml
5) Butyraldehyde	3.61	41459691	10289.542 ng/ml
6) Benzaldehyde	4.45	28054819	10474.194 ng/ml
7) Isovaleraldehyde	4.96	35490040	10008.095 ng/ml
8) Valeraldehyde	5.22	34502996	10294.068 ng/ml
9) o-Tolualdehyde	5.69	22342247	10989.551 ng/ml
10) m,p-Tolualdehyde	5.88	48892935	20909.052 ng/ml
11) Hexaldehyde	6.85	29145211	10125.299 ng/mlm
12) 2,5-Dimethylbenzaldehyde	7.07	20767473	10862.963 ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121021.D Vial: 131
Acq On : 12-May-2010, 16:16 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:27 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.85min 10522.780ng/ml

response 30289342

(+) = Expected Retention Time

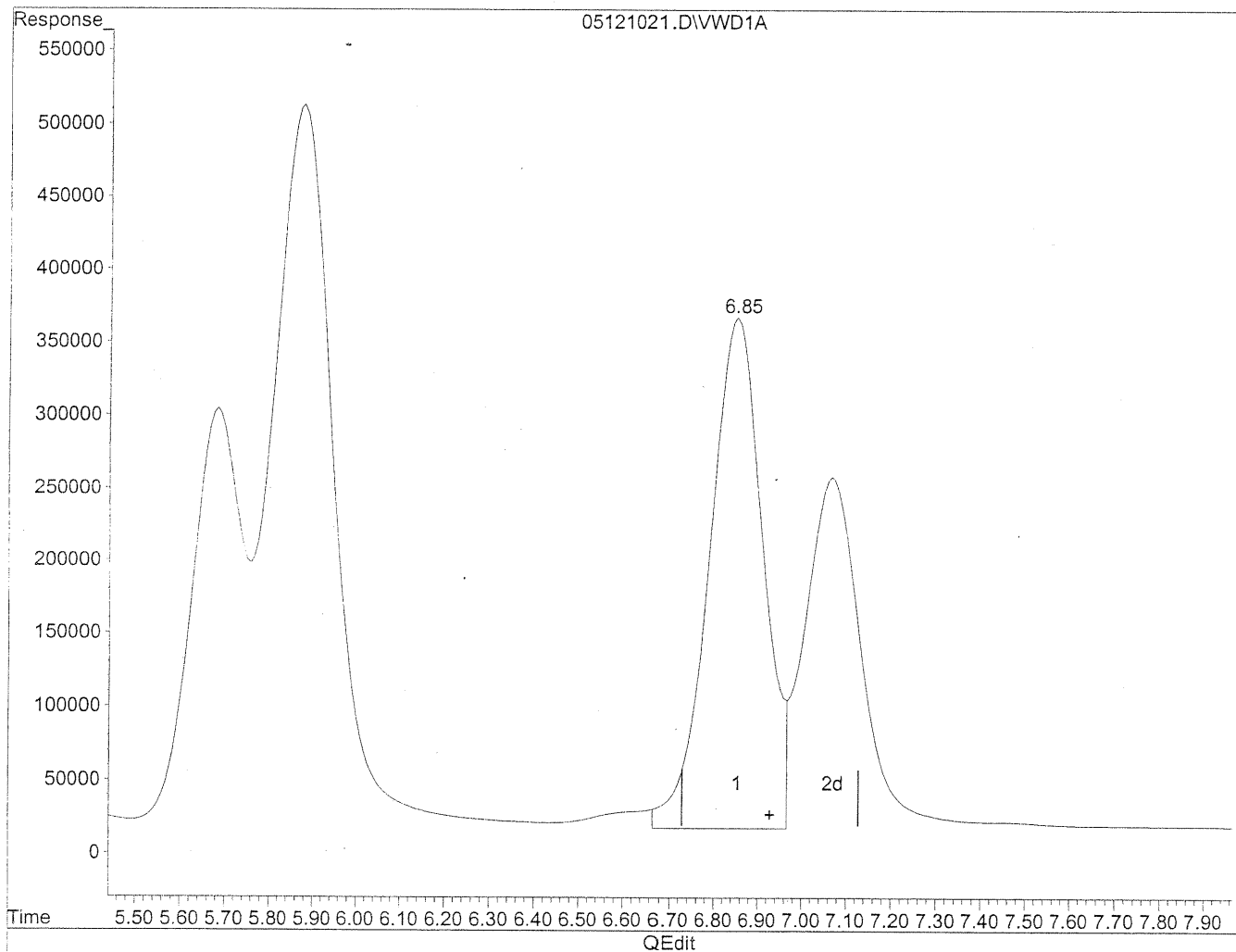
05121021.D TO110510.M

Thu May 13 11:28:03 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121021.D Vial: 131
Acq On : 12-May-2010, 16:16 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:27 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.85min 10125.299ng/ml m

response 29145211

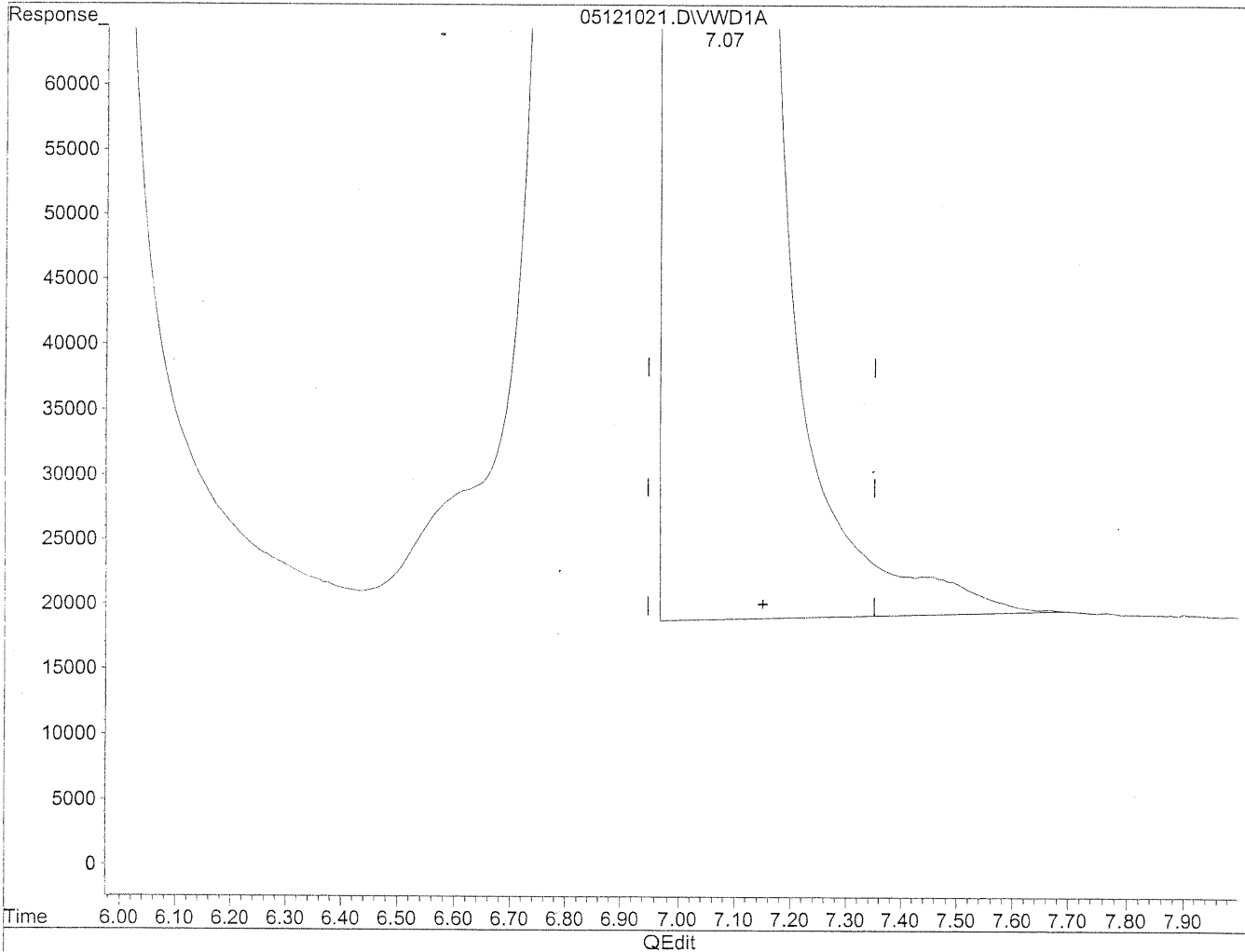
Sh
MD
5/13/10

Hc
5/19/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121021.D Vial: 131
Acq On : 12-May-2010, 16:16 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:27 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.07min 11093.435ng/ml

response 21208083

(+) = Expected Retention Time

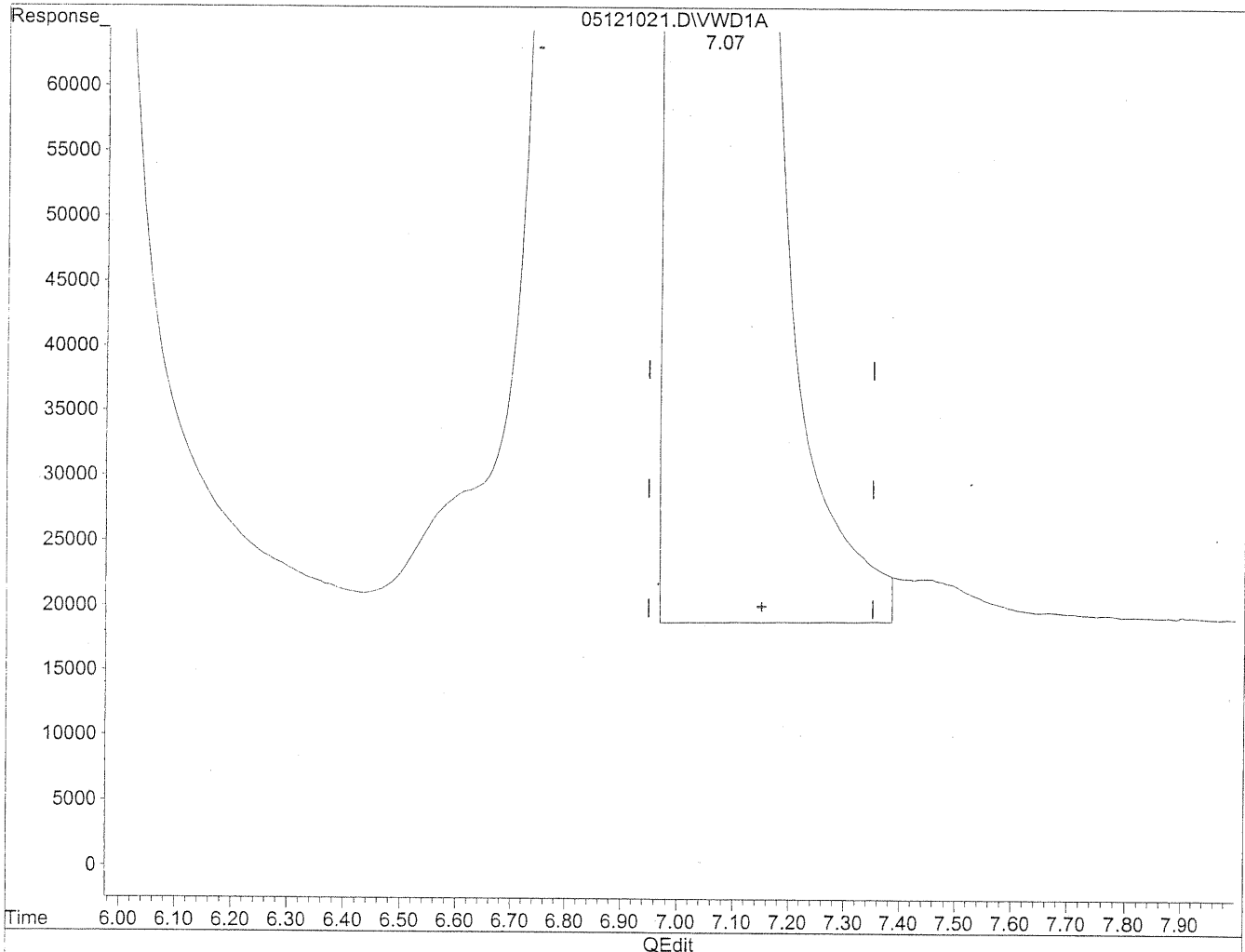
05121021.D TO110510.M

Thu May 13 11:28:13 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121021.D Vial: 131
Acq On : 12-May-2010, 16:16 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:27 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.07min 10862.963ng/ml m

response 20767473

Sh
MD
5/13/10

HC
5/19/10

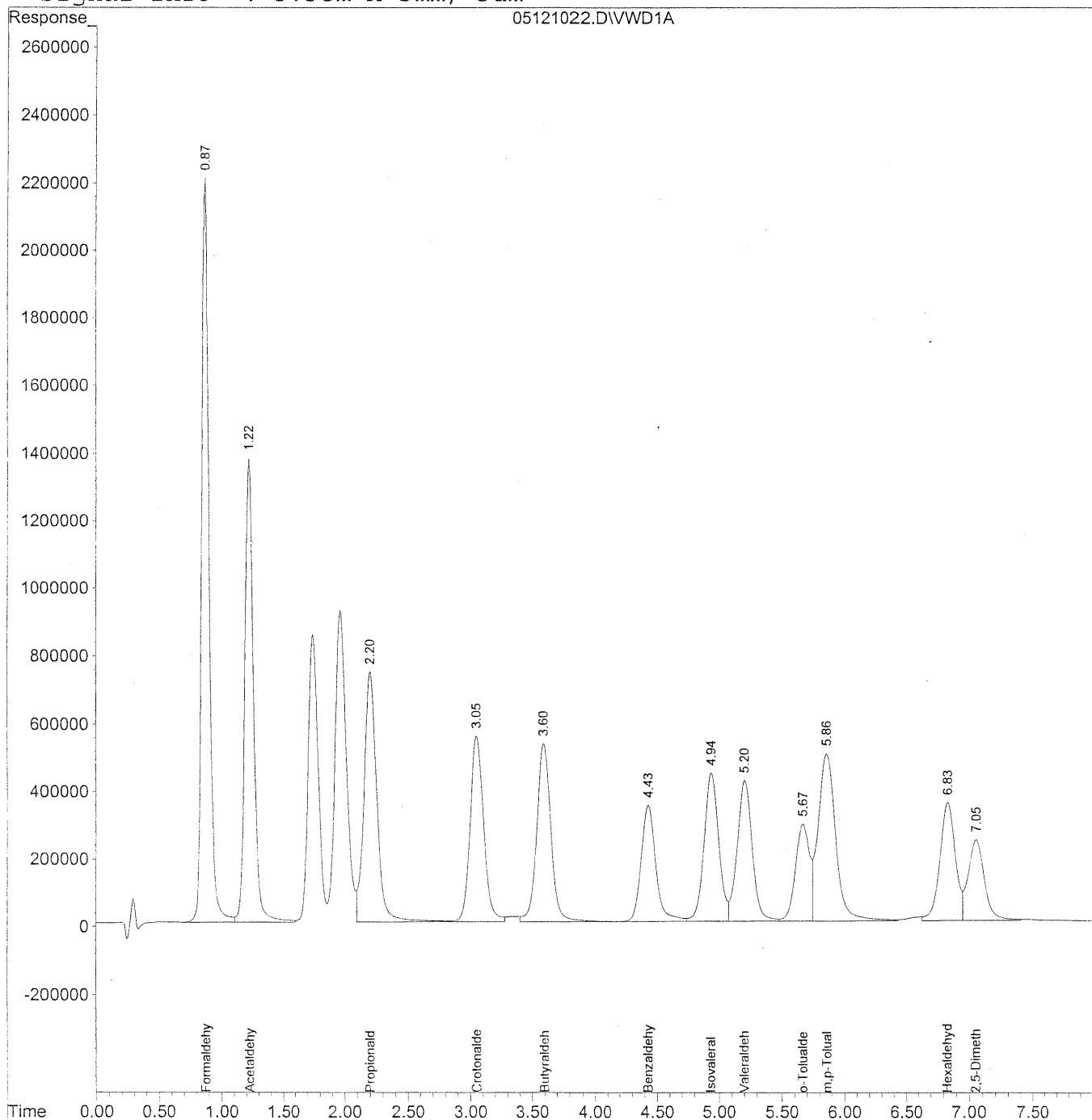
(+) = Expected Retention Time
05121021.D TO110510.M Thu May 13 11:28:18 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121022.D Vial: 131
 Acq On : 12-May-2010, 16:26 Operator: MD
 Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:29 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Quantitation Report

(QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121022.D Vial: 131
Acq On : 12-May-2010, 16:26 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:29 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

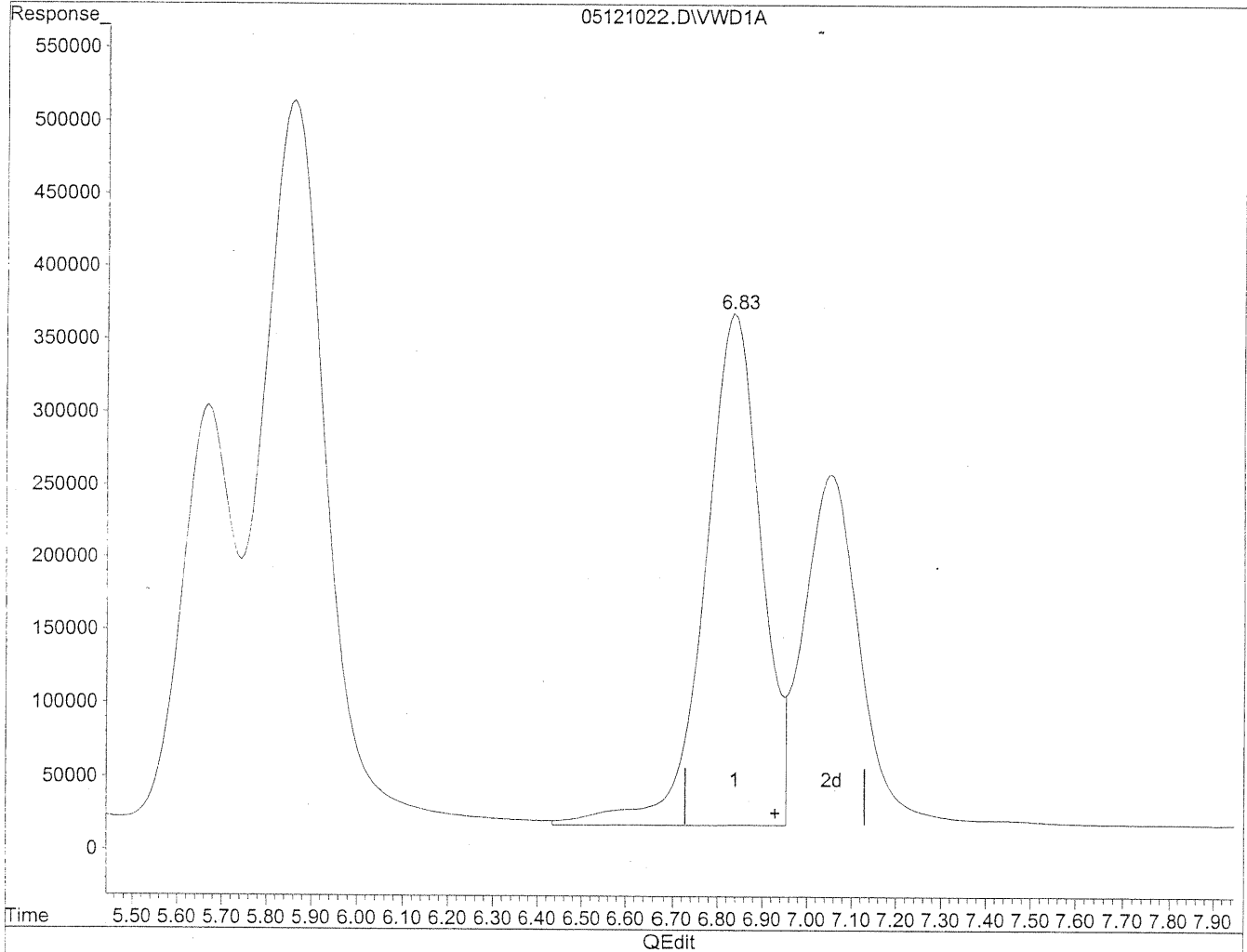
	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.88	91183852	9777.376 ng/ml
2)	Acetaldehyde	1.23	67226101	9988.370 ng/ml
3)	Propionaldehyde	2.21	52545859	10813.558 ng/ml
4)	Crotonaldehyde	3.06	41390037	10161.984 ng/ml
5)	Butyraldehyde	3.60	41669737	10349.111 ng/ml
6)	Benzaldehyde	4.43	28191466	10529.148 ng/ml
7)	Isovaleraldehyde	4.94	35675923	10063.381 ng/ml
8)	Valeraldehyde	5.21	34690610	10349.339 ng/ml
9)	o-Tolualdehyde	5.67	22468352	11047.678 ng/ml
10)	m,p-Tolualdehyde	5.86	49151608	20998.470 ng/ml
11)	Hexaldehyde	6.83	29280568	10204.191 ng/mlm
12)	2,5-Dimethylbenzaldehyde	7.05	20997209	10967.450 ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121022.D Vial: 131
Acq On : 12-May-2010, 16:26 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.84min 10634.067ng/ml

response 30514082

(+) = Expected Retention Time

05121022.D TO110510.M

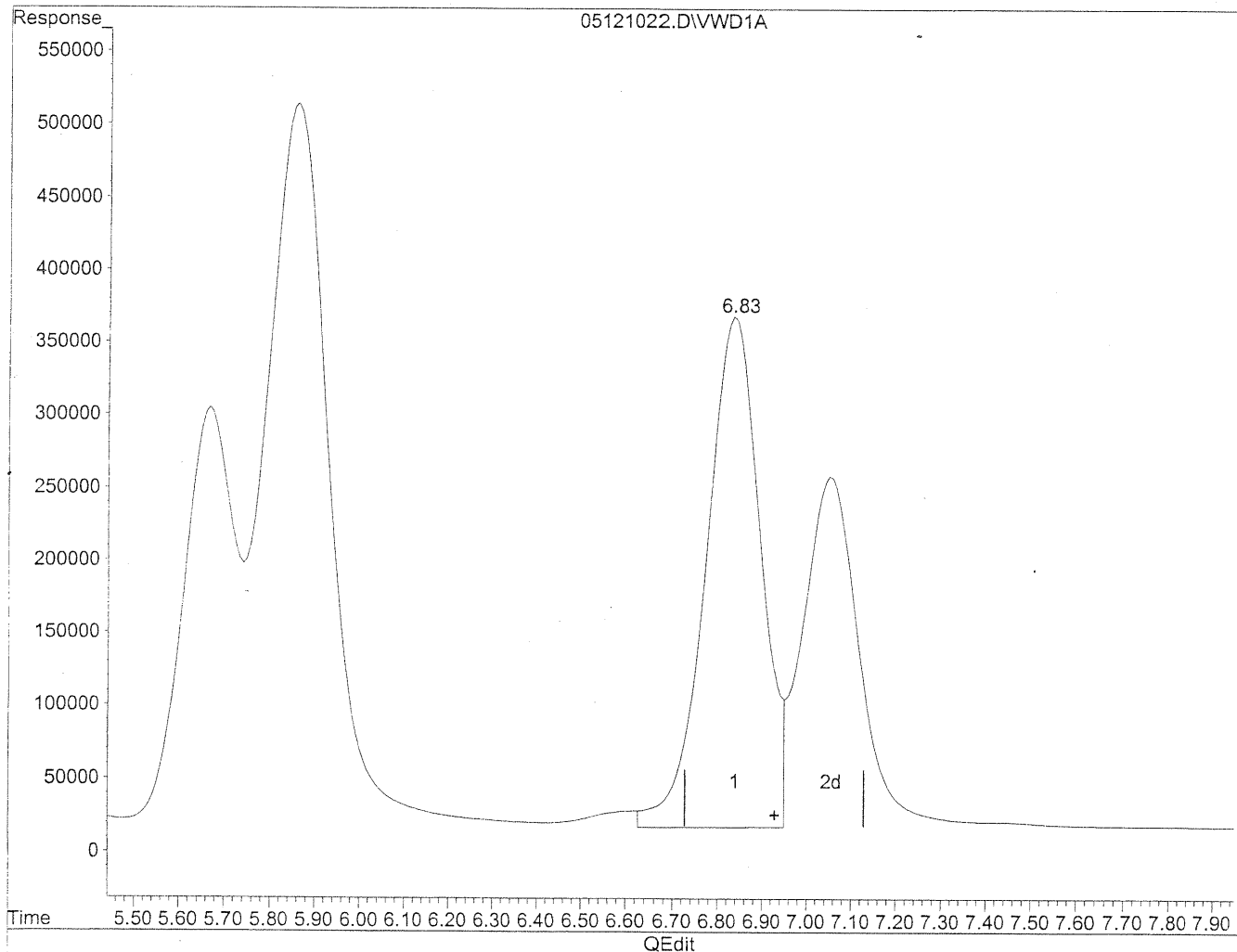
Thu May 13 11:28:43 2010

549 of 610

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121022.D Vial: 131
Acq On : 12-May-2010, 16:26 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.83min 10204.191ng/ml m

response 29280568

Sh
MD
5/13/10

48
5/19/10

(+) = Expected Retention Time

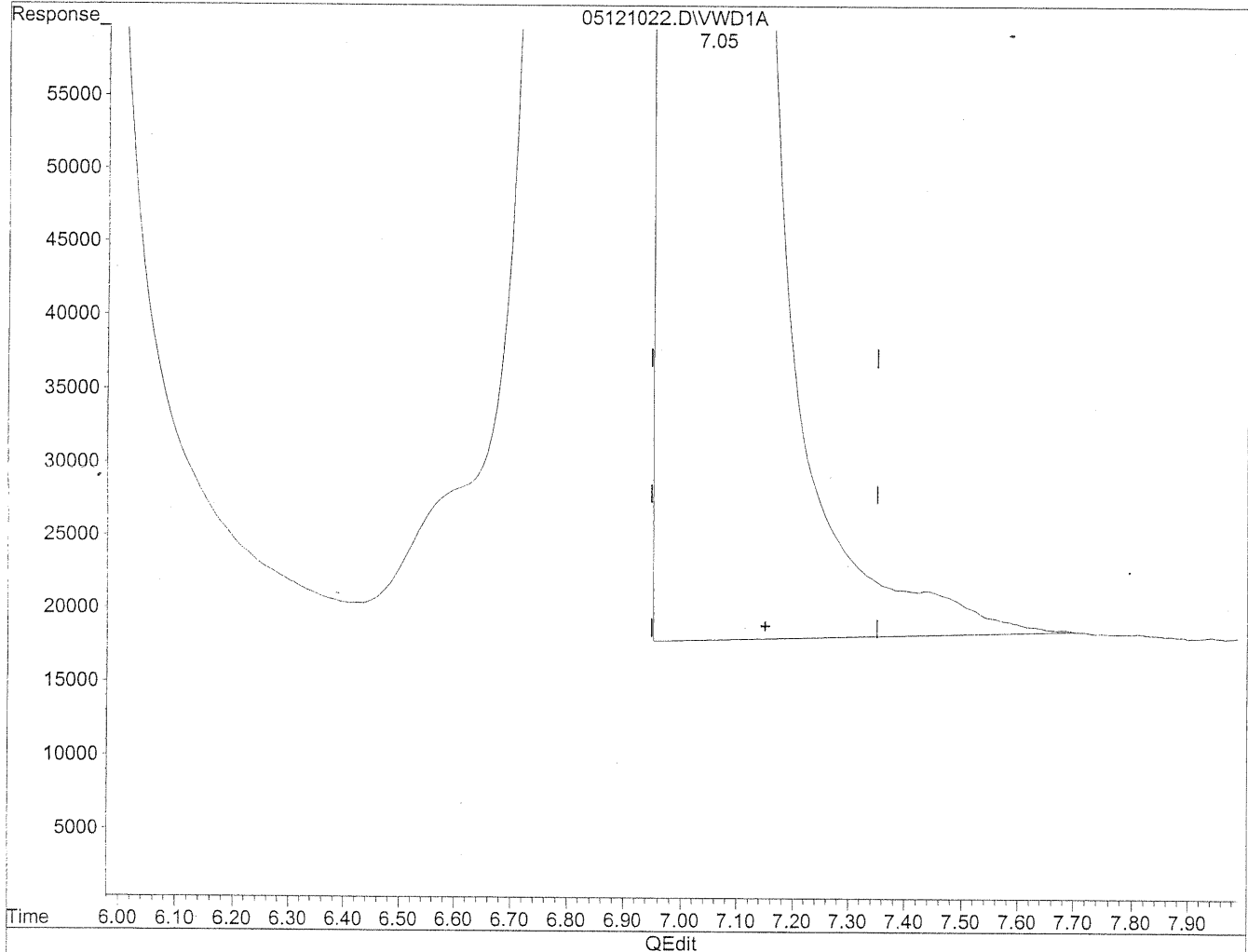
05121022.D TO110510.M

Thu May 13 11:28:58 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121022.D Vial: 131
Acq On : 12-May-2010, 16:26 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.06min 11160.548ng/ml

response 21366896

(+) = Expected Retention Time

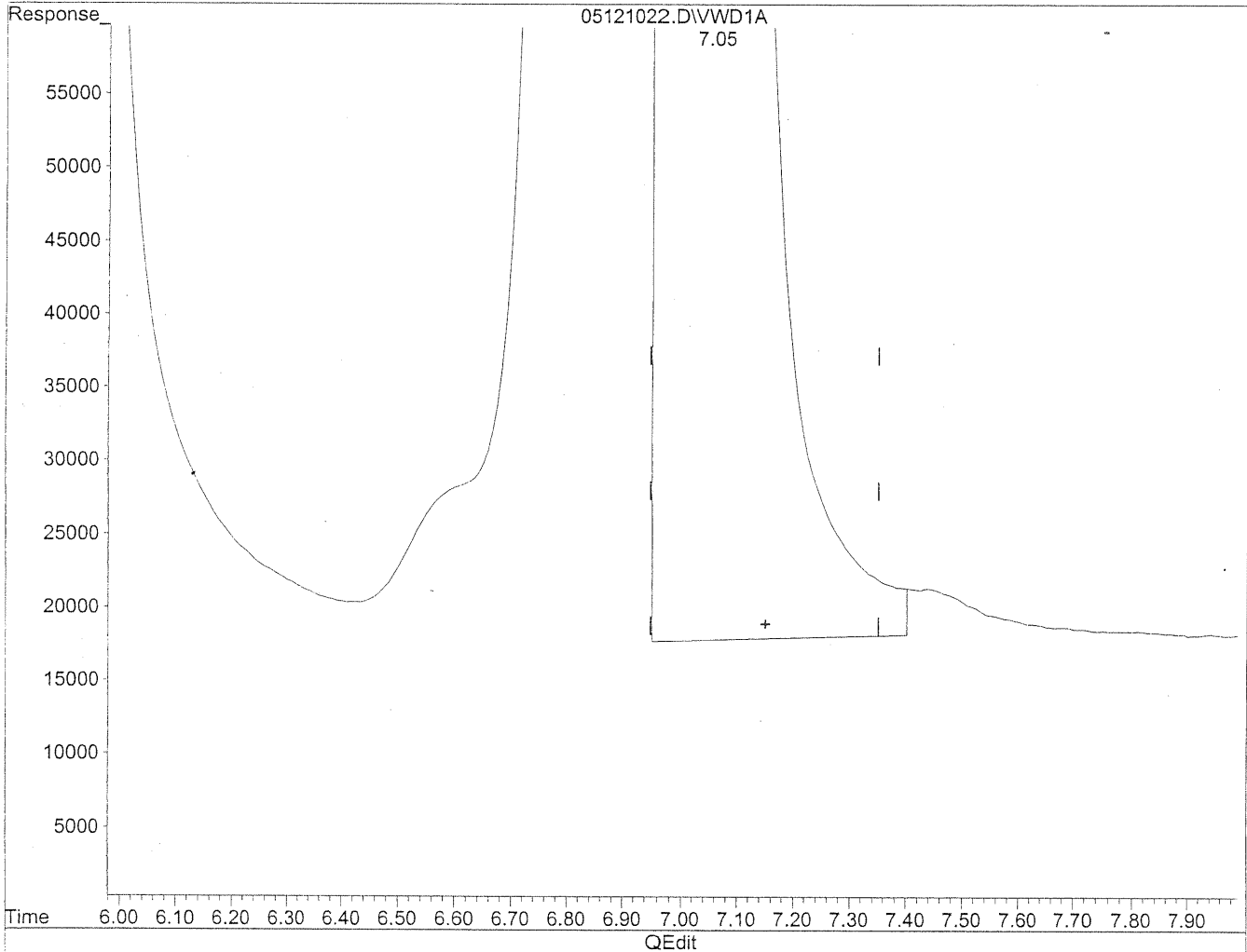
05121022.D TO110510.M

Thu May 13 11:29:02 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121022.D Vial: 131
Acq On : 12-May-2010, 16:26 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:28 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.05min 10967.450ng/ml m

response 20997209

Sh
MD
5/13/10
AK
5/14/10

(+) = Expected Retention Time

05121022.D TO110510.M

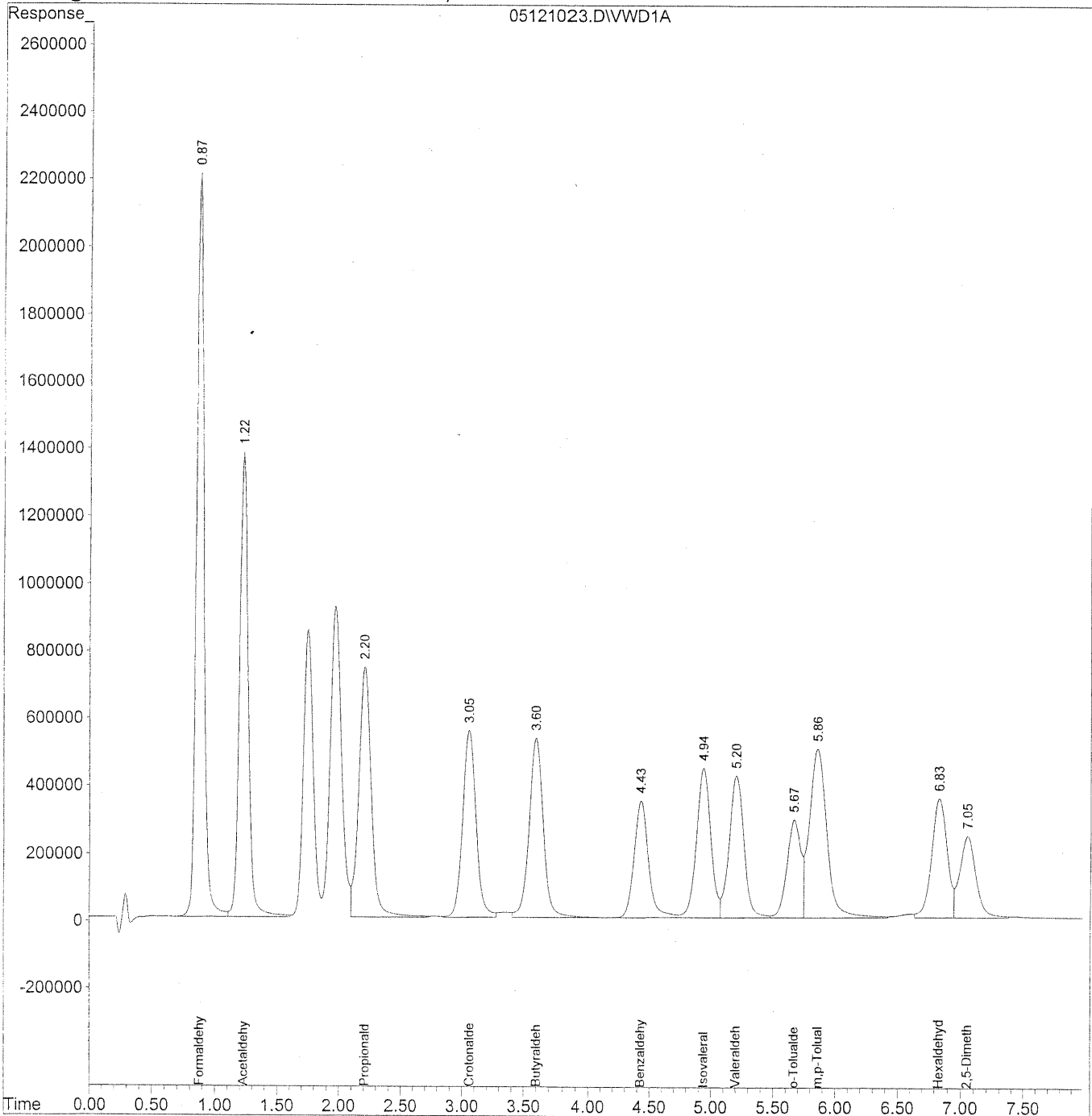
Thu May 13 11:29:08 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121023.D Vial: 131
Acq On : 12-May-2010, 16:37 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:29 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121023.D Vial: 131
Acq On : 12-May-2010, 16:37 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:29 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

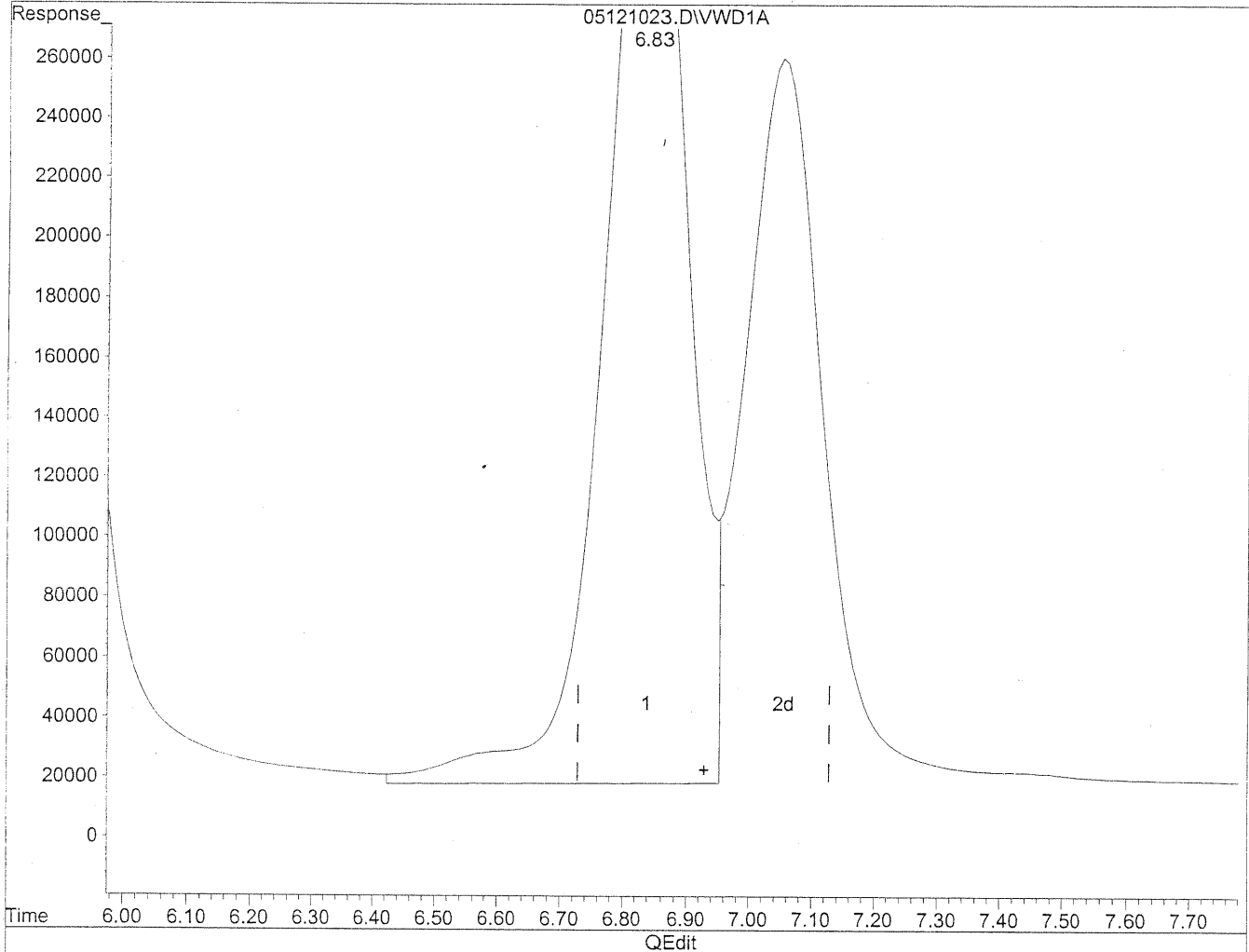
Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	91472042	9804.123 ng/ml
2) Acetaldehyde	1.23	67416123	10012.437 ng/ml
3) Propionaldehyde	2.21	52440027	10786.196 ng/ml
4) Crotonaldehyde	3.06	41499442	10184.361 ng/ml
5) Butyraldehyde	3.60	41771054	10369.766 ng/ml
6) Benzaldehyde	4.43	28269761	10553.902 ng/ml
7) Isovaleraldehyde	4.94	35769102	10085.258 ng/ml
8) Valeraldehyde	5.21	34792517	10374.902 ng/ml
9) o-Tolualdehyde	5.67	22535528	11074.985 ng/ml
10) m,p-Tolualdehyde	5.86	49312981	21057.715 ng/ml
11) Hexaldehyde	6.83	30073334	10476.349 ng/mlm
12) 2,5-Dimethylbenzaldehyde	7.05	21232541	11079.292 ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121023.D Vial: 131
Acq On : 12-May-2010, 16:37 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration

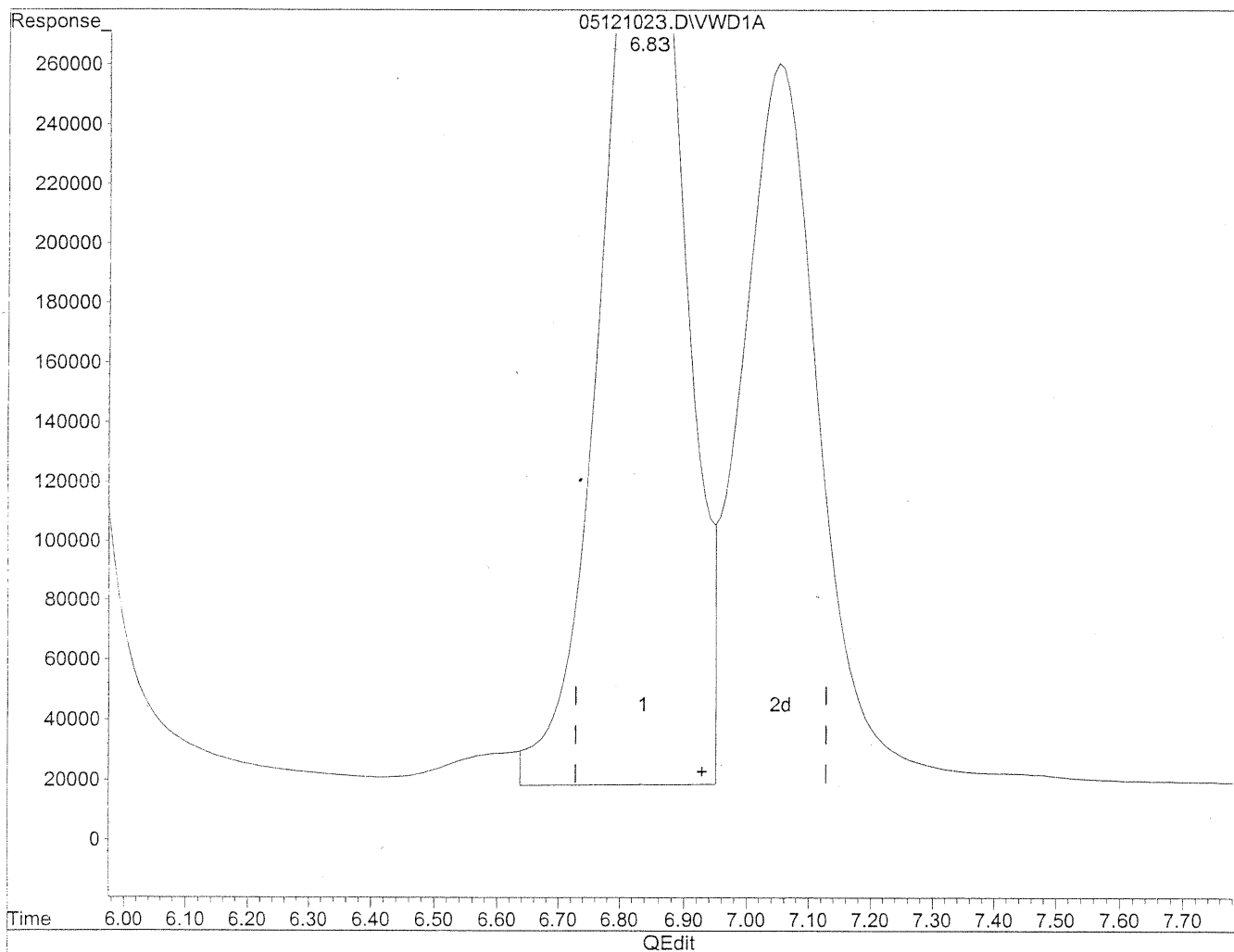


(11) Hexaldehyde
6.84min 10671.617ng/ml
response 30633869

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121023.D Vial: 131
 Acq On : 12-May-2010, 16:37 Operator: MD
 Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 12 13:15:37 2010
 Response via : Multiple Level Calibration



(11) Hexaldehyde

6.83min 10476.349ng/ml m

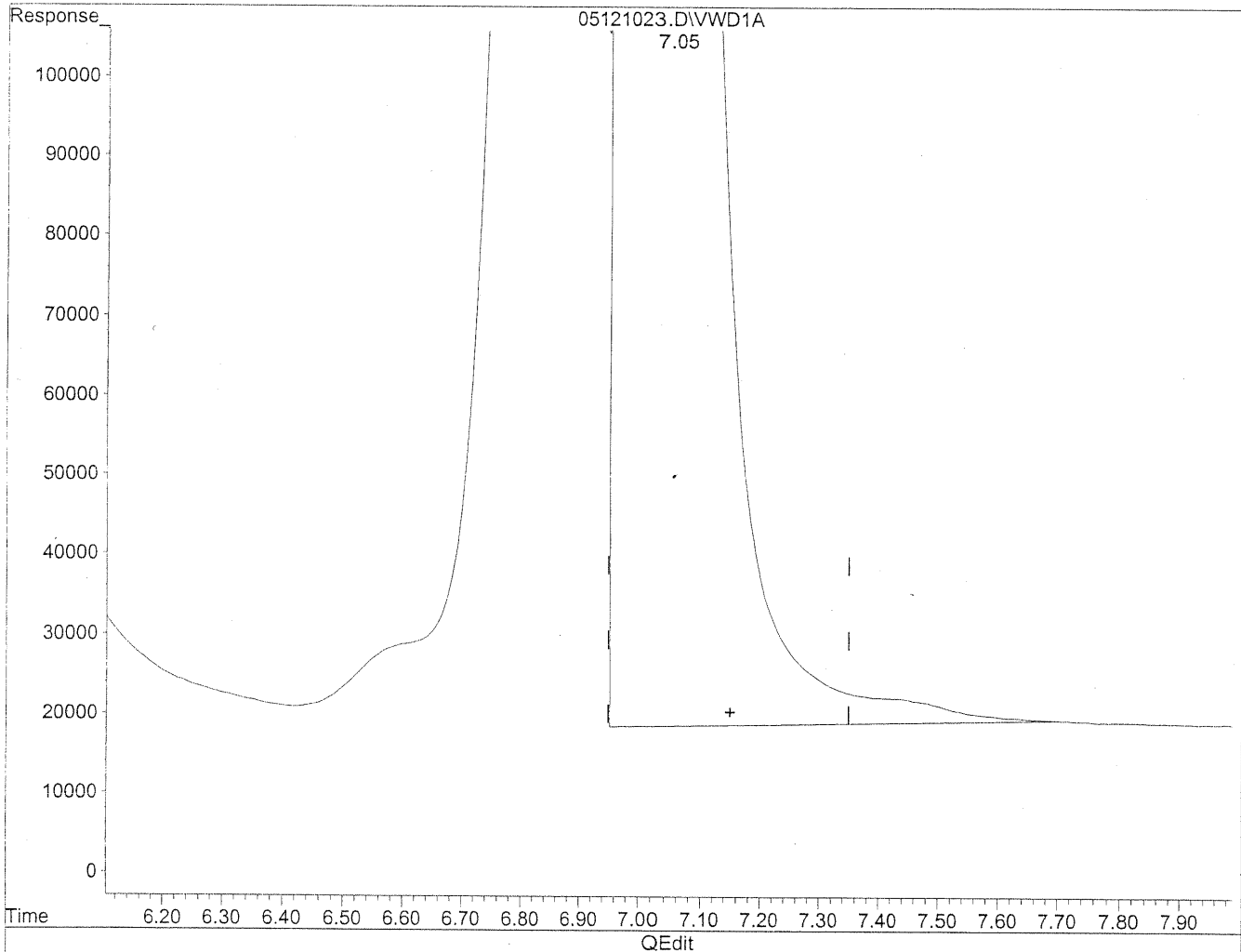
response 30073334

Sh
 (signature)
 5/13/10
 Hc
 5/19/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121023.D Vial: 131
Acq On : 12-May-2010, 16:37 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

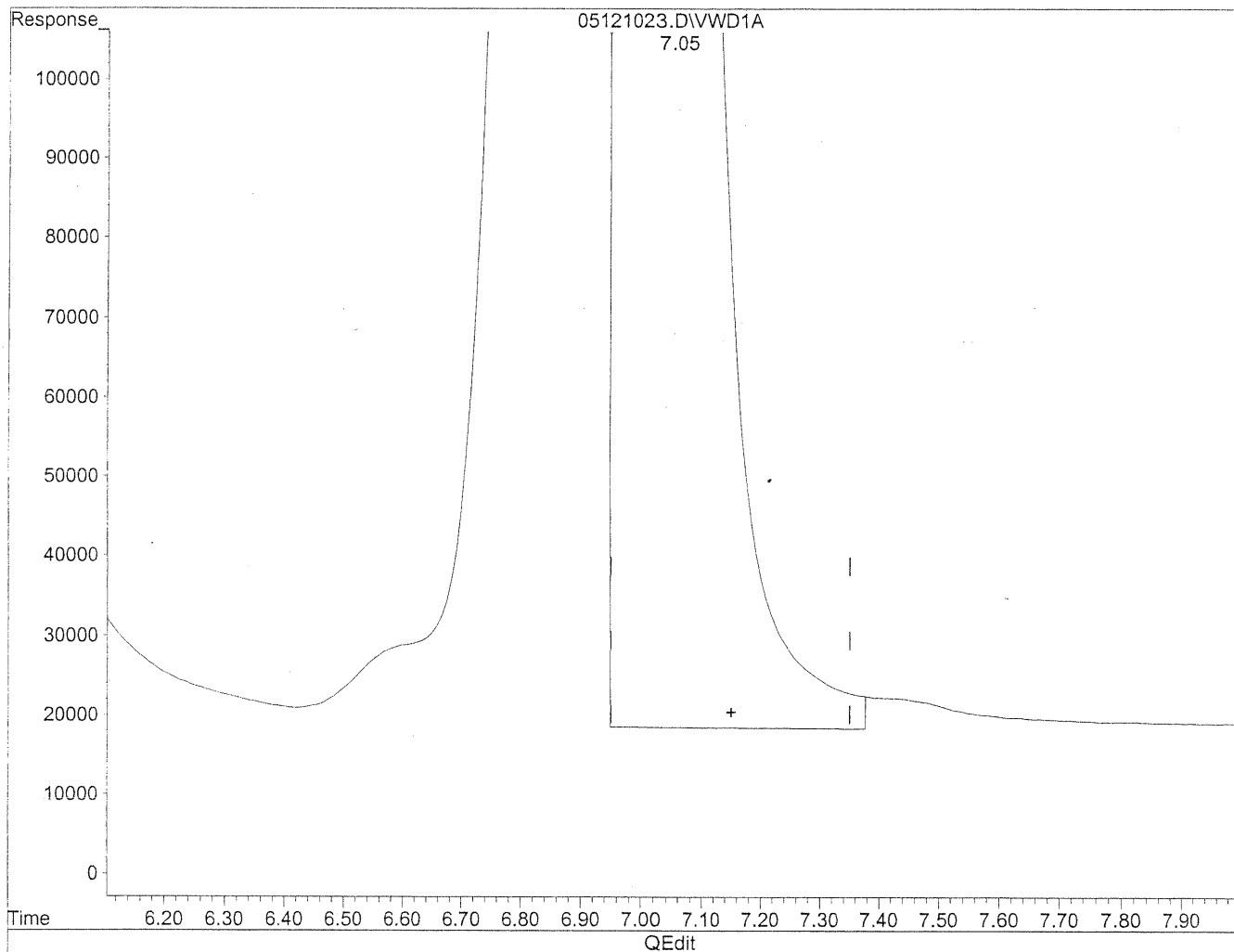
7.05min 11190.681ng/ml

response 21446009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121023.D Vial: 131
Acq On : 12-May-2010, 16:37 Operator: MD
Sample : 10000ng/ml TO-11 S21-03091007 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:29 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 12 13:15:37 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.05min 11079.292ng/ml m

response 21232541

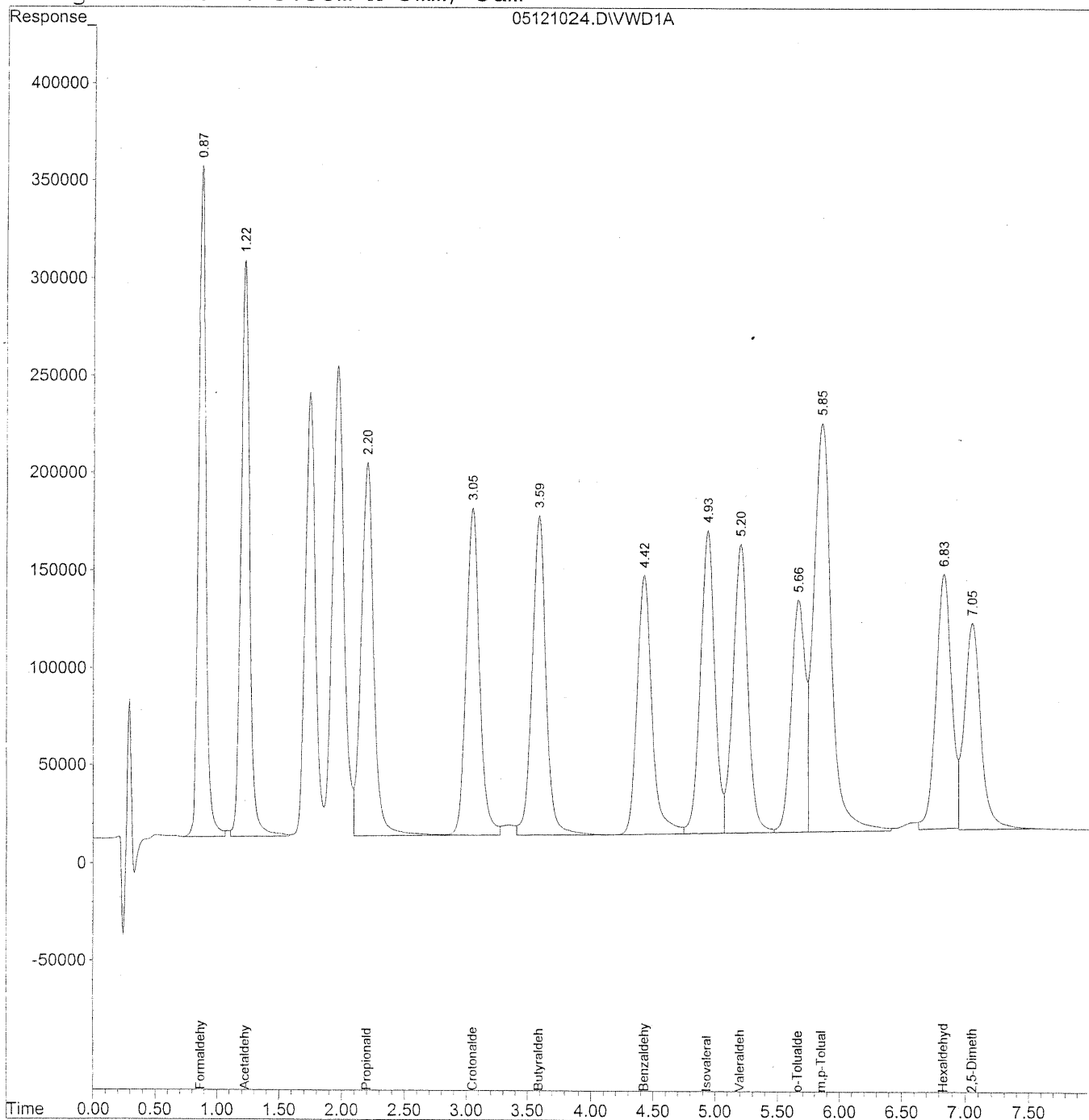
sh
MD
5/13/10
HC
5/13/10

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121024.D Vial: 132
 Acq On : 12-May-2010, 16:48 Operator: MD
 Sample : ~1500 TO-11A ICV S21-03091003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 13 11:49 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 11:47:19 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\12\05121024.D Vial: 132
Acq On : 12-May-2010, 16:48 Operator: MD
Sample : ~1500 TO-11A ICV S21-03091003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:49 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:47:19 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

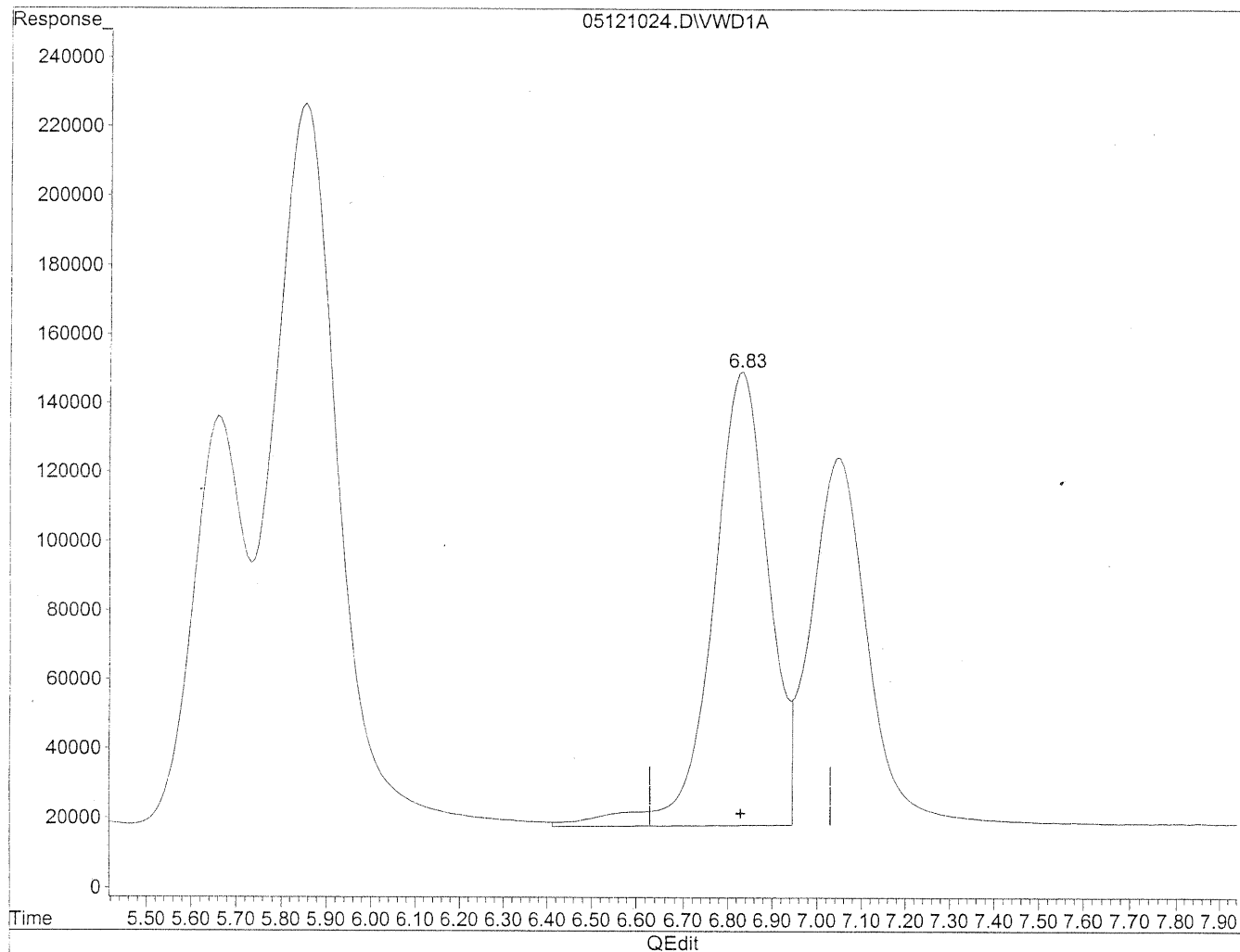
Compound	R.T.	Response	Conc	Units

Target Compounds				
1) Formaldehyde	0.87	14317805	1534.126	ng/ml
2) Acetaldehyde	1.22	14429644	2142.414	ng/ml
3) Propionaldehyde	2.20	13449982	2766.335	ng/ml
4) Crotonaldehyde	3.05	12673442	3109.264	ng/ml
5) Butyraldehyde	3.59	12877834	3196.044	ng/ml
6) Benzaldehyde	4.42	10966971	4051.752	ng/ml
7) Isovaleraldehyde	4.94	12510790	3526.445	ng/ml
8) Valeraldehyde	5.20	12247050	3650.807	ng/ml
9) o-Tolualdehyde	5.66	9205480	4522.385	ng/ml
10) m,p-Tolualdehyde	5.85	21103085	9008.370	ng/ml
11) Hexaldehyde	6.83	10778547	3748.573	ng/mlm
12) 2,5-Dimethylbenzaldehyde	7.05	9419393	4895.634	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121024.D Vial: 132
Acq On : 12-May-2010, 16:48 Operator: MD
Sample : ~1500 TO-11A ICV S21-03091003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:38 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:38:28 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.83min 3969.429ng/ml

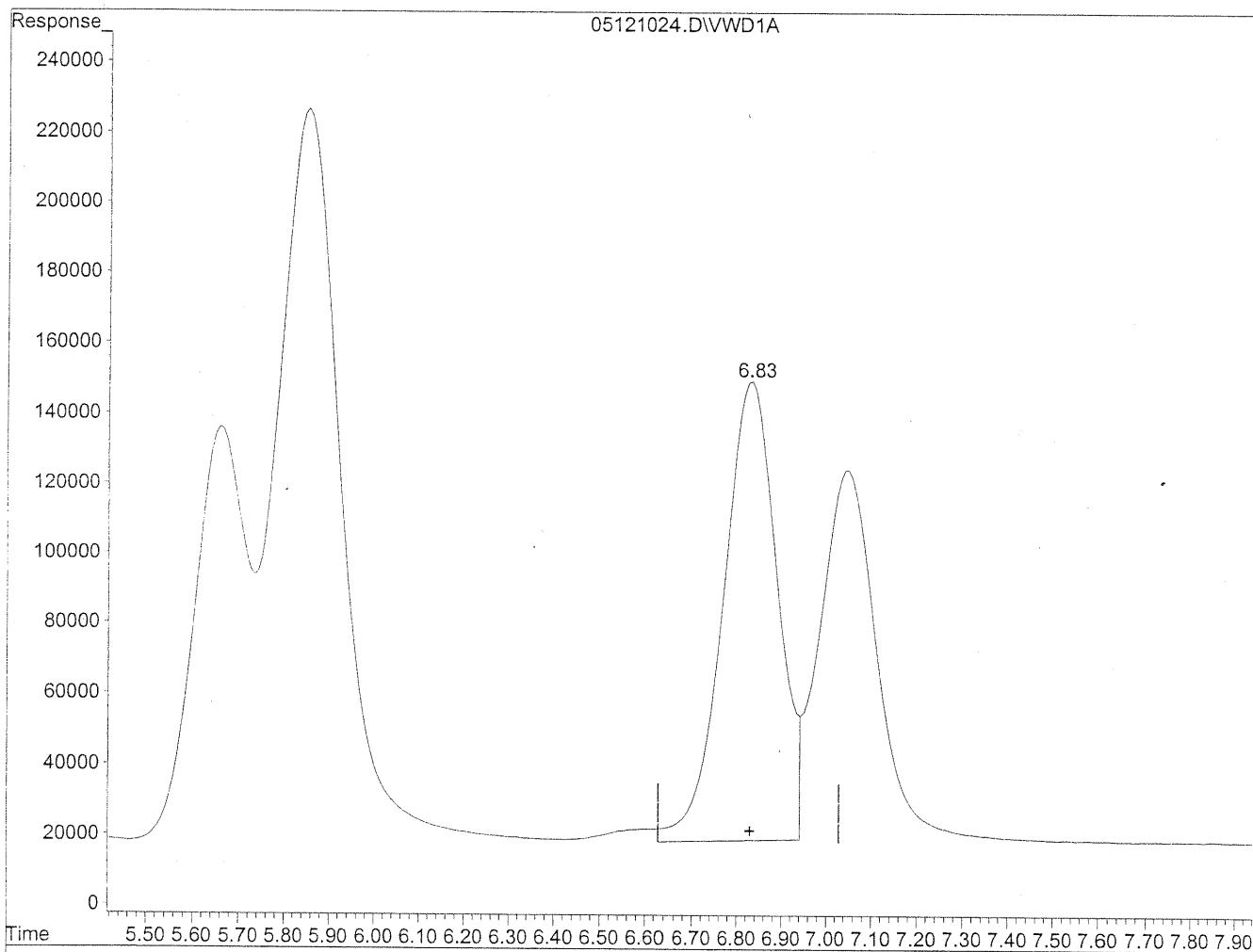
response 11413591

(+) = Expected Retention Time
05121024.D TO110510.M Thu May 13 11:38:51 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\12\05121024.D Vial: 132
Acq On : 12-May-2010, 16:48 Operator: MD
Sample : ~1500 TO-11A ICV S21-03091003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 11:47 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 11:47:19 2010
Response via : Multiple Level Calibration



(11) Hexaldehyde

6.83min 3748.573ng/ml m

response 10778547

Sh
MD
5/13/10
105
5/13/10

(+) = Expected Retention Time

05121024.D TO110510.M

Thu May 13 11:49:20 2010

CONTINUING CALIBRATION STANDARDS

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251002.D Vial: 10
 Acq On : 25-May-2010, 11:35 Operator: MD
 Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Tue Oct 13 11:33:26 2009
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

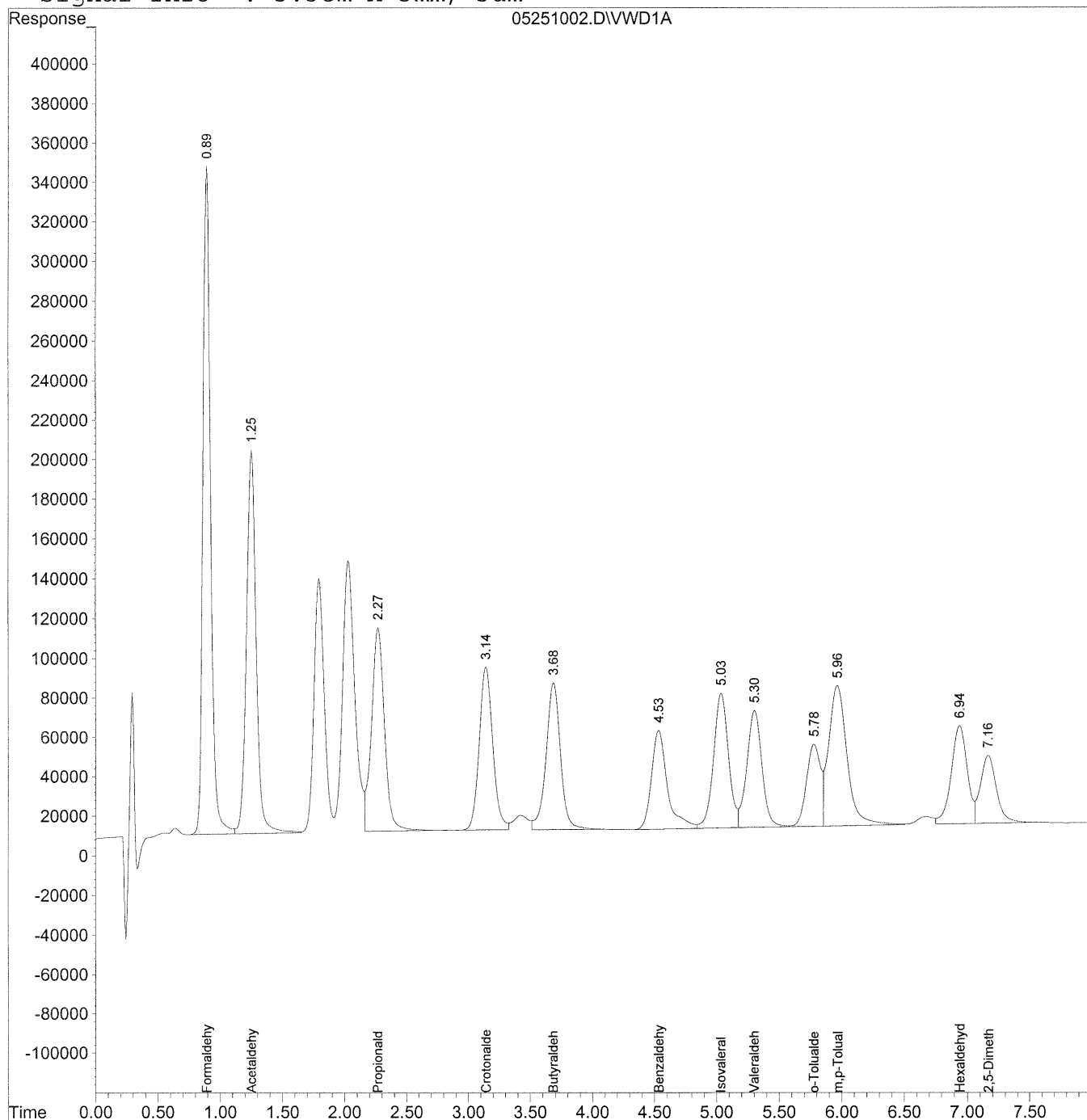
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.560 E3	-2.4	103	0.00
2	Acetaldehyde	6.735	6.999 E3	-3.9	103	0.00
3	Propionaldehyde	4.862	5.017 E3	-3.2	103	0.00
4	Crotonaldehyde	4.076	4.190 E3	-2.8	101	0.00
5	Butyraldehyde	4.029	4.007 E3	0.5	102	0.00
6	Benzaldehyde	2.707	2.966 E3	-9.6	112	0.00
7	Isovaleraldehyde	3.548	3.781 E3	-6.6	103	0.00
8	Valeraldehyde	3.355	3.316 E3	1.2	102	0.00
9	o-Tolualdehyde	2.036	2.138 E3	-5.0	101	0.00
10	m,p-Tolualdehyde	2.343	2.452 E3	-4.7	102	0.00
11	Hexaldehyde	2.875	2.851 E3	0.8	103	0.00
12	2,5-Dimethylbenzaldehyde	1.924	2.033 E3	-5.7	100	0.00

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251002.D Vial: 10
 Acq On : 25-May-2010, 11:35 Operator: MD
 Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 25 11:51 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 14:13:10 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251002.D Vial: 10
Acq On : 25-May-2010, 11:35 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 11:51 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

mm
6/4/10

HL
6/4/10

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	14340119	1536.517 ng/ml
2) Acetaldehyde	1.25	10498397	1558.729 ng/ml
3) Propionaldehyde	2.27	7524823	1547.673 ng/ml
4) Crotonaldehyde	3.14	6284264	1541.763 ng/ml
5) Butyraldehyde	3.69	6011001	1491.821 ng/ml
6) Benzaldehyde	4.54	4448993	1643.682 ng/ml
7) Isovaleraldehyde	5.04	5671854	1598.738 ng/ml
8) Valeraldehyde	5.31	4974712	1482.946 ng/ml
9) o-Tolualdehyde	5.78	3206910	1575.462 ng/ml
10) m,p-Tolualdehyde	5.97	7356466	3140.288 ng/ml
11) Hexaldehyde	6.94	4275787	1487.037 ng/ml
12) 2,5-Dimethylbenzaldehyde	7.17	3048999	1584.686 ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251018.D Vial: 10
 Acq On : 25-May-2010, 14:25 Operator: MD
 Sample : MID CCV 1500ng/ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Tue Oct 13 11:33:26 2009
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

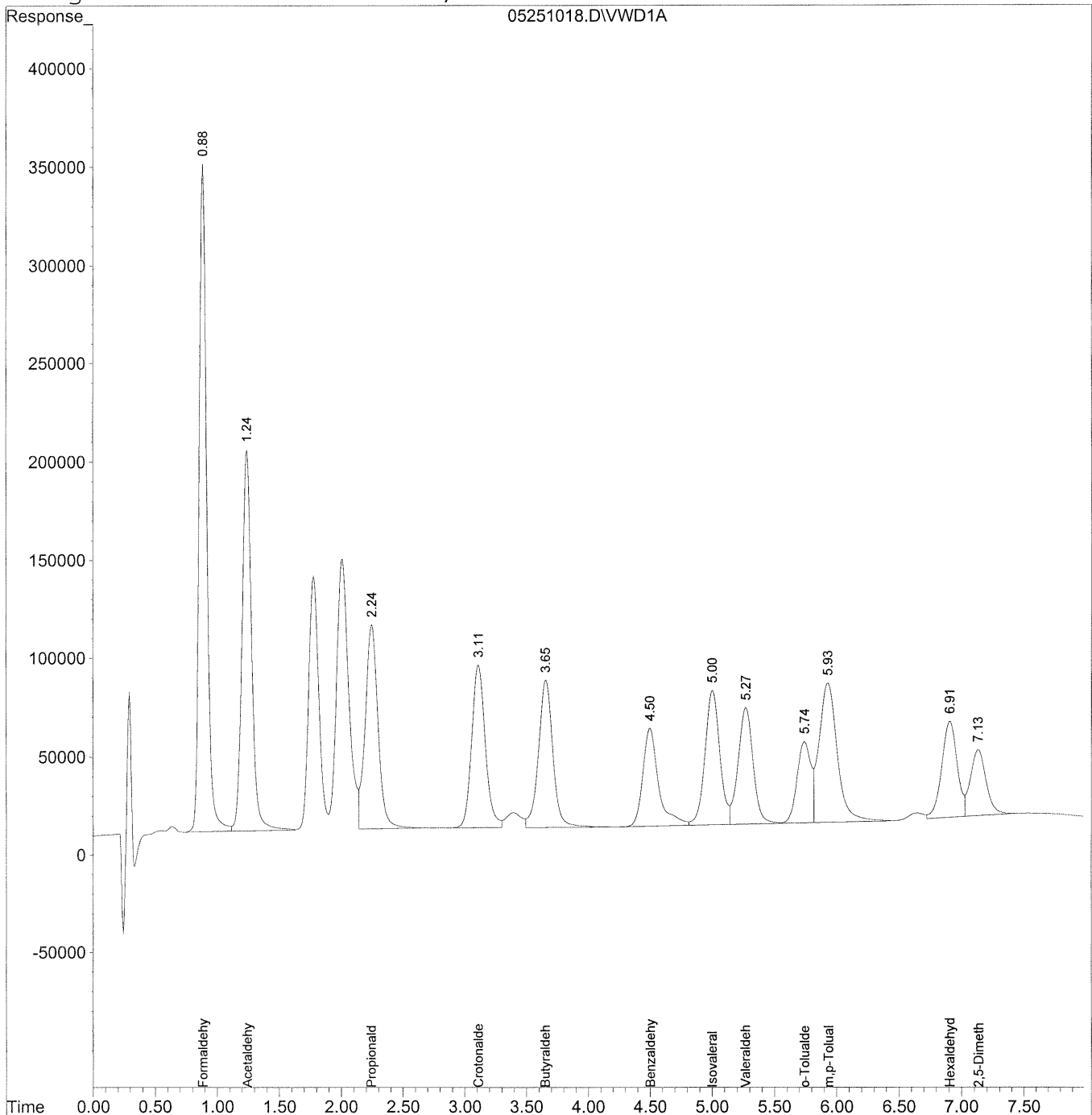
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.546 E3	-2.3	103	0.00
2	Acetaldehyde	6.735	6.971 E3	-3.5	103	0.00
3	Propionaldehyde	4.862	4.990 E3	-2.6	102	-0.01
4	Crotonaldehyde	4.076	4.206 E3	-3.2	102	-0.02
5	Butyraldehyde	4.029	4.040 E3	-0.3	102	-0.02
6	Benzaldehyde	2.707	2.931 E3	-8.3	110	-0.03
7	Isovaleraldehyde	3.548	3.758 E3	-5.9	102	-0.02
8	Valeraldehyde	3.355	3.300 E3	1.6	101	-0.03
9	o-Tolualdehyde	2.036	2.115 E3	-3.9	100	-0.03
10	m,p-Tolualdehyde	2.343	2.405 E3	-2.6	100	-0.03
11	Hexaldehyde	2.875	2.725 E3	5.2	98	-0.02
12	2,5-Dimethylbenzaldehyde	1.924	1.928 E3	-0.2	95	-0.03

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251018.D Vial: 10
Acq On : 25-May-2010, 14:25 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 14:35 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251018.D Vial: 10
Acq On : 25-May-2010, 14:25 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 14:35 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	14319382	1534.295 ng/ml
2) Acetaldehyde	1.24	10456464	1552.503 ng/ml
3) Propionaldehyde	2.25	7484845	1539.451 ng/ml
4) Crotonaldehyde	3.11	6309021	1547.836 ng/ml
5) Butyraldehyde	3.66	6060467	1504.098 ng/ml
6) Benzaldehyde	4.50	4396495	1624.287 ng/ml
7) Isovaleraldehyde	5.01	5637441	1589.038 ng/ml
8) Valeraldehyde	5.27	4949433	1475.410 ng/ml
9) o-Tolualdehyde	5.75	3172148	1558.384 ng/ml
10) m,p-Tolualdehyde	5.93	7215399	3080.070 ng/ml
11) Hexaldehyde	6.91	4087117	1421.422 ng/ml
12) 2,5-Dimethylbenzaldehyde	7.13	2892136	1503.158 ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251031.D Vial: 10
 Acq On : 25-May-2010, 16:41 Operator: MD
 Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Tue Oct 13 11:33:26 2009
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

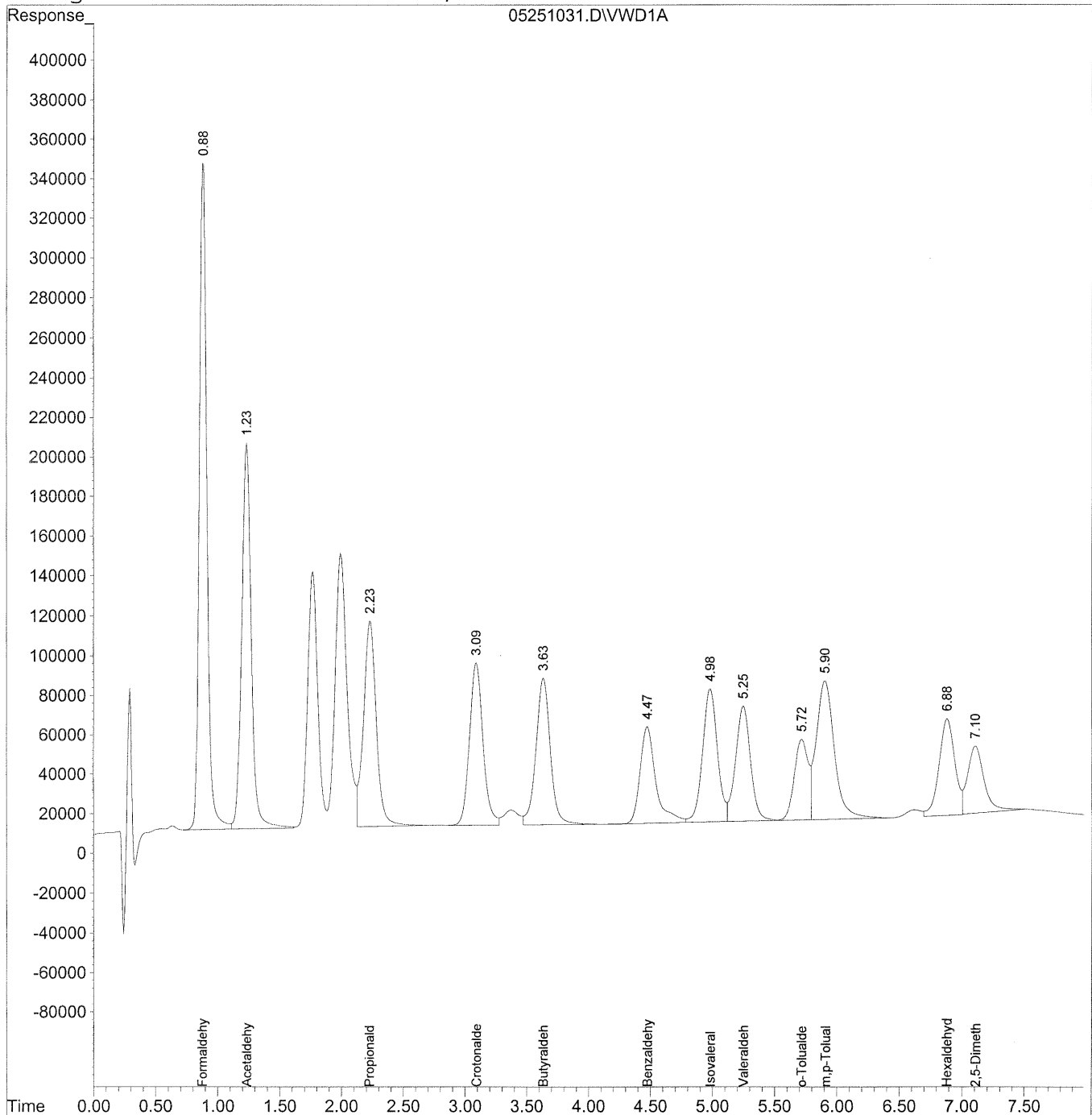
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.511 E3	-1.9	102	0.00
2	Acetaldehyde	6.735	6.966 E3	-3.4	102	-0.01
3	Propionaldehyde	4.862	5.012 E3	-3.1	103	-0.03
4	Crotonaldehyde	4.076	4.179 E3	-2.5	101	-0.04
5	Butyraldehyde	4.029	4.002 E3	0.7	101	-0.04
6	Benzaldehyde	2.707	2.879 E3	-6.4	108	-0.05
7	Isovaleraldehyde	3.548	3.735 E3	-5.3	101	-0.05
8	Valeraldehyde	3.355	3.260 E3	2.8	100	-0.05
9	o-Tolualdehyde	2.036	2.103 E3	-3.3	99	-0.05
10	m,p-Tolualdehyde	2.343	2.387 E3	-1.9	99	-0.05
11	Hexaldehyde	2.875	2.818 E3	2.0	102	-0.05
12	2,5-Dimethylbenzaldehyde	1.924	2.080 E3	-8.1	103	-0.05

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251031.D Vial: 10
Acq On : 25-May-2010, 16:41 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:11 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251031.D Vial: 10
Acq On : 25-May-2010, 16:41 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:11 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

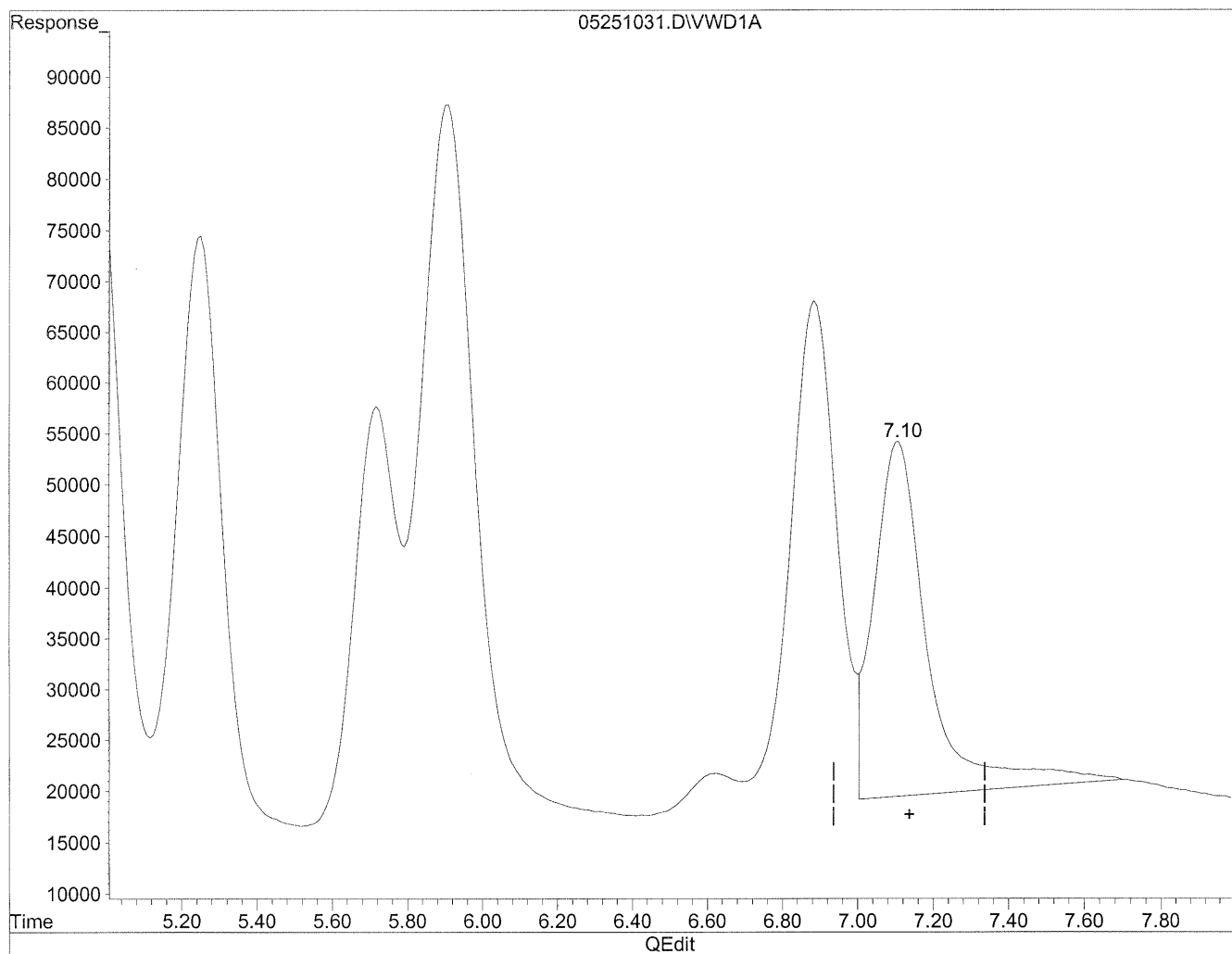
	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.88	14266801	1528.661 ng/ml
2)	Acetaldehyde	1.24	10448834	1551.371 ng/ml
3)	Propionaldehyde	2.23	7517891	1546.248 ng/ml
4)	Crotonaldehyde	3.09	6268012	1537.775 ng/ml
5)	Butyraldehyde	3.64	6003237	1489.894 ng/ml
6)	Benzaldehyde	4.48	4318130	1595.335 ng/ml
7)	Isovaleraldehyde	4.98	5602258	1579.121 ng/ml
8)	Valeraldehyde	5.25	4890686	1457.898 ng/ml
9)	o-Tolualdehyde	5.72	3154292	1549.612 ng/ml
10)	m,p-Tolualdehyde	5.91	7160273	3056.538 ng/ml
11)	Hexaldehyde	6.89	4226472	1469.886 ng/ml
12)	2,5-Dimethylbenzaldehyde	7.10	3119805	1621.487 ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251031.D Vial: 10
Acq On : 25-May-2010, 16:41 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:53 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.11min 1813.442ng/ml

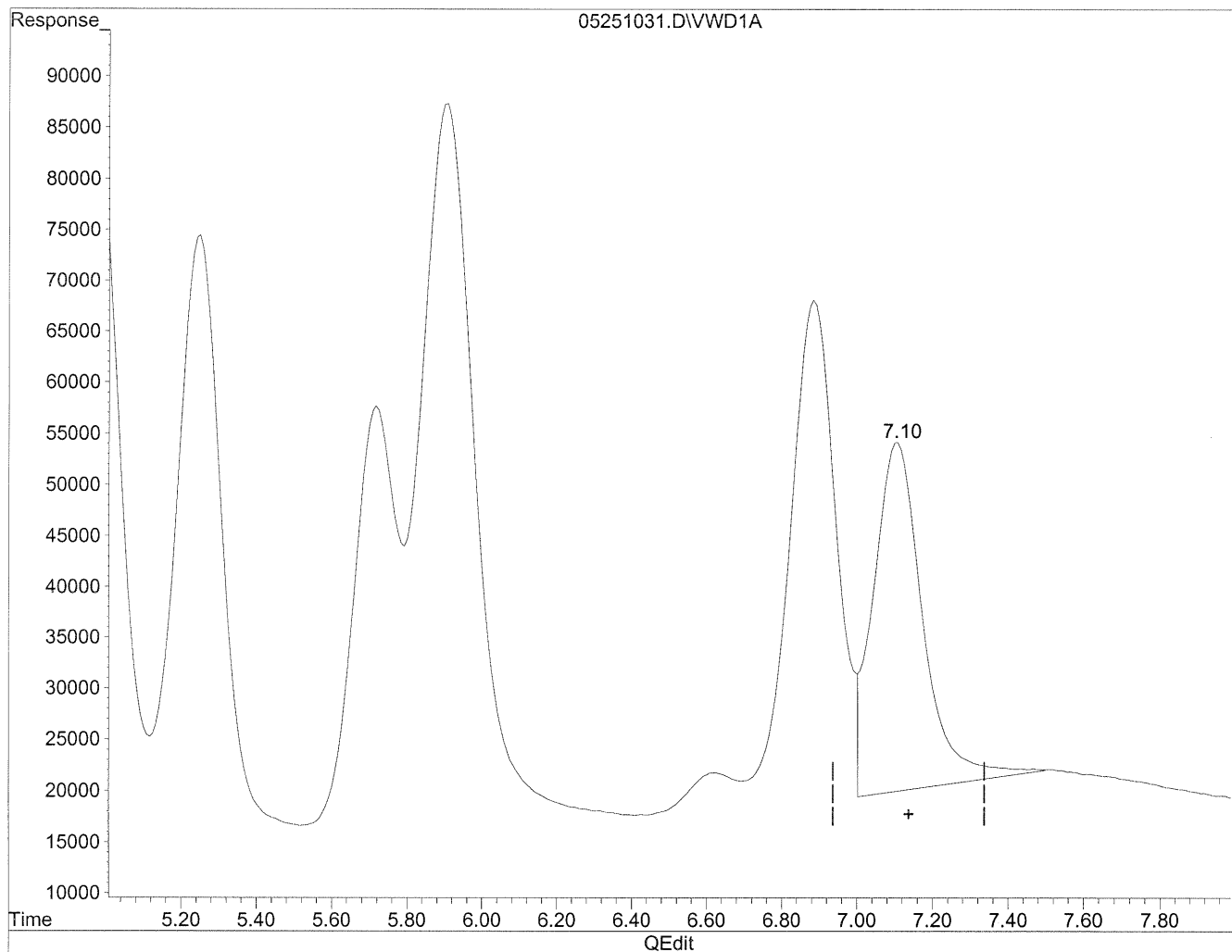
response 3489134

(+) = Expected Retention Time
05251031.D TO110510.M Fri May 28 10:11:51 2010

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251031.D Vial: 10
Acq On : 25-May-2010, 16:41 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 25 16:53 19110 Quant Results File: TO110510.RES

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

7.10min 1621.487ng/ml m

response 3119805

RV
MD
6/4/10
HC
6/4/10

(+) = Expected Retention Time
05251031.D TO110510.M Fri May 28 10:11:57 2010

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251045.D Vial: 10
 Acq On : 25-May-2010, 19:06 Operator: MD
 Sample : MID CCV 1500ng/ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Tue Oct 13 11:33:26 2009
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

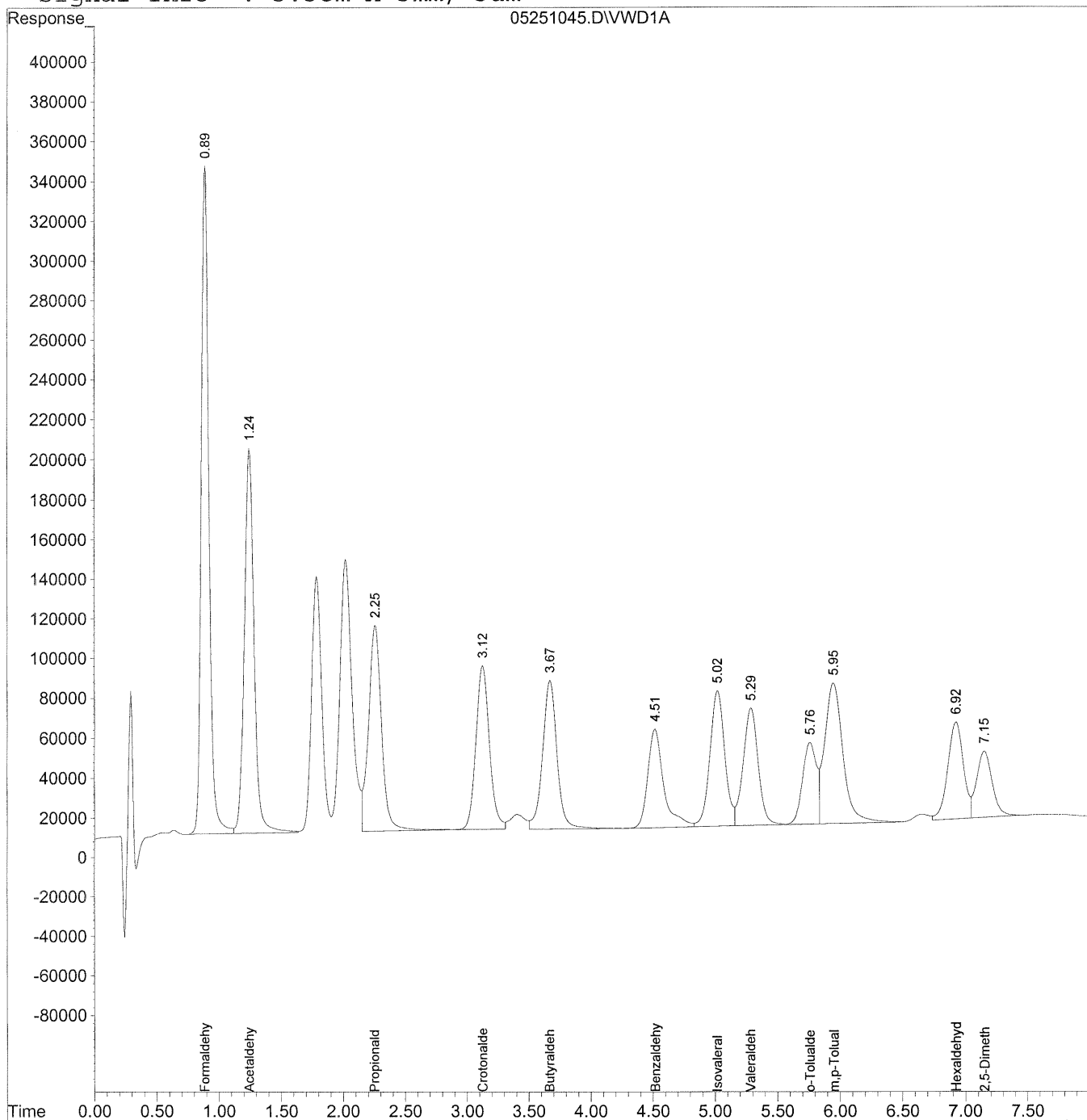
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.534 E3	-2.2	103	0.00
2	Acetaldehyde	6.735	6.990 E3	-3.8	103	0.00
3	Propionaldehyde	4.862	5.056 E3	-4.0	104	0.00
4	Crotonaldehyde	4.076	4.175 E3	-2.4	101	0.00
5	Butyraldehyde	4.029	4.040 E3	-0.3	102	0.00
6	Benzaldehyde	2.707	2.948 E3	-8.9	111	0.00
7	Isovaleraldehyde	3.548	3.750 E3	-5.7	102	0.00
8	Valeraldehyde	3.355	3.284 E3	2.1	101	0.00
9	o-Tolualdehyde	2.036	2.105 E3	-3.4	99	0.00
10	m,p-Tolualdehyde	2.343	2.412 E3	-2.9	100	0.00
11	Hexaldehyde	2.875	2.735 E3	4.9	99	0.00
12	2,5-Dimethylbenzaldehyde	1.924	1.919 E3	0.3	95	0.00

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251045.D Vial: 10
 Acq On : 25-May-2010, 19:06 Operator: MD
 Sample : MID CCV 1500ng/ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 26 8:01 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Thu May 13 14:13:10 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251045.D Vial: 10
Acq On : 25-May-2010, 19:06 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:01 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.89	14300872	1532.312 ng/ml
2) Acetaldehyde	1.25	10484450	1556.659 ng/ml
3) Propionaldehyde	2.26	7583590	1559.760 ng/ml
4) Crotonaldehyde	3.13	6262176	1536.344 ng/ml
5) Butyraldehyde	3.67	6060284	1504.052 ng/ml
6) Benzaldehyde	4.52	4422665	1633.956 ng/ml
7) Isovaleraldehyde	5.02	5624888	1585.500 ng/ml
8) Valeraldehyde	5.29	4926476	1468.567 ng/ml
9) o-Tolualdehyde	5.76	3157626	1551.250 ng/ml
10) m,p-Tolualdehyde	5.95	7234655	3088.290 ng/ml
11) Hexaldehyde	6.93	4102238	1426.680 ng/ml
12) 2,5-Dimethylbenzaldehyde	7.15	2879240	1496.456 ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251056.D Vial: 10
 Acq On : 25-May-2010, 21:02 Operator: MD
 Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Tue Oct 13 11:33:26 2009
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

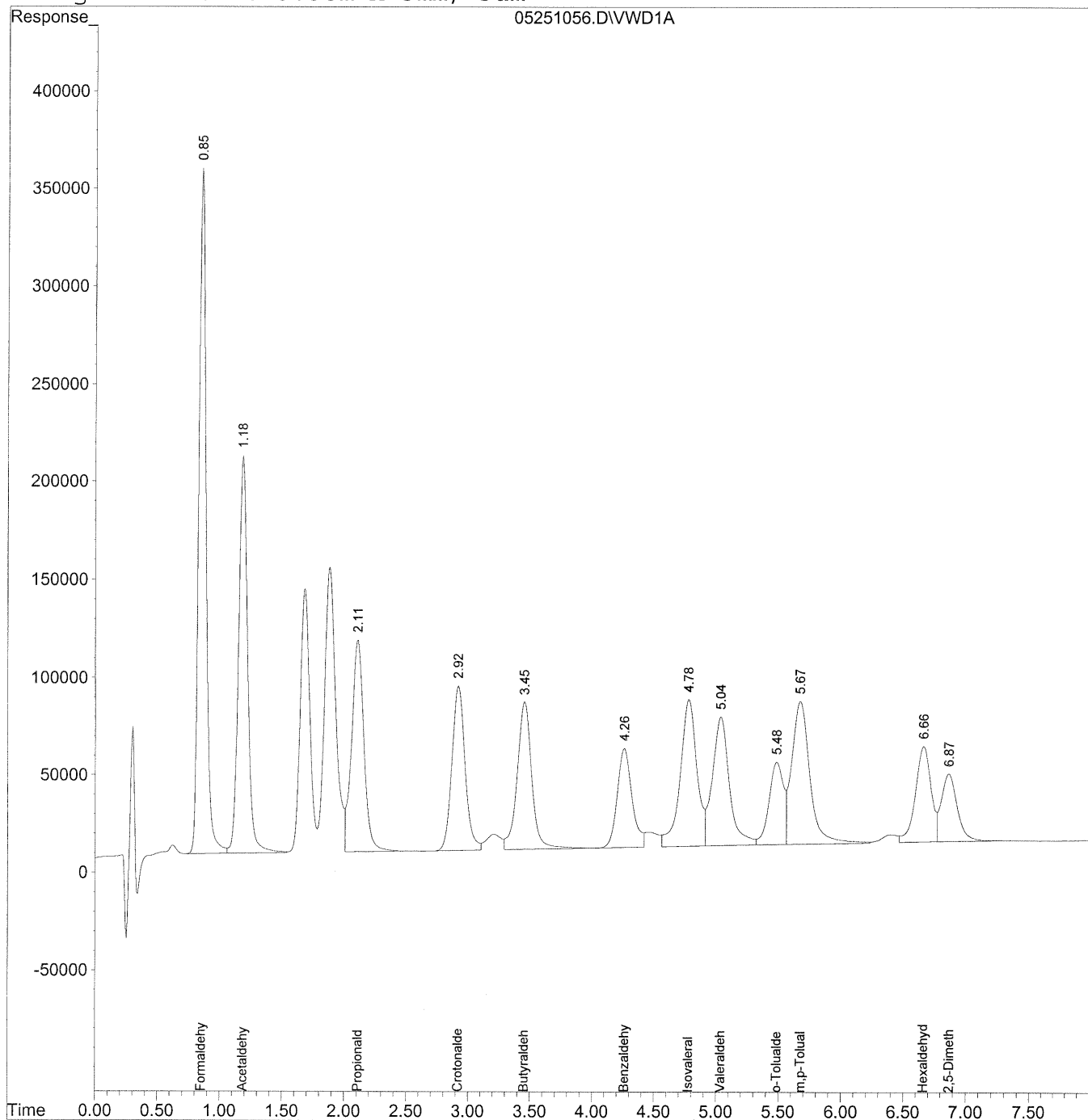
	Compound	AvgRF	CCRF		%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.439	E3	-1.1	102	-0.03
2	Acetaldehyde	6.735	6.897	E3	-2.4	101	-0.06
3	Propionaldehyde	4.862	4.983	E3	-2.5	102	-0.15
4	Crotonaldehyde	4.076	4.165	E3	-2.2	101	-0.21
5	Butyraldehyde	4.029	4.101	E3	-1.8	104	-0.22
6	Benzaldehyde	2.707	2.789	E3	-3.0	105	-0.27
7	Isovaleraldehyde	3.548	4.671	E3	-31.7#	127	-0.25
8	Valeraldehyde	3.355	4.204	E3	-25.3#	129	-0.26
9	o-Tolualdehyde	2.036	2.239	E3	-10.0	106	-0.28
10	m,p-Tolualdehyde	2.343	2.479	E3	-5.8	103	-0.29
11	Hexaldehyde	2.875	2.847	E3	1.0	103	-0.27
12	2,5-Dimethylbenzaldehyde	1.924	2.025	E3	-5.2	100	-0.29

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251056.D Vial: 10
Acq On : 25-May-2010, 21:02 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 8:07 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 08:07:45 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251056.D Vial: 10
Acq On : 25-May-2010, 21:02 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1:00
IntFile : events.e
Quant Time: May 26 8:07 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 08:07:45 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.85	14157887	1516.991 ng/ml
2) Acetaldehyde	1.19	10346039	1536.108 ng/ml
3) Propionaldehyde	2.11	7474001	1537.221 ng/ml
4) Crotonaldehyde	2.92	6247449	1532.730 ng/ml
5) Butyraldehyde	3.46	6150964	1526.557 ng/ml
6) Benzaldehyde	4.26	4183961	1545.766 ng/ml
7) Isovaleraldehyde	4.78	7006356	1974.898 ng/ml
8) Valeraldehyde	5.04	6305324	1879.597 ng/ml
9) o-Tolualdehyde	5.49	3358098	1649.736 ng/ml
10) m,p-Tolualdehyde	5.68	7437809	3175.011 ng/ml
11) Hexaldehyde	6.67	4270402	1485.164 ng/ml
12) 2,5-Dimethylbenzaldehyde	6.87	3037640	1578.782 ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251069.D Vial: 10
 Acq On : 25-May-2010, 23:18 Operator: MD
 Sample : MID CCV 1500ng/ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Tue Oct 13 11:33:26 2009
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF		%Dev	Area%	Dev(min)

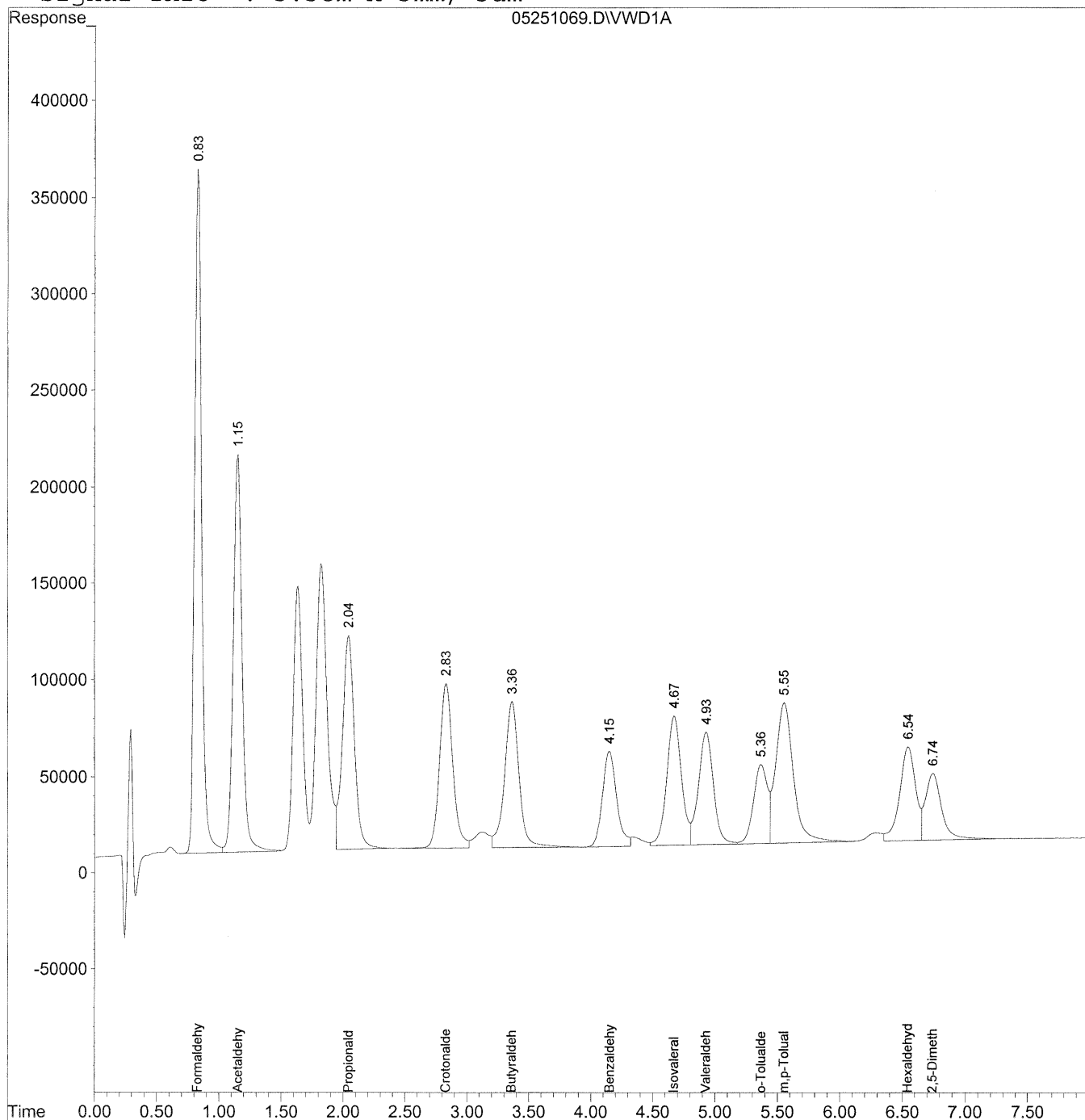
1	Formaldehyde	9.333	9.337 E3		-0.0	101	-0.06
2	Acetaldehyde	6.735	6.832 E3		-1.4	100	-0.10
3	Propionaldehyde	4.862	4.956 E3		-1.9	102	-0.22
4	Crotonaldehyde	4.076	4.210 E3		-3.3	102	-0.30#
5	Butyraldehyde	4.029	4.100 E3		-1.8	104	-0.32#
6	Benzaldehyde	2.707	2.637 E3		2.6	99	-0.38#
7	Isovaleraldehyde	3.548	3.658 E3		-3.1	99	-0.36#
8	Valeraldehyde	3.355	3.268 E3		2.6	100	-0.37#
9	o-Tolualdehyde	2.036	2.113 E3		-3.8	100	-0.41#
10	m,p-Tolualdehyde	2.343	2.405 E3		-2.6	100	-0.41#
11	Hexaldehyde	2.875	2.866 E3		0.3	103	-0.39#
12	2,5-Dimethylbenzaldehyde	1.924	2.120 E3		-10.2	105	-0.41#

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251069.D Vial: 10
 Acq On : 25-May-2010, 23:18 Operator: MD
 Sample : MID CCV 1500ng/ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 28 10:15 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 10:15:17 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251069.D Vial: 10
Acq On : 25-May-2010, 23:18 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:15 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.83	14006106	1500.728	ng/ml
2)	Acetaldehyde	1.15	10248443	1521.618	ng/ml
3)	Propionaldehyde	2.04	7434394	1529.074	ng/ml
4)	Crotonaldehyde	2.83	6315565	1549.442	ng/ml
5)	Butyraldehyde	3.36	6150690	1526.489	ng/ml
6)	Benzaldehyde	4.15	3956136	1461.596	ng/ml
7)	Isovaleraldehyde	4.67	5486460	1546.481	ng/ml
8)	Valeraldehyde	4.93	4902229	1461.339	ng/ml
9)	o-Tolualdehyde	5.37	3169235	1556.953	ng/ml
10)	m,p-Tolualdehyde	5.55	7214967	3079.886	ng/ml
11)	Hexaldehyde	6.55	4299297	1495.214	ng/ml
12)	2,5-Dimethylbenzaldehyde	6.75	3179287	1652.402	ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251081.D Vial: 10
 Acq On : 26-May-2010, 01:24 Operator: MD
 Sample : 1500ng/ml end std Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Tue Oct 13 11:33:26 2009
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

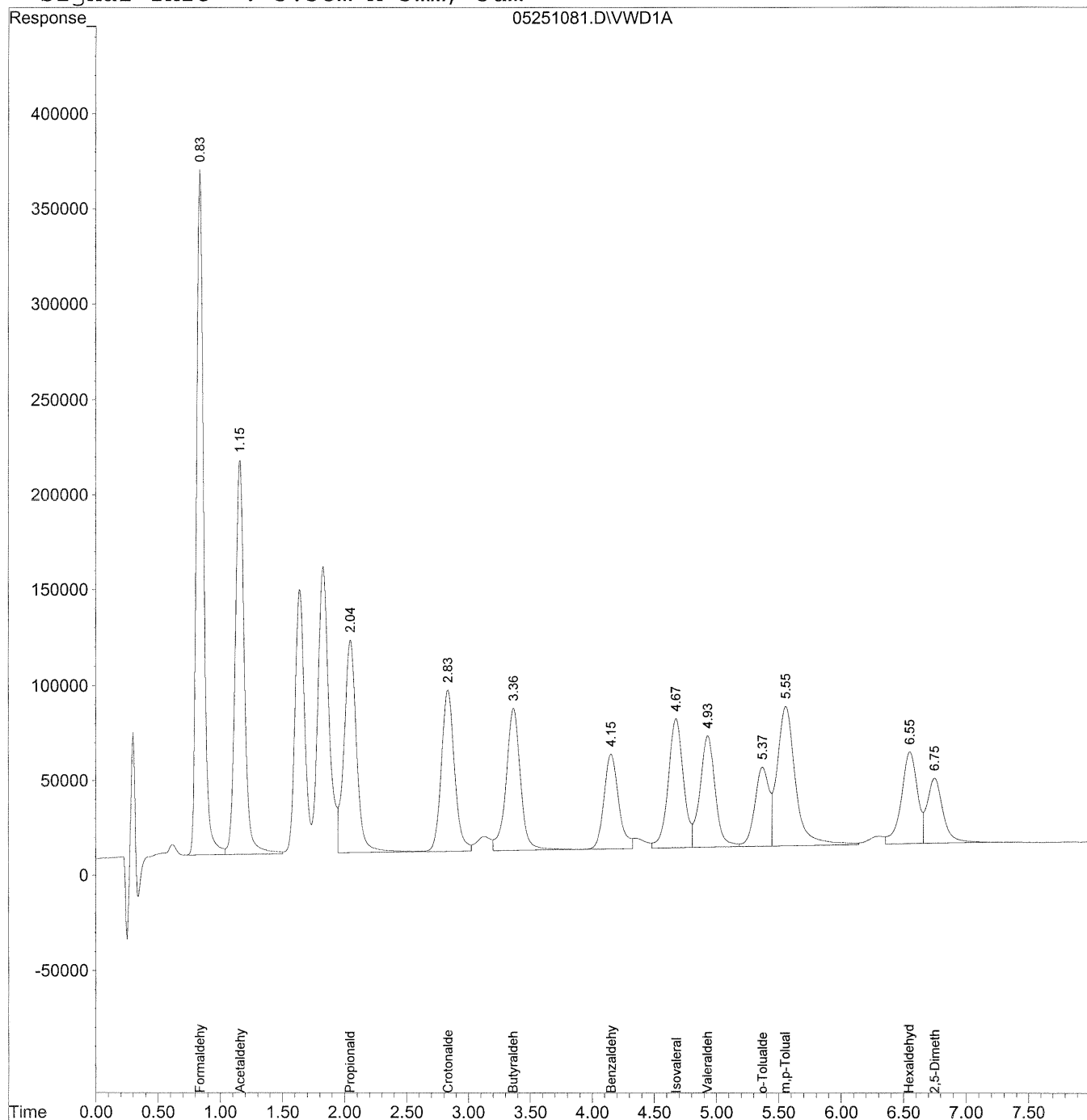
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.463 E3	-1.4	102	-0.05
2	Acetaldehyde	6.735	6.966 E3	-3.4	102	-0.09
3	Propionaldehyde	4.862	5.168 E3	-6.3	106	-0.21
4	Crotonaldehyde	4.076	4.204 E3	-3.1	101	-0.30
5	Butyraldehyde	4.029	4.033 E3	-0.1	102	-0.31#
6	Benzaldehyde	2.707	2.724 E3	-0.6	103	-0.38#
7	Isovaleraldehyde	3.548	3.823 E3	-7.8	104	-0.36#
8	Valeraldehyde	3.355	3.365 E3	-0.3	103	-0.37#
9	o-Tolualdehyde	2.036	2.189 E3	-7.5	103	-0.40#
10	m,p-Tolualdehyde	2.343	2.515 E3	-7.3	105	-0.40#
11	Hexaldehyde	2.875	2.879 E3	-0.1	104	-0.39#
12	2,5-Dimethylbenzaldehyde	1.924	2.073 E3	-7.7	102	-0.41#

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\25\05251081.D Vial: 10
Acq On : 26-May-2010, 01:24 Operator: MD
Sample : 1500ng/ml end std Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:16 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\25\05251081.D Vial: 10
Acq On : 26-May-2010, 01:24 Operator: MD
Sample : 1500ng/ml end std Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 10:16 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 10:15:17 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.84	14195142	1520.983 ng/ml
2) Acetaldehyde	1.16	10449536	1551.475 ng/ml
3) Propionaldehyde	2.05	7752724	1594.547 ng/ml
4) Crotonaldehyde	2.83	6306149	1547.132 ng/ml
5) Butyraldehyde	3.37	6049252	1501.314 ng/ml
6) Benzaldehyde	4.15	4086669	1509.822 ng/ml
7) Isovaleraldehyde	4.67	5734202	1616.313 ng/ml
8) Valeraldehyde	4.93	5047576	1504.667 ng/ml
9) o-Tolualdehyde	5.37	3284171	1613.418 ng/ml
10) m,p-Tolualdehyde	5.56	7543676	3220.203 ng/ml
11) Hexaldehyde	6.55	4318417	1501.863 ng/ml
12) 2,5-Dimethylbenzaldehyde	6.75	3110236	1616.513 ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261002.D Vial: 10
 Acq On : 26-May-2010, 11:34 Operator: MD
 Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 15:52:42 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

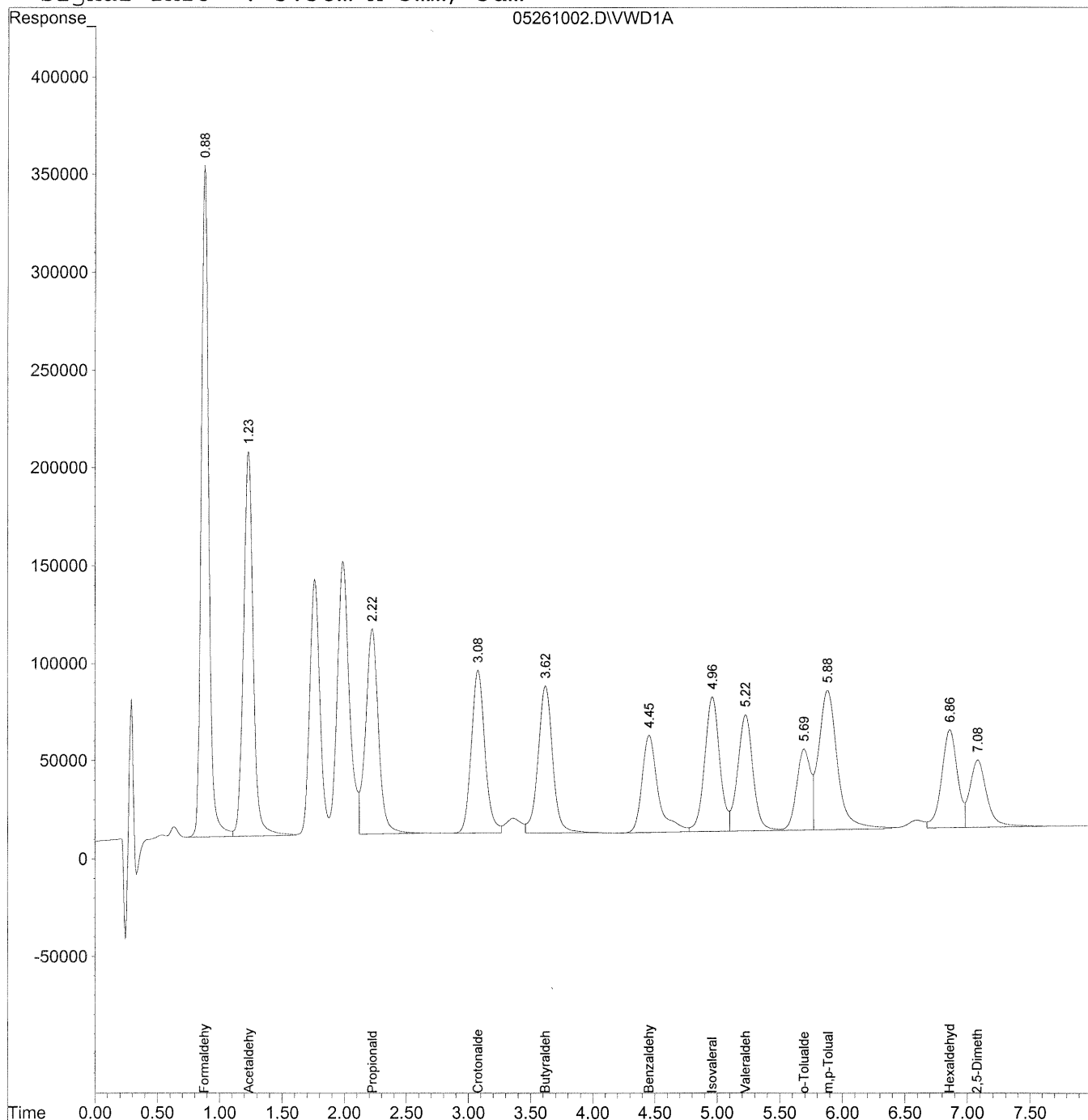
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.657 E3	-3.5	104	0.00
2	Acetaldehyde	6.735	7.044 E3	-4.6	104	-0.01
3	Propionaldehyde	4.862	5.055 E3	-4.0	104	-0.04
4	Crotonaldehyde	4.076	4.218 E3	-3.5	102	-0.05
5	Butyraldehyde	4.029	4.033 E3	-0.1	102	-0.06
6	Benzaldehyde	2.707	2.964 E3	-9.5	112	-0.07
7	Isovaleraldehyde	3.548	3.819 E3	-7.6	104	-0.07
8	Valeraldehyde	3.355	3.346 E3	0.3	103	-0.07
9	o-Tolualdehyde	2.036	2.137 E3	-5.0	101	-0.08
10	m,p-Tolualdehyde	2.343	2.480 E3	-5.8	103	-0.08
11	Hexaldehyde	2.875	2.899 E3	-0.8	105	-0.07
12	2,5-Dimethylbenzaldehyde	1.924	2.129 E3	-10.7	105	-0.08

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261002.D Vial: 10
 Acq On : 26-May-2010, 11:34 Operator: MD
 Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e
 Quant Time: May 26 11:46 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Wed May 26 11:46:33 2010
 Response via : Multiple Level Calibration
 DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
 Signal Phase : Supelcosil LC-18
 Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261002.D Vial: 10
Acq On : 26-May-2010, 11:34 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 11:46 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

(MD)
6/4/10 *AC*
6/4/10

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.88	14484927	1552.033 ng/ml
2) Acetaldehyde	1.23	10566628	1568.860 ng/ml
3) Propionaldehyde	2.22	7581789	1559.390 ng/ml
4) Crotonaldehyde	3.08	6327001	1552.247 ng/ml
5) Butyraldehyde	3.62	6049477	1501.370 ng/ml
6) Benzaldehyde	4.46	4446111	1642.617 ng/ml
7) Isovaleraldehyde	4.96	5728284	1614.645 ng/ml
8) Valeraldehyde	5.23	5018569	1496.019 ng/ml
9) o-Tolualdehyde	5.70	3204999	1574.522 ng/ml
10) m,p-Tolualdehyde	5.88	7438999	3175.519 ng/ml
11) Hexaldehyde	6.86	4348132	1512.197 ng/ml
12) 2,5-Dimethylbenzaldehyde	7.08	3192931	1659.494 ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261014.D Vial: 10
 Acq On : 26-May-2010, 13:40 Operator: MD
 Sample : MID CCV 1500ng/ml Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 15:52:42 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

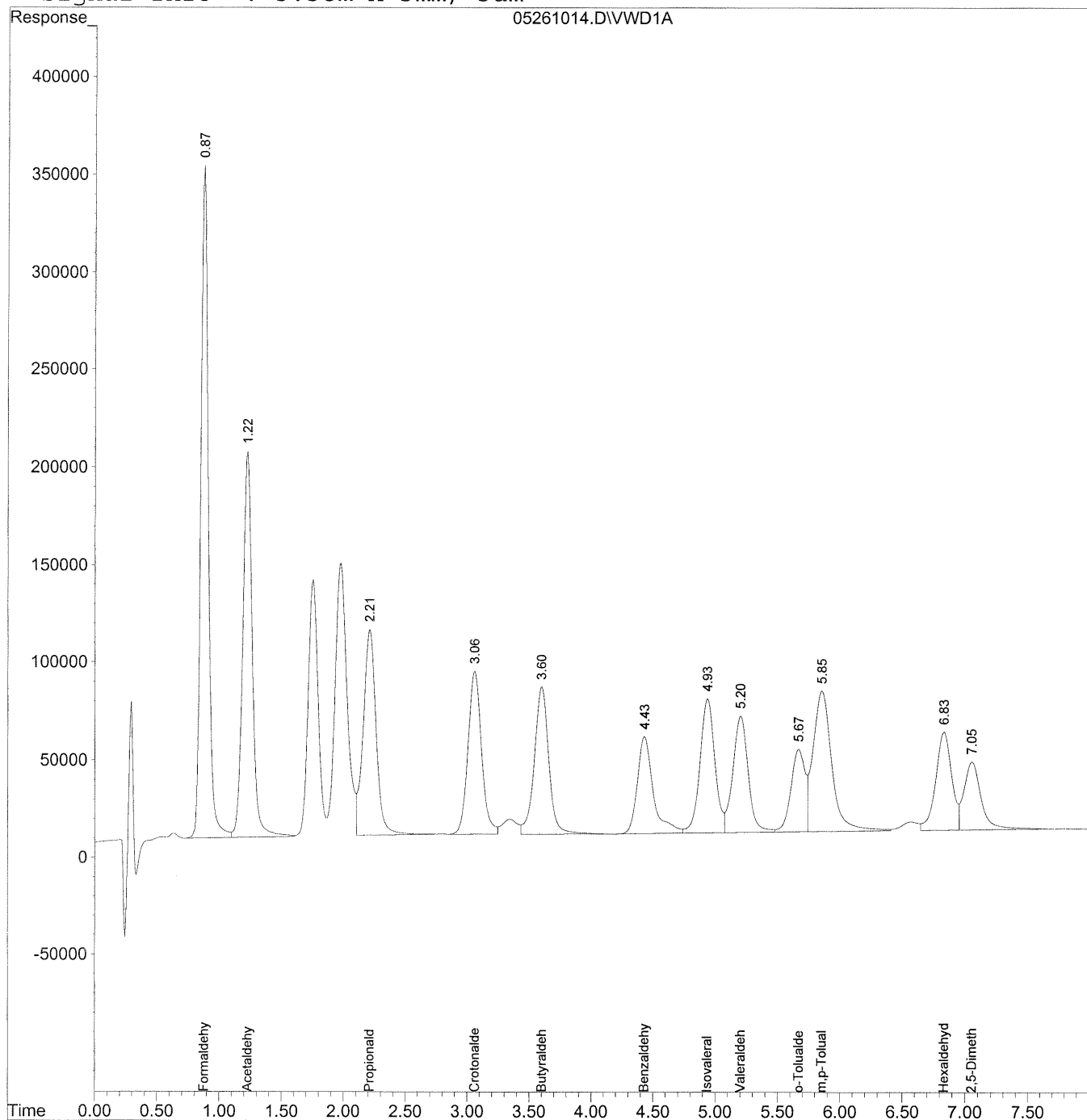
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.586 E3	-2.7	103	-0.01
2	Acetaldehyde	6.735	7.031 E3	-4.4	103	-0.02
3	Propionaldehyde	4.862	5.084 E3	-4.6	104	-0.05
4	Crotonaldehyde	4.076	4.223 E3	-3.6	102	-0.07
5	Butyraldehyde	4.029	4.088 E3	-1.5	104	-0.08
6	Benzaldehyde	2.707	2.943 E3	-8.7	111	-0.10
7	Isovaleraldehyde	3.548	3.796 E3	-7.0	103	-0.09
8	Valeraldehyde	3.355	3.383 E3	-0.8	104	-0.09
9	o-Tolualdehyde	2.036	2.214 E3	-8.7	105	-0.10
10	m,p-Tolualdehyde	2.343	2.510 E3	-7.1	105	-0.10
11	Hexaldehyde	2.875	2.922 E3	-1.6	105	-0.10
12	2,5-Dimethylbenzaldehyde	1.924	2.183 E3	-13.5	108	-0.11

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261014.D Vial: 10
Acq On : 26-May-2010, 13:40 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261014.D Vial: 10
Acq On : 26-May-2010, 13:40 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:37 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.88	14378289	1540.607	ng/ml
2)	Acetaldehyde	1.23	10546866	1565.926	ng/ml
3)	Propionaldehyde	2.21	7625492	1568.379	ng/ml
4)	Crotonaldehyde	3.06	6334856	1554.175	ng/ml
5)	Butyraldehyde	3.60	6132255	1521.914	ng/ml
6)	Benzaldehyde	4.43	4415175	1631.188	ng/ml
7)	Isovaleraldehyde	4.94	5693317	1604.788	ng/ml
8)	Valeraldehyde	5.20	5074798	1512.781	ng/ml
9)	o-Tolualdehyde	5.67	3320940	1631.481	ng/ml
10)	m,p-Tolualdehyde	5.86	7529395	3214.107	ng/ml
11)	Hexaldehyde	6.84	4382624	1524.193	ng/ml
12)	2,5-Dimethylbenzaldehyde	7.05	3273931	1701.592	ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261019.D Vial: 10
 Acq On : 26-May-2010, 14:33 Operator: MD
 Sample : 1500ng/ml end std Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 15:52:42 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

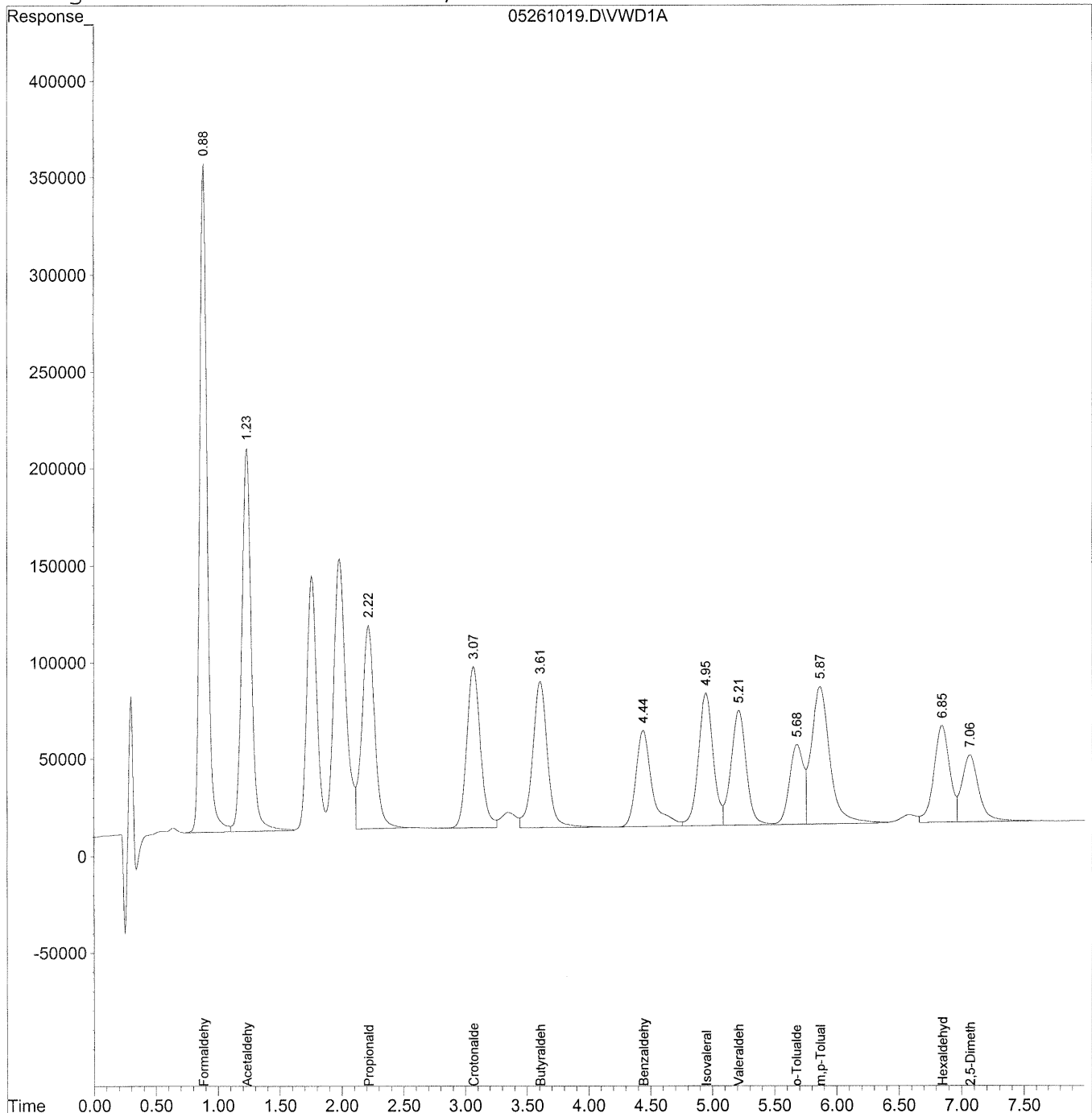
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.667 E3	-3.6	104	0.00
2	Acetaldehyde	6.735	7.082 E3	-5.2	104	-0.01
3	Propionaldehyde	4.862	5.037 E3	-3.6	103	-0.04
4	Crotonaldehyde	4.076	4.256 E3	-4.4	103	-0.06
5	Butyraldehyde	4.029	4.136 E3	-2.7	105	-0.07
6	Benzaldehyde	2.707	2.971 E3	-9.8	112	-0.08
7	Isovaleraldehyde	3.548	3.811 E3	-7.4	103	-0.08
8	Valeraldehyde	3.355	3.339 E3	0.5	102	-0.08
9	o-Tolualdehyde	2.036	2.136 E3	-4.9	101	-0.09
10	m,p-Tolualdehyde	2.343	2.468 E3	-5.3	103	-0.09
11	Hexaldehyde	2.875	2.901 E3	-0.9	105	-0.09
12	2,5-Dimethylbenzaldehyde	1.924	2.122 E3	-10.3	105	-0.09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\26\05261019.D Vial: 10
Acq On : 26-May-2010, 14:33 Operator: MD
Sample : 1500ng/ml end std Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:52 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\26\05261019.D Vial: 10
Acq On : 26-May-2010, 14:33 Operator: MD
Sample : 1500ng/ml end std Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 26 14:52 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed May 26 11:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.89	14500682	1553.721 ng/ml
2)	Acetaldehyde	1.23	10622455	1577.149 ng/ml
3)	Propionaldehyde	2.22	7555881	1554.061 ng/ml
4)	Crotonaldehyde	3.07	6383387	1566.081 ng/ml
5)	Butyraldehyde	3.61	6204094	1539.743 ng/ml
6)	Benzaldehyde	4.44	4455942	1646.250 ng/ml
7)	Isovaleraldehyde	4.95	5716638	1611.362 ng/ml
8)	Valeraldehyde	5.22	5008893	1493.135 ng/ml
9)	o-Tolualdehyde	5.68	3204177	1574.119 ng/ml
10)	m,p-Tolualdehyde	5.87	7404748	3160.899 ng/ml
11)	Hexaldehyde	6.85	4351702	1513.439 ng/ml
12)	2,5-Dimethylbenzaldehyde	7.07	3182938	1654.300 ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281001.D Vial: 10
 Acq On : 28-May-2010, 13:08 Operator: MD
 Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 15:52:42 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

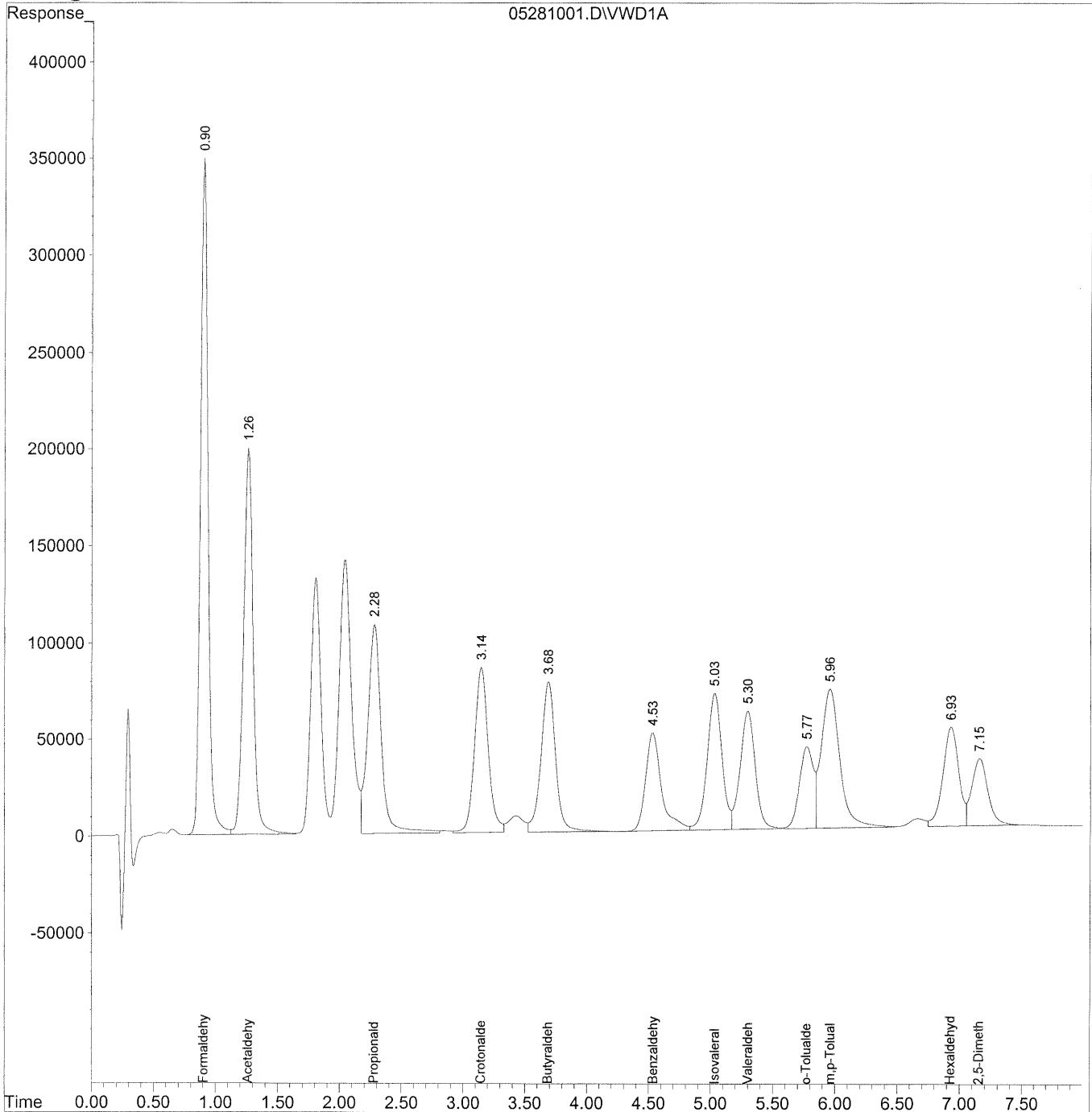
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.847 E3	-5.5	106	0.01
2	Acetaldehyde	6.735	7.180 E3	-6.6	106	0.02
3	Propionaldehyde	4.862	5.465 E3	-12.4	112	0.02
4	Crotonaldehyde	4.076	4.421 E3	-8.5	107	0.01
5	Butyraldehyde	4.029	4.226 E3	-4.9	107	0.00
6	Benzaldehyde	2.707	3.007 E3	-11.1	113	0.00
7	Isovaleraldehyde	3.548	3.918 E3	-10.4	106	0.00
8	Valeraldehyde	3.355	3.418 E3	-1.9	105	0.00
9	o-Tolualdehyde	2.036	2.187 E3	-7.4	103	0.00
10	m,p-Tolualdehyde	2.343	2.489 E3	-6.2	104	0.00
11	Hexaldehyde	2.875	2.932 E3	-2.0	106	0.00
12	2,5-Dimethylbenzaldehyde	1.924	2.058 E3	-7.0	102	0.00

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281001.D Vial: 10
Acq On : 28-May-2010, 13:08 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:54 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 14:54:52 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\28\05281001.D Vial: 10
Acq On : 28-May-2010, 13:08 Operator: MD
Sample : 1500ng/ml TO-11A S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 28 14:54 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 14:54:52 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

AC
2/4/10
MD
6/4/10

Compound	R.T.	Response	Conc Units

Target Compounds			
1) Formaldehyde	0.90	14770285	1582.608 ng/ml
2) Acetaldehyde	1.26	10769745	1599.017 ng/ml
3) Propionaldehyde	2.28	8198212	1686.173 ng/ml
4) Crotonaldehyde	3.15	6631544	1626.963 ng/ml
5) Butyraldehyde	3.69	6338640	1573.135 ng/ml
6) Benzaldehyde	4.53	4510238	1666.309 ng/ml
7) Isovaleraldehyde	5.03	5876621	1656.457 ng/ml
8) Valeraldehyde	5.30	5127288	1528.428 ng/ml
9) o-Tolualdehyde	5.77	3280132	1611.433 ng/ml
10) m,p-Tolualdehyde	5.96	7465598	3186.874 ng/ml
11) Hexaldehyde	6.93	4397353	1529.316 ng/ml
12) 2,5-Dimethylbenzaldehyde	7.16	3086802	1604.334 ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281025.D Vial: 10
 Acq On : 28-May-2010, 17:20 Operator: MD
 Sample : 1500ng/ml Std S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 15:52:42 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

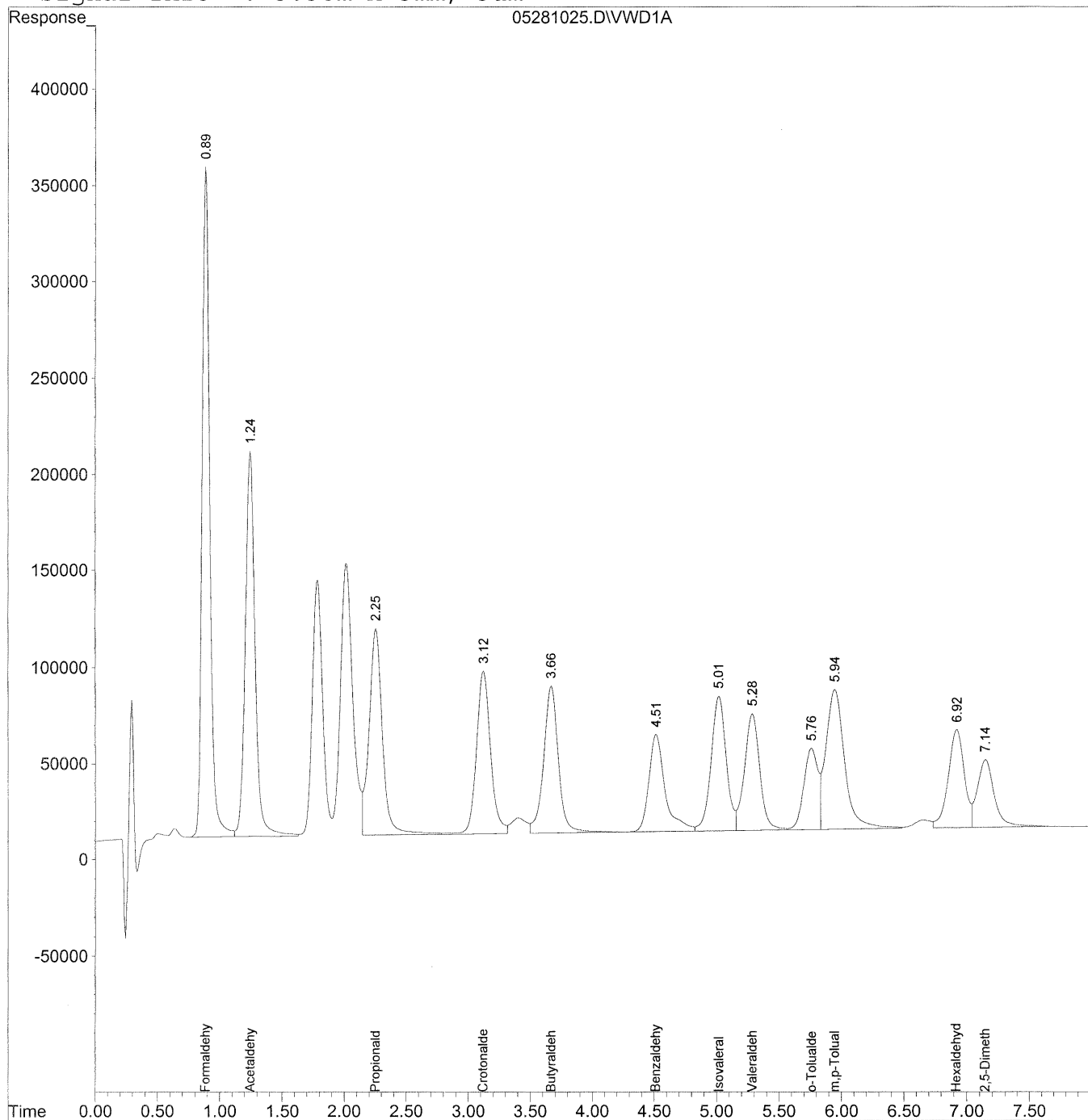
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.905 E3	-6.1	107	0.00
2	Acetaldehyde	6.735	7.290 E3	-8.2	107	0.00
3	Propionaldehyde	4.862	5.390 E3	-10.9	111	0.00
4	Crotonaldehyde	4.076	4.450 E3	-9.2	107	-0.01
5	Butyraldehyde	4.029	4.237 E3	-5.2	107	-0.01
6	Benzaldehyde	2.707	3.061 E3	-13.1	115	-0.01
7	Isovaleraldehyde	3.548	3.912 E3	-10.3	106	-0.01
8	Valeraldehyde	3.355	3.458 E3	-3.1	106	-0.01
9	o-Tolualdehyde	2.036	2.197 E3	-7.9	104	-0.01
10	m,p-Tolualdehyde	2.343	2.549 E3	-8.8	106	-0.01
11	Hexaldehyde	2.875	2.973 E3	-3.4	107	-0.01
12	2,5-Dimethylbenzaldehyde	1.924	2.193 E3	-14.0	108	-0.01

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281025.D Vial: 10
Acq On : 28-May-2010, 17:20 Operator: MD
Sample : 1500ng/ml Std S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\28\05281025.D Vial: 10
Acq On : 28-May-2010, 17:20 Operator: MD
Sample : 1500ng/ml Std S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:28 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Fri May 28 15:52:42 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units

Target Compounds					
1)	Formaldehyde	0.89	14858007	1592.008	ng/ml
2)	Acetaldehyde	1.25	10934540	1623.485	ng/ml
3)	Propionaldehyde	2.25	8085626	1663.017	ng/ml
4)	Crotonaldehyde	3.12	6674717	1637.555	ng/ml
5)	Butyraldehyde	3.67	6355902	1577.419	ng/ml
6)	Benzaldehyde	4.52	4591205	1696.223	ng/ml
7)	Isovaleraldehyde	5.02	5867689	1653.939	ng/ml
8)	Valeraldehyde	5.29	5186530	1546.088	ng/ml
9)	o-Tolualdehyde	5.76	3295531	1618.998	ng/ml
10)	m,p-Tolualdehyde	5.95	7647852	3264.673	ng/ml
11)	Hexaldehyde	6.92	4458884	1550.715	ng/ml
12)	2,5-Dimethylbenzaldehyde	7.15	3290146	1710.020	ng/ml

Evaluate Continuing Calibration Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281031.D Vial: 10
 Acq On : 28-May-2010, 18:22 Operator: MD
 Sample : 1500ng/ml end std S21-04211003 Inst : VWD
 Misc : Multiplr: 1.00
 IntFile : events.e

Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
 Title : LC-1050 TO-11A ICAL
 Last Update : Fri May 28 15:52:42 2010
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
 Max. RRF Dev : 25% Max. Rel. Area : 150%

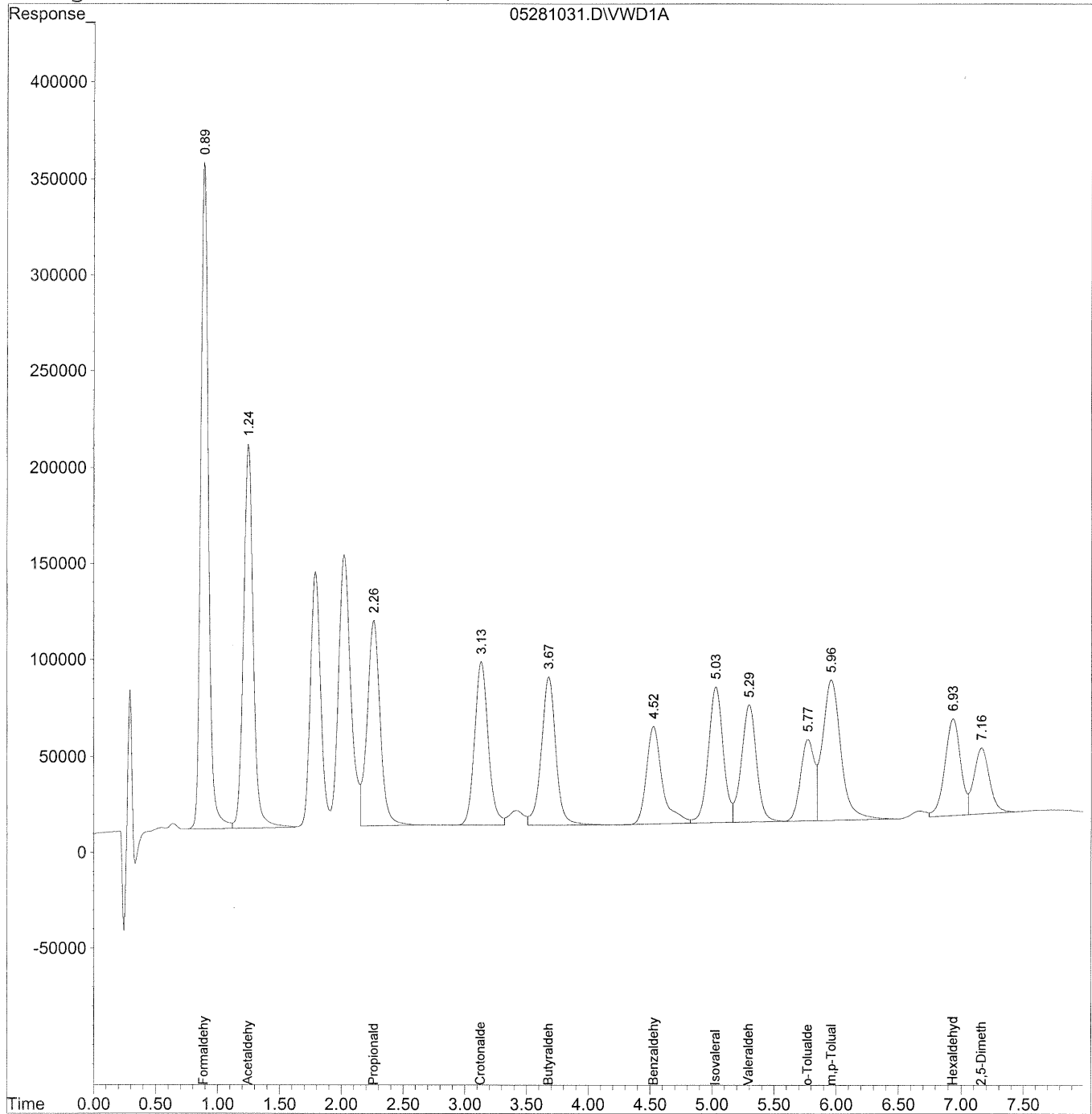
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	Formaldehyde	9.333	9.937 E3	-6.5	107	0.00
2	Acetaldehyde	6.735	7.247 E3	-7.6	107	0.00
3	Propionaldehyde	4.862	5.200 E3	-7.0	107	0.00
4	Crotonaldehyde	4.076	4.347 E3	-6.6	105	0.00
5	Butyraldehyde	4.029	4.201 E3	-4.3	106	0.00
6	Benzaldehyde	2.707	3.002 E3	-10.9	113	0.00
7	Isovaleraldehyde	3.548	3.908 E3	-10.1	106	0.00
8	Valeraldehyde	3.355	3.408 E3	-1.6	105	0.00
9	o-Tolualdehyde	2.036	2.174 E3	-6.8	103	0.00
10	m,p-Tolualdehyde	2.343	2.507 E3	-7.0	104	0.00
11	Hexaldehyde	2.875	2.832 E3	1.5	102	0.00
12	2,5-Dimethylbenzaldehyde	1.924	1.975 E3	-2.7	97	0.00

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2010_05\28\05281031.D Vial: 10
Acq On : 28-May-2010, 18:22 Operator: MD
Sample : 1500ng/ml end std S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:05 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Multiple Level Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um



Data File : J:\LC02\DATA\TO11A\2010_05\28\05281031.D Vial: 10
Acq On : 28-May-2010, 18:22 Operator: MD
Sample : 1500ng/ml end std S21-04211003 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: May 29 7:05 19110 Quant Results File: TO110510.RES

Quant Method : J:\LC02\METHODS\TO110510.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu May 13 14:13:10 2010
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc Units

Target Compounds				
1)	Formaldehyde	0.89	14905691	1597.117 ng/ml
2)	Acetaldehyde	1.25	10870548	1613.984 ng/ml
3)	Propionaldehyde	2.26	7799459	1604.160 ng/ml
4)	Crotonaldehyde	3.13	6520046	1599.609 ng/ml
5)	Butyraldehyde	3.68	6300830	1563.751 ng/ml
6)	Benzaldehyde	4.53	4502799	1663.561 ng/ml
7)	Isovaleraldehyde	5.03	5861399	1652.166 ng/ml
8)	Valeraldehyde	5.30	5111936	1523.852 ng/ml
9)	o-Tolualdehyde	5.77	3261541	1602.300 ng/ml
10)	m,p-Tolualdehyde	5.96	7521398	3210.693 ng/ml
11)	Hexaldehyde	6.94	4248020	1477.381 ng/ml
12)	2,5-Dimethylbenzaldehyde	7.16	2961806	1539.369 ng/ml

RUN LOGS

Injection Log

Directory: j:\lc02\data\to11a\2010_05\12

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	14	05121001.d	1.	prime		12-May-10, 23:5
2	14	05121002.d	1.	prime		12-May-10, 12:0
3	14	05121003.d	1.	prime		12-May-10, 12:2
4	14	05121004.d	1.	prime		12-May-10, 12:3
5	11	05121005.d	1.	ACN blank lot CY331		12-May-10, 12:5
6	126	05121006.d	1.	50ng/ml TO-11A S21-03091012		12-May-10, 25:0
7	126	05121007.d	1.	50ng/ml TO-11A S21-03091012		12-May-10, 25:1
8	126	05121008.d	1.	50ng/ml TO-11A S21-03091012		12-May-10, 25:2
9	127	05121009.d	1.	100ng/ml TO-11A S21-03091009		12-May-10, 25:4
10	127	05121010.d	1.	100ng/ml TO-11A S21-03091009		12-May-10, 25:5
11	127	05121011.d	1.	100ng/ml TO-11A S21-03091009		12-May-10, 26:0
12	128	05121012.d	1.	500ng/ml TO-11A S21-03091008		12-May-10, 26:1
13	128	05121013.d	1.	500ng/ml TO-11A S21-03091008		12-May-10, 26:2
14	128	05121014.d	1.	500ng/ml TO-11A S21-03091008		12-May-10, 26:3
15	129	05121015.d	1.	1500ng/ml TO-11A S21-04211003		12-May-10, 26:4
16	129	05121016.d	1.	1500ng/ml TO-11A S21-04211003		12-May-10, 26:5
17	129	05121017.d	1.	1500ng/ml TO-11A S21-04211003		12-May-10, 27:0
18	130	05121018.d	1.	5000ng/ml TO-11A S21-03091001		12-May-10, 27:1
19	130	05121019.d	1.	5000ng/ml TO-11A S21-03091001		12-May-10, 27:5
20	130	05121020.d	1.	5000ng/ml TO-11A S21-03091001		12-May-10, 28:0
21	131	05121021.d	1.	10000ng/ml TO-11 S21-03091007		12-May-10, 28:1
22	131	05121022.d	1.	10000ng/ml TO-11 S21-03091007		12-May-10, 28:2
23	131	05121023.d	1.	10000ng/ml TO-11 S21-03091007		12-May-10, 28:3
24	132	05121024.d	1.	~1500 TO-11A ICV S21-03091003		12-May-10, 28:4

Injection Log

Directory: j:\lc02\data\to11a\2010_05\25

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	12	05251001.d	1.	prime		25-May-10, 23:2
2	10	05251002.d	1.	1500ng/ml TO-11A S21-04211003		25-May-10, 23:3
3	11	05251003.d	1.	ACN blank lot CY331		25-May-10, 23:4
4	101	05251004.d	1.	P1001739-001 2.0ml	Radiello passive sampler	25-May-10, 23:5
5	102	05251005.d	1.	P1001741-001 2.0ml		25-May-10, 12:0
6	103	05251006.d	1.	P1001793-001 2ml		25-May-10, 12:2
7	104	05251007.d	1.	P1001793-002 2ml		25-May-10, 12:3
8	104	05251008.d	1.	P1001793-002 2ml dup		25-May-10, 12:4
9	105	05251009.d	1.	P1001793-003 2ml		25-May-10, 12:5
10	106	05251010.d	1.	P1001793-004 2ml		25-May-10, 25:0
11	107	05251011.d	1.	P1001793-005 2ml		25-May-10, 25:1
12	108	05251012.d	1.	P1001793-006 2ml		25-May-10, 25:2
13	109	05251013.d	1.	P1001793-007 2ml		25-May-10, 25:3
14	10	05251014.d	1.	x-MID CCV 1500ng/ml		25-May-10, 25:4
15	110	05251015.d	1.	x-P1001793-008 2ml		25-May-10, 25:5
16	11	05251016.d	1.	ACN blank		25-May-10, 26:0
17	11	05251017.d	1.	ACN blank		25-May-10, 26:1
18	10	05251018.d	1.	MID CCV 1500ng/ml		25-May-10, 26:2
19	110	05251019.d	1.	P1001793-008 2ml		25-May-10, 26:3
20	111	05251020.d	1.	X- P1001793-009 2ml		25-May-10, 26:4
21	112	05251021.d	1.	P1001793-010 2ml		25-May-10, 26:5
22	113	05251022.d	1.	P1001793-011 2ml		25-May-10, 27:0
23	114	05251023.d	1.	X- P1001793-012 2ml		25-May-10, 27:1
24	115	05251024.d	1.	P1001793-013 2ml		25-May-10, 27:2
25	116	05251025.d	1.	P1001793-014 2ml		25-May-10, 27:3
26	117	05251026.d	1.	X- P1001793-015 2ml		25-May-10, 27:5
27	118	05251027.d	1.	P1001793-016 2ml		25-May-10, 28:0
28	119	05251028.d	1.	P1001793-017 2ml		25-May-10, 28:1
29	11	05251029.d	1.	acn blank		25-May-10, 28:2
30	11	05251030.d	1.	acn blank		25-May-10, 28:3
31	10	05251031.d	1.	1500ng/ml TO-11A S21-04211003		25-May-10, 28:4
32	11	05251032.d	1.	ACN blank LOT CY331		25-May-10, 28:5
33	120	05251033.d	1.	P1001793-020 2ml		25-May-10, 29:0
34	121	05251034.d	1.	P1001793-025 2ml		25-May-10, 29:1
35	122	05251035.d	1.	P1001793-030 2ml		25-May-10, 29:2
36	123	05251036.d	1.	P1001793-012 2ml	re-run	25-May-10, 29:3
37	124	05251037.d	1.	P1001793-009 2ml	re-run	25-May-10, 29:4
38	125	05251038.d	1.	P1001793-015 2ml	re-run	25-May-10, 29:5
39	126	05251039.d	1.	P1001793-018 2ml		25-May-10, 30:0
40	127	05251040.d	1.	P1001793-019 2ml		25-May-10, 30:1
41	128	05251041.d	1.	P1001793-021 2ml		25-May-10, 30:2
42	128	05251042.d	1.	P1001793-021 2ml dup		25-May-10, 30:3
43	11	05251043.d	1.	acn blank		25-May-10, 30:4
44	11	05251044.d	1.	acn blank		25-May-10, 30:5
45	10	05251045.d	1.	MID CCV 1500ng/ml <i>ok</i>		25-May-10, 31:0
46	129	05251046.d	1.	P1001793-022 2ml	> Report Isoval. + Valeri from dilution.	25-May-10, 31:1
47	130	05251047.d	1.	P1001793-023 2ml		25-May-10, 31:2
48	131	05251048.d	1.	X- P1001793-024 2ml		25-May-10, 31:3
49	132	05251049.d	1.	X- P1001793-026 2ml		25-May-10, 31:4
50	133	05251050.d	1.	X- P1001793-027 2ml		25-May-10, 31:5
51	134	05251051.d	1.	X- P1001793-028 2ml		25-May-10, 32:1
52	135	05251052.d	1.	X- P1001793-029 2ml		25-May-10, 32:2
53	136	05251053.d	1.	P1001793-006 2ml 2x dil		25-May-10, 32:3
54	137	05251054.d	1.	P1001793-007 2ml 2x dil		25-May-10, 32:4
55	138	05251055.d	1.	P1001793-008 2ml 2x dil		25-May-10, 32:5
56	10	05251056.d	1.	1500ng/ml TO-11A S21-04211003		25-May-10, 33:0
57	11	05251057.d	1.	ACN blank lot cy331		25-May-10, 33:1

Injection Log

Directory: j:\lc02\data\to11a\2010_05\25

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
58	139	05251058.d	1.	P1001793-001 2ml 10x dil		25-May-10, 33:2
59	140	05251059.d	1.	P1001793-002 2ml 10x dil		25-May-10, 33:3
60	141	05251060.d	1.	P1001793-003 2ml 10x dil		25-May-10, 33:4
61	142	05251061.d	1.	P1001793-011 2ml 10x dil		25-May-10, 33:5
62	143	05251062.d	1.	P1001793-013 2ml 10x dil		25-May-10, 34:0
63	144	05251063.d	1.	P1001793-014 2ml 10x dil		25-May-10, 34:1
64	145	05251064.d	1.	P1001793-017 2ml 10x dil		25-May-10, 34:2
65	146	05251065.d	1.	MB front 1.0ml Lot 6440/6248		25-May-10, 34:3
66	147	05251066.d	1.	MB back 1.0ml Lot 6440/6248		25-May-10, 34:4
67	148	05251067.d	1.	P1001510-001 back 1.0ml		25-May-10, 34:5
68	149	05251068.d	1.	P1001510-002 back 1.0ml		25-May-10, 35:0
69	10	05251069.d	1.	MID CCV 1500ng/ml		25-May-10, 35:1
70	150	05251070.d	1.	P1001510-003 back 1.0ml		25-May-10, 35:2
71	151	05251071.d	1.	P1001599-002 back 1.0ml		25-May-10, 35:3
72	152	05251072.d	1.	P1001599-004 back 1.0ml		25-May-10, 35:4
73	153	05251073.d	1.	P1001510-001 front 1.0ml		26-May-10, 12:0
74	153	05251074.d	1.	P1001510-001 front 1.0ml dup		26-May-10, 12:1
75	154	05251075.d	1.	P1001510-002 front 1.0ml		26-May-10, 12:2
76	155	05251076.d	1.	P1001510-003 front 1.0ml		26-May-10, 12:3
77	156	05251077.d	1.	P1001599-002 front 1.0ml		26-May-10, 12:4
78	157	05251078.d	1.	P1001599-004 front 1.0ml		26-May-10, 12:5
79	158	05251079.d	1.	Chamber Blank front 1.0ml		26-May-10, 13:0
80	159	05251080.d	1.	Chamber Blank back 1.0ml		26-May-10, 13:1
81	10	05251081.d	1.	1500ng/ml end std		26-May-10, 13:2
82		05251082.d	1.			

Injection Log

Directory: j:\lc02\data\to11a\2010_05\26

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	12	05261001.d	1.	prime		26-May-10, 23:2
2	10	05261002.d	1.	1500ng/ml TO-11A S21-04211003		26-May-10, 23:3
3	11	05261003.d	1.	ACN blank Lot CY331		26-May-10, 23:4
4	101	05261004.d	1.	P1001793-024 2ml	re-run	26-May-10, 23:5
5	102	05261005.d	1.	P1001793-029 2ml	re-run	26-May-10, 12:0
6	103	05261006.d	1.	P1001793-018 2ml 10x dil		26-May-10, 12:1
7	104	05261007.d	1.	P1001793-019 2ml 10x dil		26-May-10, 12:2
8	105	05261008.d	1.	P1001793-021 2ml 10x dil		26-May-10, 12:3
9	106	05261009.d	1.	P1001793-022 2ml 10x dil		26-May-10, 12:4
10	107	05261010.d	1.	P1001793-023 2ml 10x dil		26-May-10, 12:5
11	108	05261011.d	1.	P1001793-026 2m 10x dil		26-May-10, 25:0
12	109	05261012.d	1.	P1001793-027 2ml 10x dil		26-May-10, 25:2
13	110	05261013.d	1.	P1001793-028 2m 10x dil		26-May-10, 25:3
14	10	05261014.d	1.	MID CCV 1500ng/ml		26-May-10, 25:4
15	111	05261015.d	1.	P1001510-001 front 1.0ml 10x dil		26-May-10, 25:5
16	112	05261016.d	1.	P1001510-002 front 1.0ml 10x dil		26-May-10, 26:0
17	113	05261017.d	1.	P1001510-003 front 1.0ml 10x dil		26-May-10, 26:1
18	114	05261018.d	1.	P1001599-002 front 1.0ml 10x dil		26-May-10, 26:2
19	10	05261019.d	1.	1500ng/ml end std		26-May-10, 26:3

Injection Log

Directory: j:\lc02\data\to11a\2010_05\28

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	10	05281001.d	1.	1500ng/ml TO-11A S21-04211003		28-May-10, 25:0
2	11	05281002.d	1.	ACN blank Lot CY331		28-May-10, 25:1
3	101	05281003.d	1.	MB front 1.0ml Lot 6440/6248		28-May-10, 25:2
4	102	05281004.d	1.	MB back 1.0ml Lot 6440/6248		28-May-10, 25:3
5	103	05281005.d	1.	P1001877-001 back 1.0ml		28-May-10, 25:5
6	104	05281006.d	1.	P1001877-002 back 1.0ml		28-May-10, 26:0
7	105	05281007.d	1.	P1001877-003 back 1.0ml		28-May-10, 26:1
8	106	05281008.d	1.	P1001877-004 back 1.0ml		28-May-10, 26:2
9	107	05281009.d	1.	P1001877-005 back 1.0ml		28-May-10, 26:3
10	108	05281010.d	1.	P1001877-006 back 1.0ml		28-May-10, 26:4
11	109	05281011.d	1.	P1001877-007 back 1.0ml		28-May-10, 26:5
12	110	05281012.d	1.	P1001877-008 back 1.0ml		28-May-10, 27:0
13	111	05281013.d	1.	P1001877-009 back 1.0ml		28-May-10, 27:1
14	10	05281014.d	1.	MID CCV 1500ng/ml S21-04211003		28-May-10, 27:2
15	112	05281015.d	1.	P1001877-001 front 1.0ml		28-May-10, 27:3
16	112	05281016.d	1.	P1001877-001 front 1.0ml dup		28-May-10, 27:4
17	113	05281017.d	1.	P1001877-002 front 1.0ml		28-May-10, 27:5
18	114	05281018.d	1.	P1001877-003 front 1.0ml		28-May-10, 28:0
19	115	05281019.d	1.	P1001877-004 front 1.0ml		28-May-10, 28:1
20	116	05281020.d	1.	P1001877-005 front 1.0ml		28-May-10, 28:2
21	117	05281021.d	1.	P1001877-006 front 1.0ml		28-May-10, 28:3
22	118	05281022.d	1.	P1001877-007 front 1.0ml		28-May-10, 28:4
23	119	05281023.d	1.	P1001877-008 front 1.0ml		28-May-10, 29:0
24	120	05281024.d	1.	P1001877-009 front 1.0ml		28-May-10, 29:1
25	10	05281025.d	1.	1500ng/ml Std S21-04211003		28-May-10, 29:2
26	121	05281026.d	1.	P1001793-026 2.0ml	rerun	28-May-10, 29:3
27	122	05281027.d	1.	P1001793-027 2.0ml	rerun	28-May-10, 29:4
28	123	05281028.d	1.	P1001793-028 2.0ml	rerun	28-May-10, 29:5
29	11	05281029.d	1.	ACN BLANK		28-May-10, 30:0
30	11	05281030.d	1.	ACN BLANK		28-May-10, 30:1
31	10	05281031.d	1.	1500ng/ml end std S21-04211003		28-May-10, 30:2
32	11	05281032.d	1.	shutdown		28-May-10, 30:3