Columbia Analytical Services™ 2655 Park Center Drive, Suite A | Simi Valley, CA 93065 | 805.526.7161 | 805.526.7270 fax | www.caslab.com

LABORATORY REPORT

September 24, 2009

Brian Baker
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

RE: 16512

Dear Brian:

Enclosed are the results of the samples submitted to our laboratory on August 28, 2009. For your reference, these analyses have been assigned our service request number P0903011.

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 288 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; Department of the Navy (NFESC); Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA. 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

Kate Aguilera
Project Manager

Client: Environmental Health & Engineering, Inc. CAS Project No: P0903011
Project: 16512

CASE NARRATIVE

The samples were received intact under chain of custody on August 28, 2009 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.

Sample 103584 was received wet.

Aldehyde Analysis

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

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: 16512

Service Request: P0903011

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
P0903011-001	103554	8/27/09	00:00
P0903011-002	103555	8/27/09	00:00
P0903011-003	103556	8/27/09	00:00
P0903011-004	103557	8/27/09	00:00
P0903011-005	103558	8/27/09	00:00
P0903011-006	103559	8/27/09	00:00
P0903011-007	103582	8/27/09	00:00
P0903011-008	103583	8/27/09	00:00
P0903011-009	103584	8/27/09	00:00
P0903011-010	103585	8/27/09	00:00
P0903011-011	103586	8/27/09	00:00
P0903011-012	103610	8/27/09	00:00

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 8/27/09

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

8090311

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 # 16512

The cost of this analysis will be covered by EH&E Purchase Order # 16512

For EH & E Data Coordinator - URGENT DATA ☐

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
1	103554	SORBENT-AIR	EPA TO-15 -ALDEHYDES	106.1 L
2	103555			100.4 L
3	103556			105.6 L
4	103557			107.6 L
5	103558			108.7 L
6	103559			0 L
7	103582			101.0 L
8	103583			101.0 L
9	103584			100.5 L
10	103585			99.9 L
11	103586			94.6 L
FB	103610			0 L

Special instructions:

☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient MFRAGALA@EHEINC.COM

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

Relinquished by: W. Carlson of Environmental Health & Engineering, Inc. Date: 8/27/09

Received by: _____ of (company name) CAS Date: 8/28/09

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: _____

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Environmental Health & Engineering, Inc. Work order: P0903011

Project: 16512

Sample(s) received on: 08/28/09 Date opened: 08/28/09 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?	☒	☐	☐
2	Container(s) **supplied by CAS**?	☐	☒	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Was a **chain-of-custody** provided?	☒	☐	☐
5	Was the **chain-of-custody** properly completed?	☐	☒	☐
6	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
7	Was **sample volume** received adequate for analysis?	☒	☐	☐
8	Are samples within specified holding times?	☒	☐	☐
9	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
	Cooler Temperature 4 °C Blank Temperature _____ °C			
10	Was a **trip blank** received?	☐	☒	☐
	Trip blank supplied by CAS: _____			
11	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
12	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
13	**Tubes:** Are the tubes capped and intact?	☒	☐	☐
	Do they contain moisture?	☐	☒	☐
14	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P0903011-001.01	Silica Gel DNPH Tube					
P0903011-002.01	Silica Gel DNPH Tube					
P0903011-003.01	Silica Gel DNPH Tube					
P0903011-004.01	Silica Gel DNPH Tube					
P0903011-005.01	Silica Gel DNPH Tube					
P0903011-006.01	Silica Gel DNPH Tube					

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

Chain of Custody is missing time collected

*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)

Columbia Analytical Services, Inc.
Sample Acceptance Check Form

Client: Environmental Health & Engineering, Inc. Work order: P0903011

Project: 16512

Sample(s) received on: 08/28/09 Date opened: 08/28/09 by: MZAMORA

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P0903011-007.01	Silica Gel DNPH Tube					
P0903011-008.01	Silica Gel DNPH Tube					
P0903011-009.01	Silica Gel DNPH Tube					
P0903011-010.01	Silica Gel DNPH Tube					
P0903011-011.01	Silica Gel DNPH Tube					
P0903011-012.01	Silica Gel DNPH Tube					

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

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103554**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-001

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: 106.1 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**18,000**	**170**	0.94	**140**	0.77	
75-07-0	**Acetaldehyde**	**3,800**	**36**	0.94	**20**	0.52	**BT**
123-38-6	**Propionaldehyde**	**500**	**4.7**	0.94	**2.0**	0.40	
4170-30-3	Crotonaldehyde, Total	< 100	ND	0.94	ND	0.33	
123-72-8	**Butyraldehyde**	**400**	**3.8**	0.94	**1.3**	0.32	
100-52-7	**Benzaldehyde**	**880**	**8.3**	0.94	**1.9**	0.22	
590-86-3	**Isovaleraldehyde**	**260**	**2.4**	0.94	**0.69**	0.27	
110-62-3	**Valeraldehyde**	**1,200**	**12**	0.94	**3.3**	0.27	
529-20-4	o-Tolualdehyde	< 100	ND	0.94	ND	0.19	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	1.9	ND	0.38	
66-25-1	**n-Hexaldehyde**	**5,400**	**50**	0.94	**12**	0.23	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	0.94	ND	0.17	

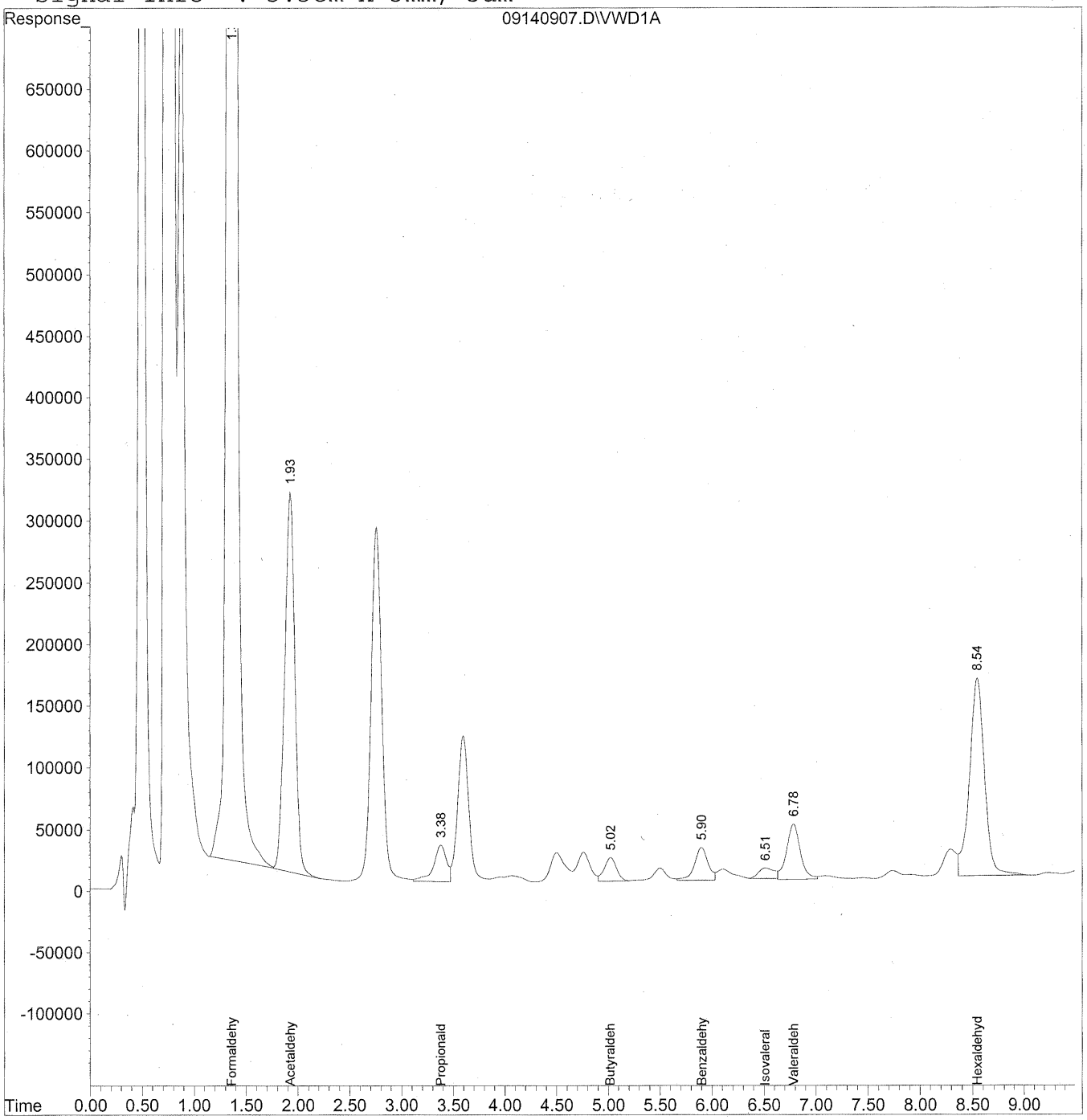
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
BC = Results reported are not blank corrected.
BT = Results indicated possible breakthrough; back section > 10% front section.

Verified By: _____ Date: 9/16/09

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140907.D Vial: 103
Acq On : 14-Sep-2009, 10:20 Operator: MD
Sample : P0903011-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:42 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



9

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140907.D Vial: 103
Acq On : 14-Sep-2009, 10:20 Operator: MD
Sample : P0903011-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:42 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

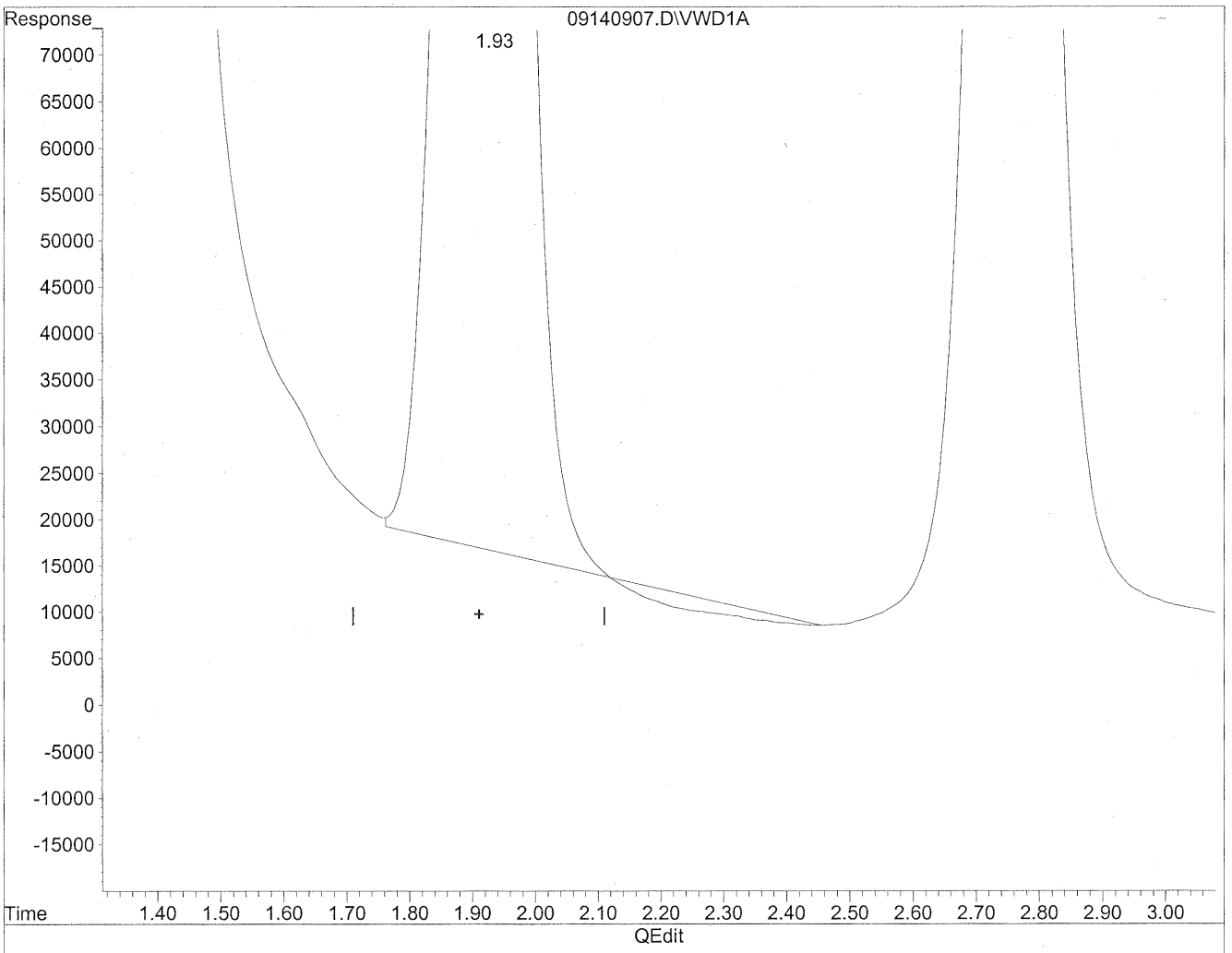
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.37	165289331	~~18498.194~~	~~ng/ml~~ See dil
2)	Acetaldehyde	1.93	21037694	3236.171	ng/mlm
3)	Propionaldehyde	3.38	2601601	500.517	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	5.02	1615552	398.629	ng/ml
6)	Benzaldehyde	5.90	2411177	883.740	ng/ml
7)	Isovaleraldehyde	6.51	893107	259.489	ng/mlm
8)	Valeraldehyde	6.79	4162101	1224.277	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	8.55	15858797	5356.390	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/mld

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140907.D Vial: 103
Acq On : 14-Sep-2009, 10:20 Operator: MD
Sample : P0903011-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:13 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.93min 3176.291ng/ml

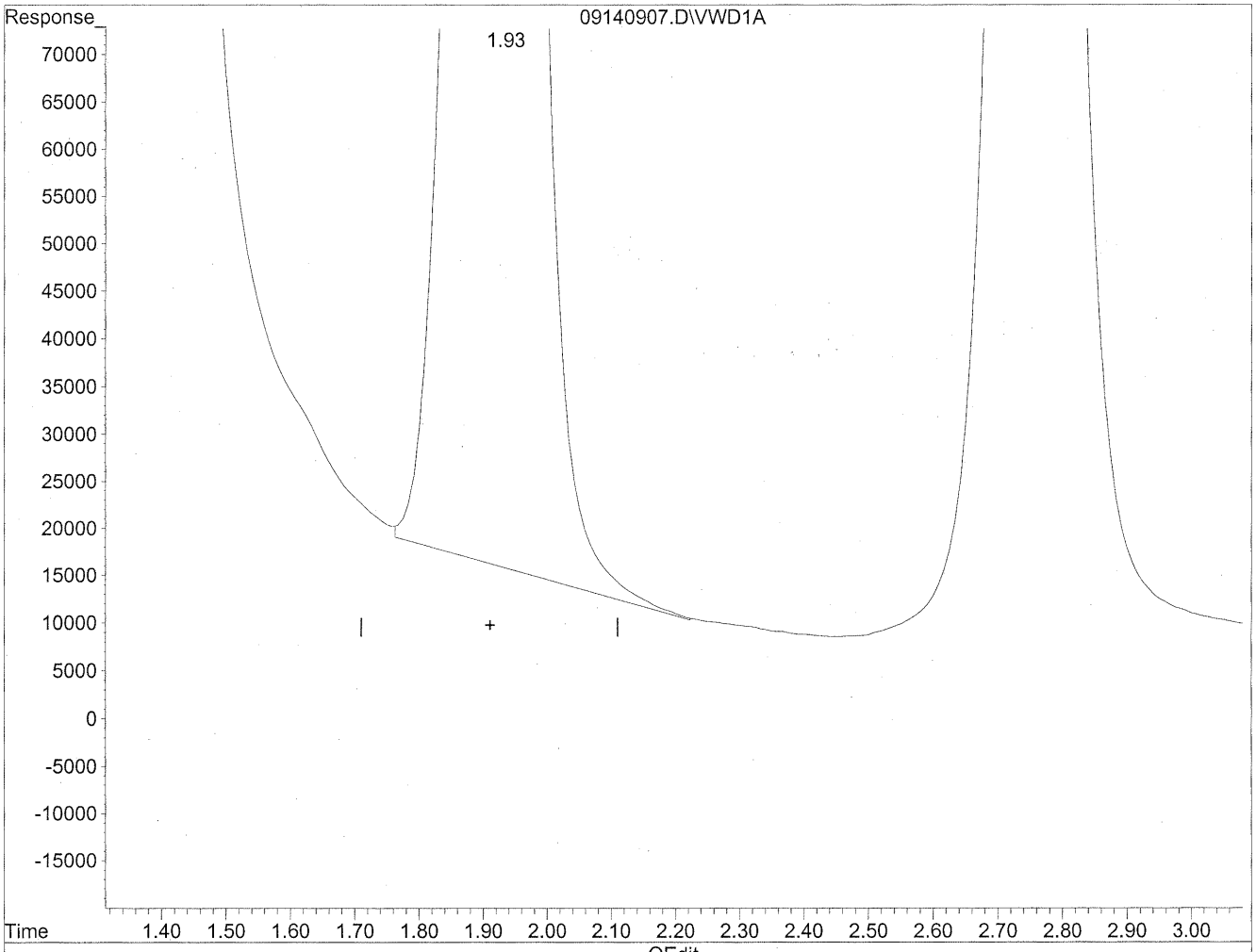
response 20648422

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140907.D Vial: 103
Acq On : 14-Sep-2009, 10:20 Operator: MD
Sample : P0903011-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:13 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



QEdit

(2) Acetaldehyde

1.93min 3236.171ng/ml m

response 21037694

9/15/09

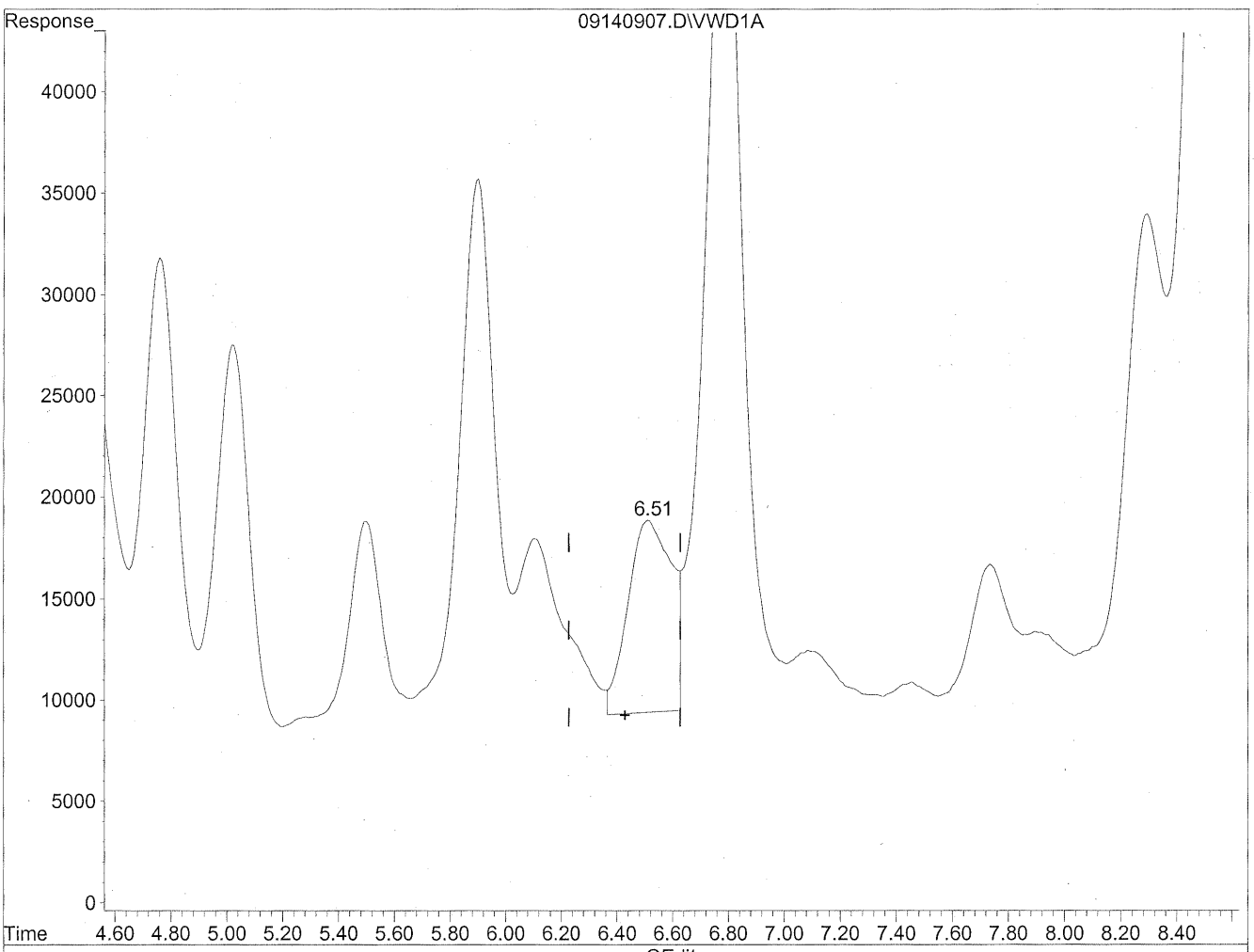
9/15/09

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140907.D Vial: 103
Acq On : 14-Sep-2009, 10:20 Operator: MD
Sample : P0903011-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:13 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.51min 297.429ng/ml

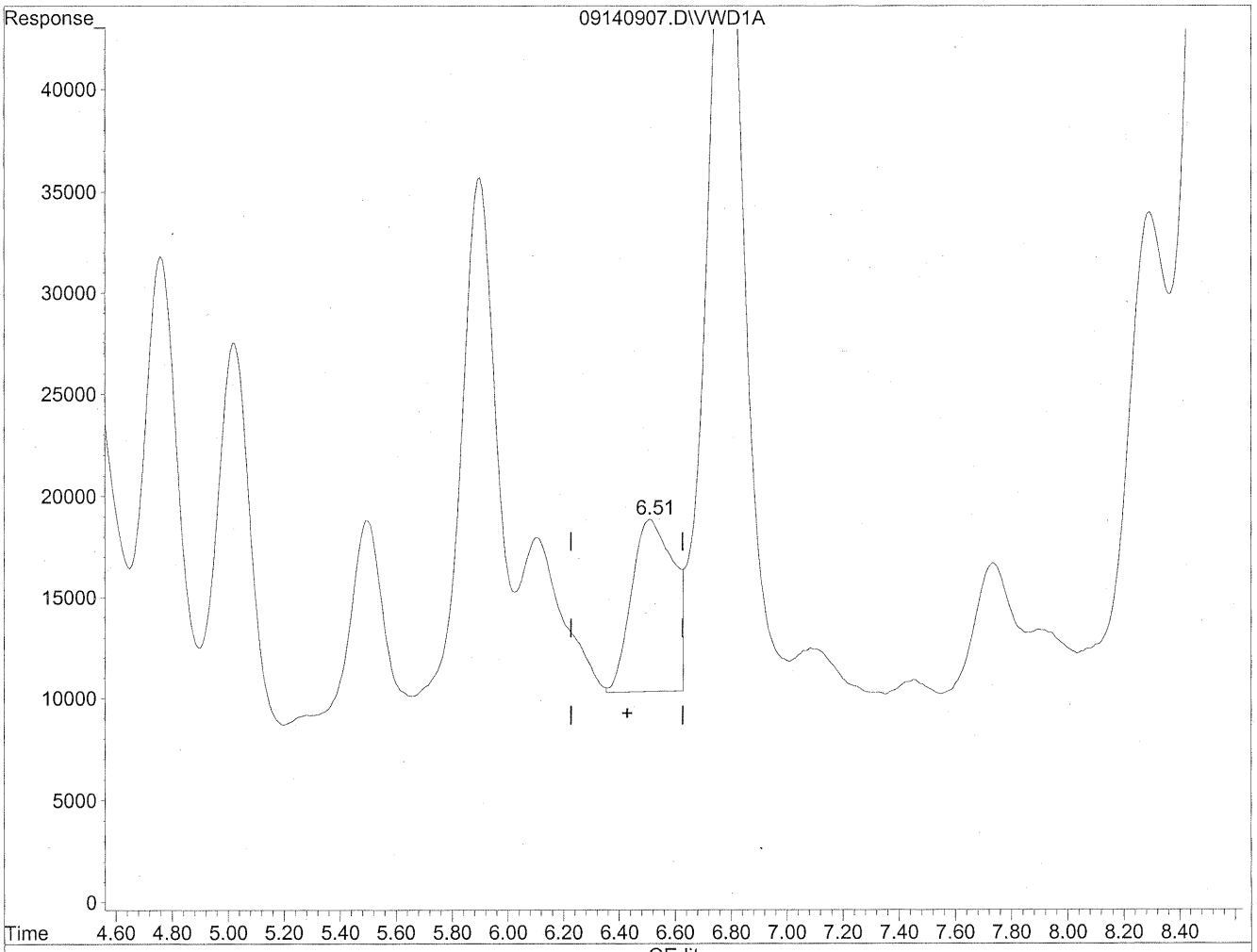
response 1023688

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140907.D Vial: 103
Acq On : 14-Sep-2009, 10:20 Operator: MD
Sample : P0903011-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:13 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.51min 259.489ng/ml m

response 893107

9/15/09 12

9/15/09

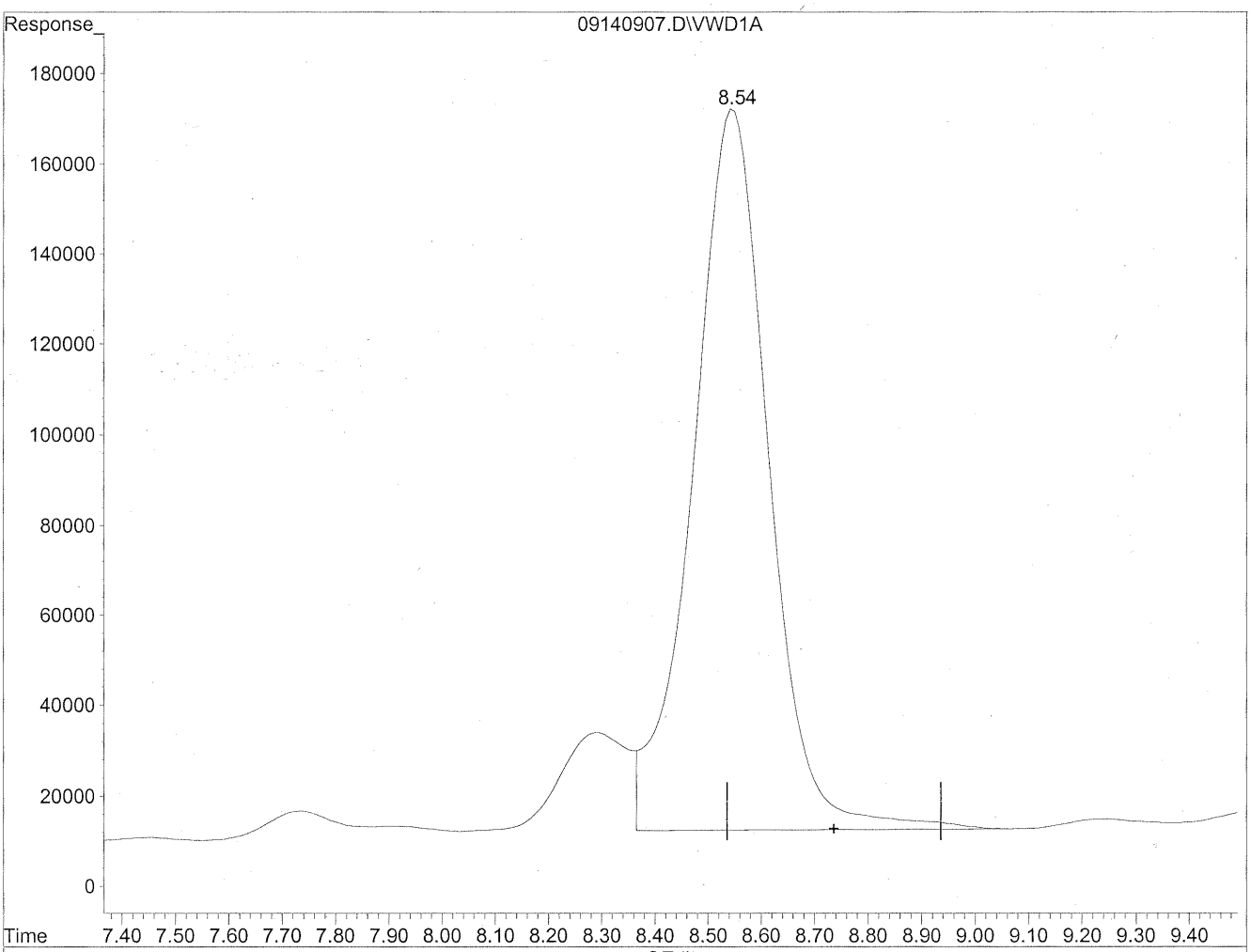
14

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140907.D Vial: 103
Acq On : 14-Sep-2009, 10:20 Operator: MD
Sample : P0903011-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:13 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.55min 7947.312ng/ml

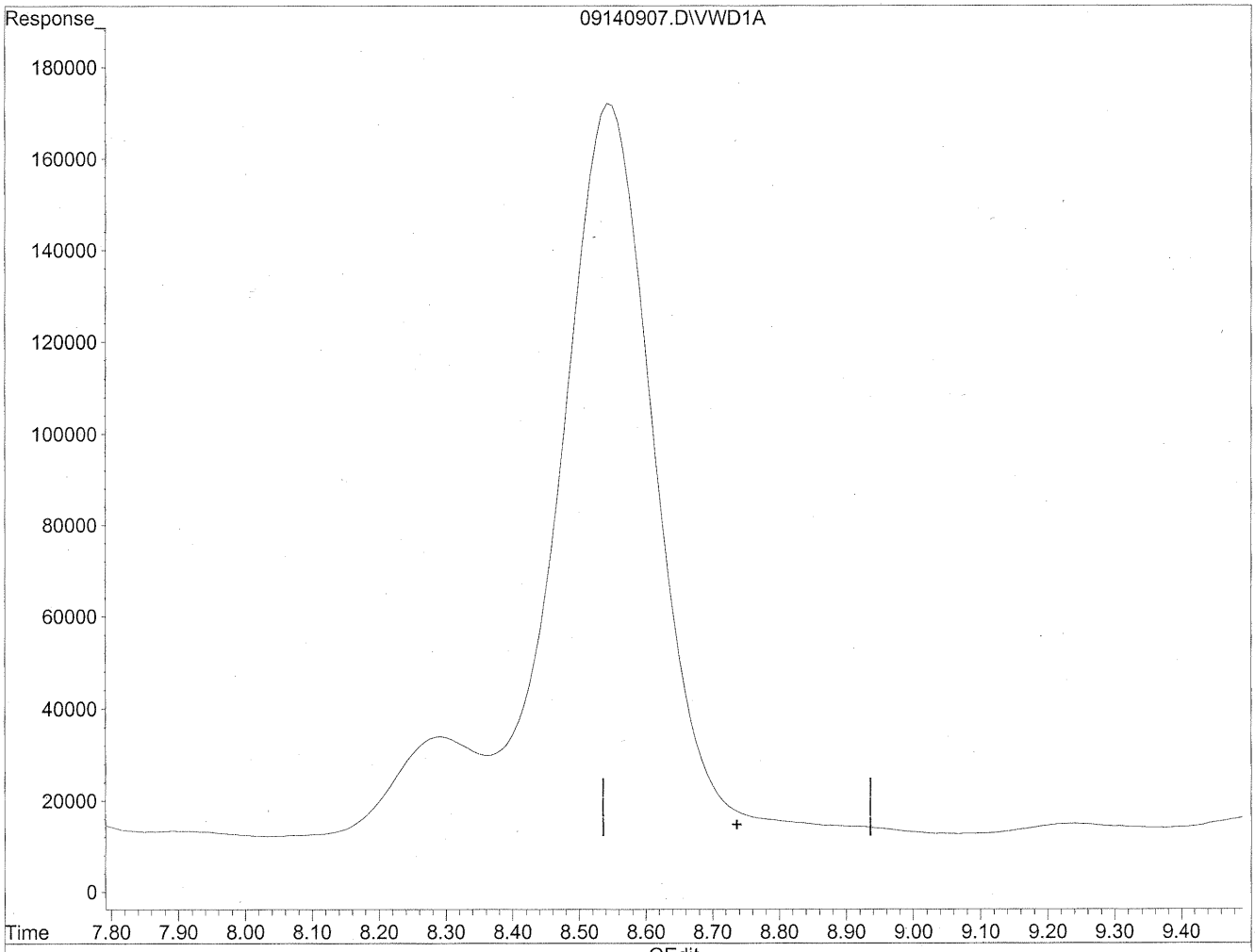
response 15858797

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140907.D Vial: 103
Acq On : 14-Sep-2009, 10:20 Operator: MD
Sample : P0903011-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:13 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

mp 9/15/09 mp

tc 9/15/09

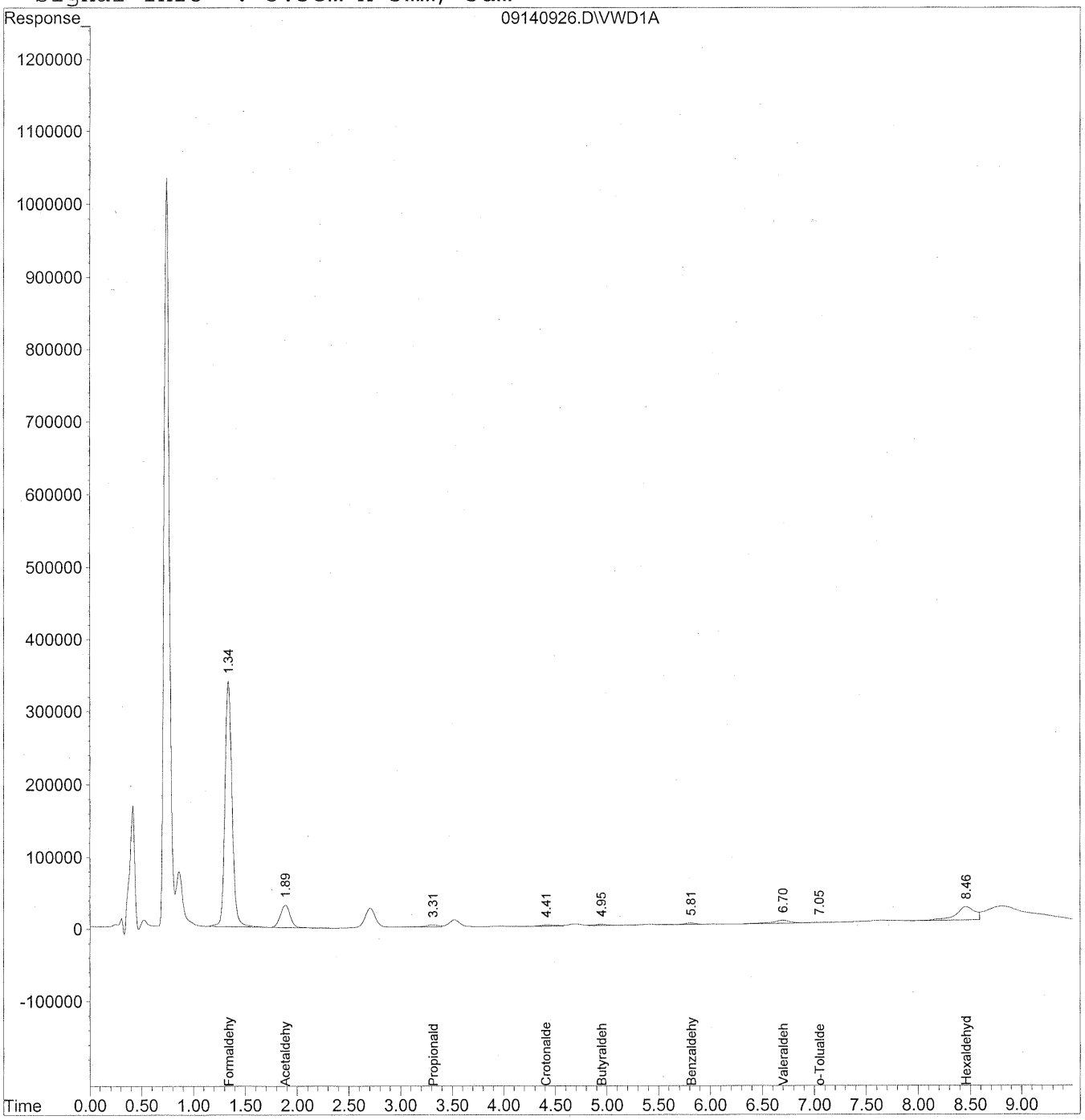
(+) = Expected Retention Time

09140907.D TO110909.M Tue Sep 15 09:42:15 2009

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140926.D Vial: 120
Acq On : 14-Sep-2009, 14:09 Operator: MD
Sample : P0903011-001 front 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:18 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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



17

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140926.D Vial: 120
Acq On : 14-Sep-2009, 14:09 Operator: MD
Sample : P0903011-001 front 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:18 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

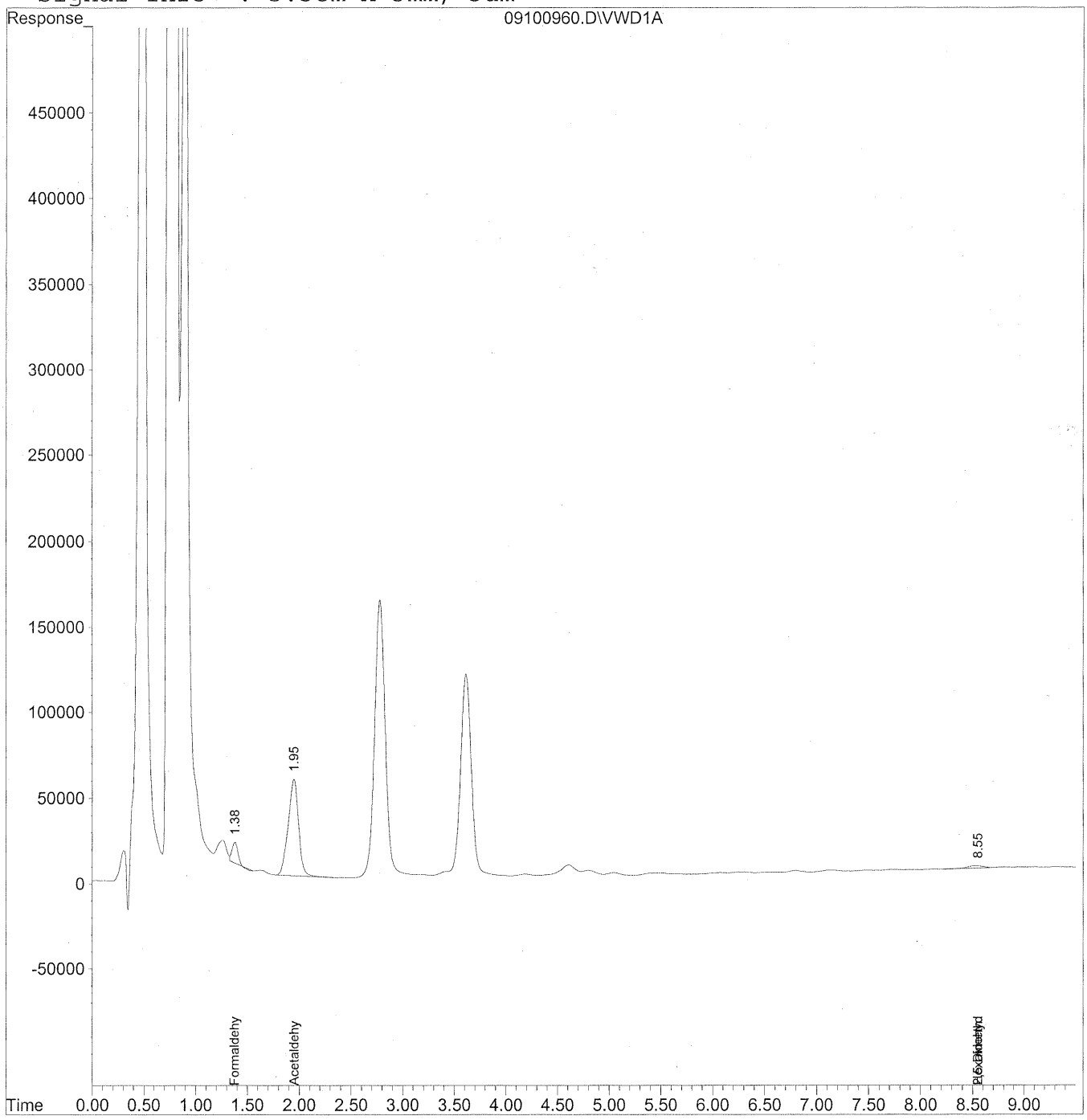
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	16245994	1818.155	ng/ml
2)	Acetaldehyde	1.89	2054478	316.035	ng/ml
3)	Propionaldehyde	3.32	223477	42.994	ng/ml
4)	Crotonaldehyde	4.42	189851	46.766	ng/ml
5)	Butyraldehyde	4.95	145439	35.886	ng/ml
6)	Benzaldehyde	5.81	139699	51.202	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	6.70	529901	155.870	ng/ml
9)	o-Tolualdehyde	7.05f	48020	21.881	ng/ml
10)	m,p-Tolualdehyde	0.00	0	N.D.	ng/ml
11)	Hexaldehyde	8.46	2287765	772.705	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/mld

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100960.D Vial: 133
Acq On : 11-Sep-2009, 13:29 Operator: MD
Sample : P0903011-001 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:52 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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\2009_09\10\09100960.D Vial: 133
Acq On : 11-Sep-2009, 13:29 Operator: MD
Sample : P0903011-001 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:52 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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	1.38	481403	53.876	ng/ml
2)	Acetaldehyde	1.95	3936924	605.606	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	8.55	150695	50.898	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.55f	150695	75.518	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.
09100960.D TO110909.M Tue Sep 15 09:01:45 2009 Page 1

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103555**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-002

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: 100.4 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**18,000**	**180**	1.0	**140**	0.81	
75-07-0	**Acetaldehyde**	**3,600**	**36**	1.0	**20**	0.55	**BT**
123-38-6	**Propionaldehyde**	**450**	**4.5**	1.0	**1.9**	0.42	
4170-30-3	Crotonaldehyde, Total	< 100	ND	1.0	ND	0.35	
123-72-8	**Butyraldehyde**	**340**	**3.4**	1.0	**1.2**	0.34	
100-52-7	**Benzaldehyde**	**840**	**8.4**	1.0	**1.9**	0.23	
590-86-3	**Isovaleraldehyde**	**250**	**2.4**	1.0	**0.69**	0.28	
110-62-3	**Valeraldehyde**	**1,100**	**11**	1.0	**3.2**	0.28	
529-20-4	o-Tolualdehyde	< 100	ND	1.0	ND	0.20	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	2.0	ND	0.41	
66-25-1	**n-Hexaldehyde**	**4,900**	**49**	1.0	**12**	0.24	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	1.0	ND	0.18	

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.
BT = Results indicated possible breakthrough; back section > 10% front section.

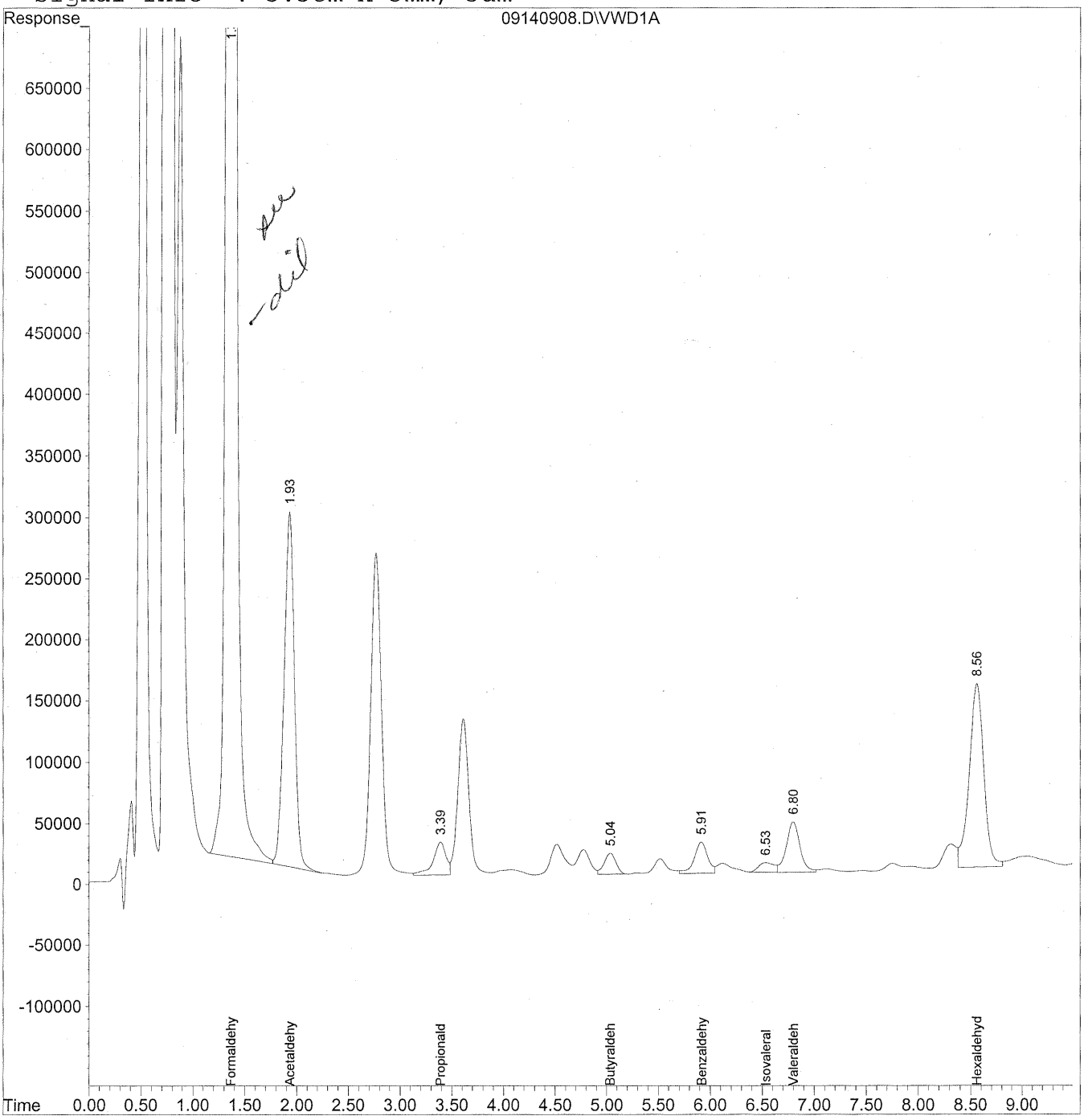
Verified By: _____ Date: 9/16/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140908.D Vial: 104
Acq On : 14-Sep-2009, 10:32 Operator: MD
Sample : P0903011-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:44 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



22

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140908.D Vial: 104
Acq On : 14-Sep-2009, 10:32 Operator: MD
Sample : P0903011-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:44 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

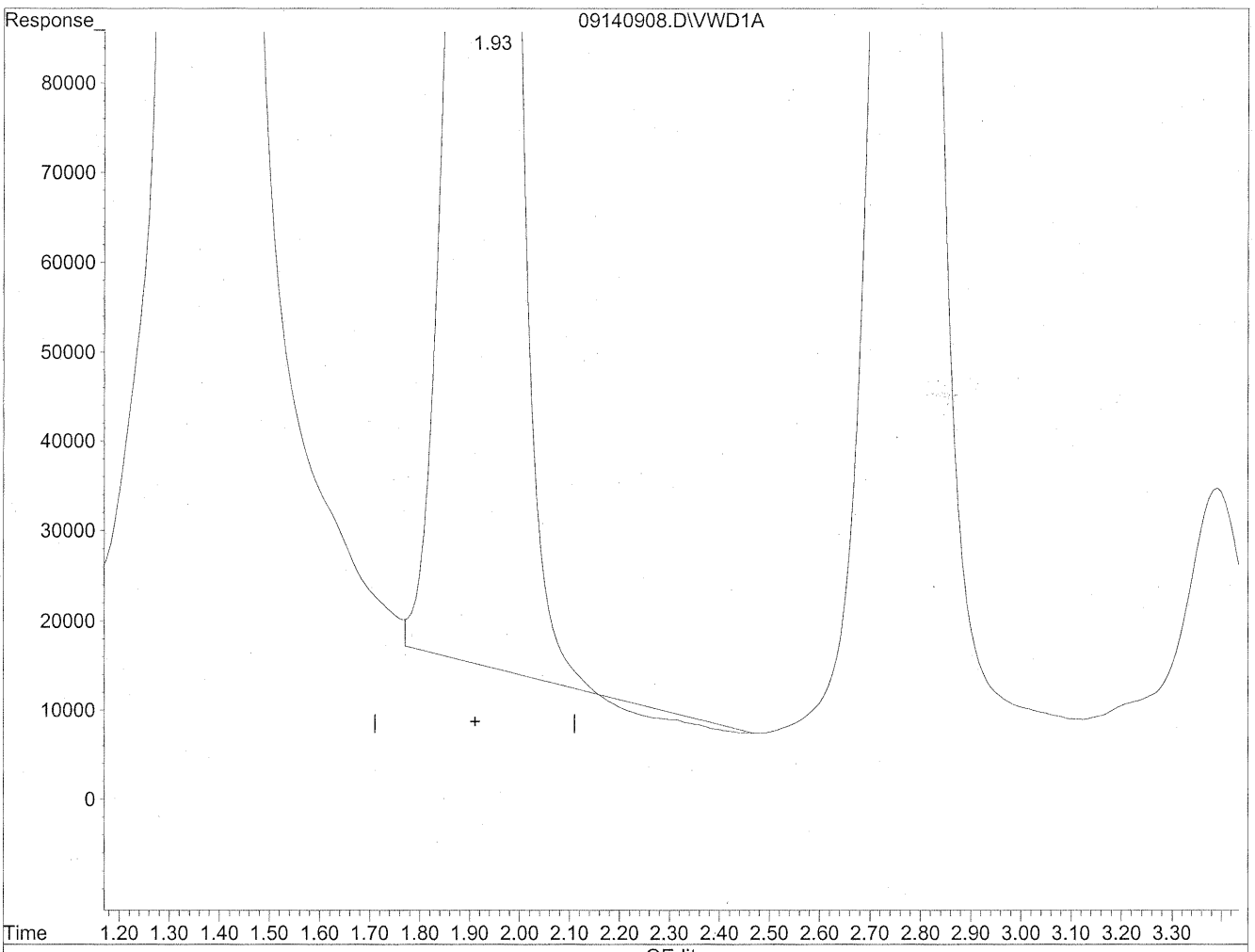
	Compound	R.T.	Response	Conc	Units	
	Target Compounds					
1)	Formaldehyde	1.37	160602820	~~17973.707~~	ng/ml	Ser dil
2)	Acetaldehyde	1.93	20005228	3077.350	ng/mlm	
3)	Propionaldehyde	3.39	2354710	453.018	ng/ml	
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml	
5)	Butyraldehyde	5.04	1393721	343.894	ng/ml	
6)	Benzaldehyde	5.92	2296230	841.610	ng/ml	
7)	Isovaleraldehyde	6.53f	844404	245.339	ng/mlm	
8)	Valeraldehyde	6.80	3817064	1122.785	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	8.56	14574290	4922.541	ng/ml	
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/mld	

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140908.D Vial: 104
Acq On : 14-Sep-2009, 10:32 Operator: MD
Sample : P0903011-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 12:55 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.94min 3037.803ng/ml

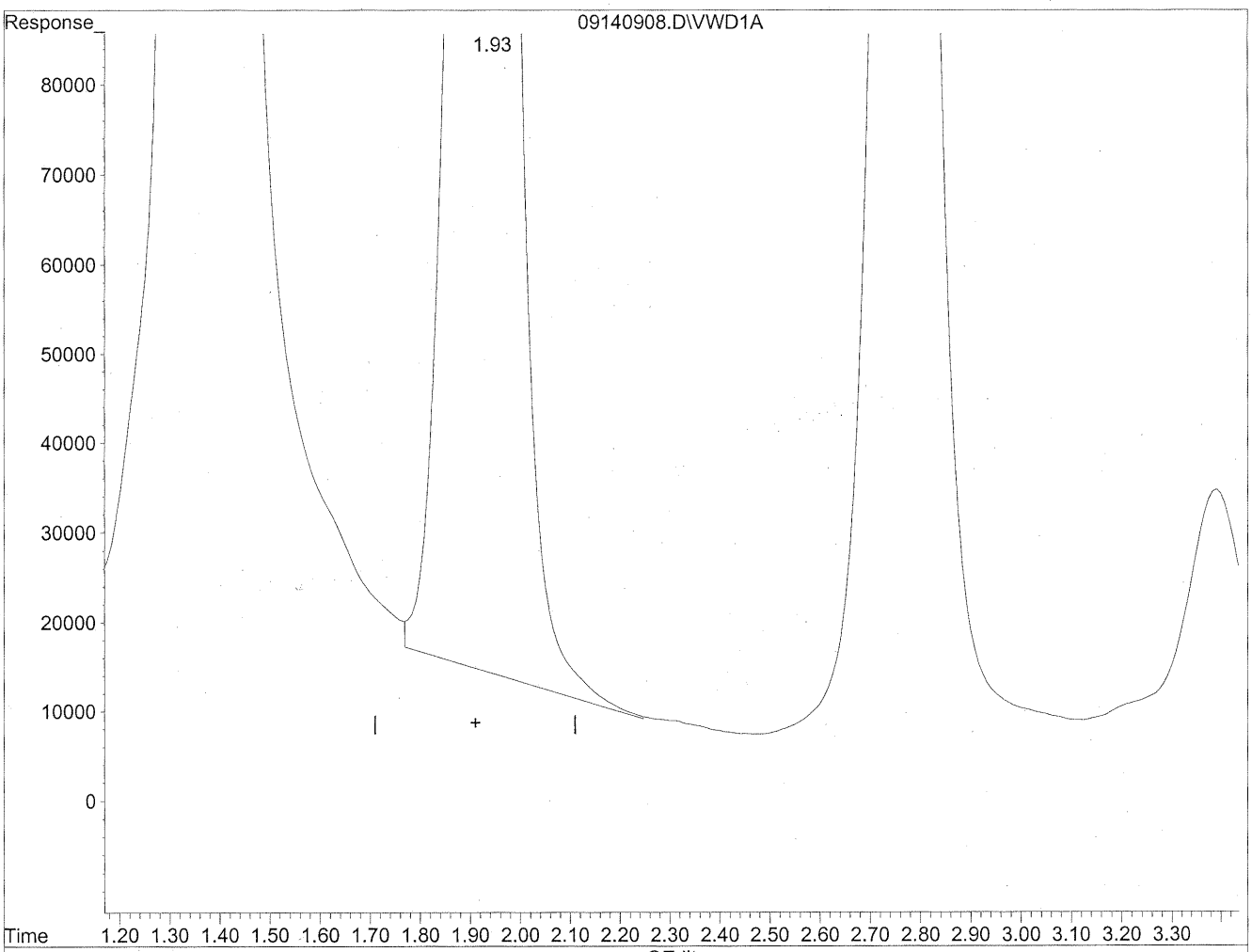
response 19748140

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140908.D Vial: 104
Acq On : 14-Sep-2009, 10:32 Operator: MD
Sample : P0903011-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 12:55 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.93min 3077.350ng/ml m

response 20005228

9/15/09

9/15/09

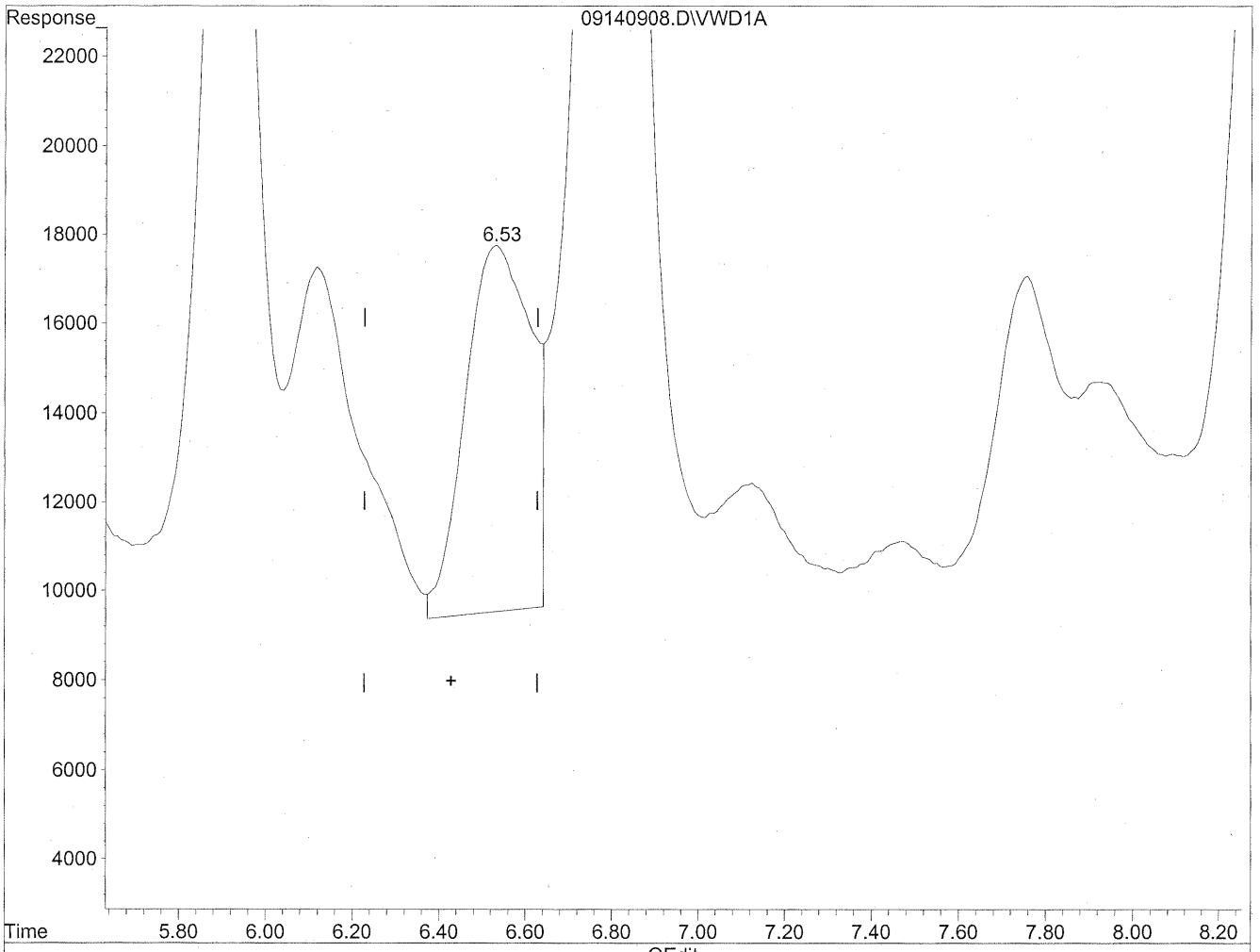
(+) = Expected Retention Time

09140908.D TO110909.M Tue Sep 15 09:43:07 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140908.D Vial: 104
Acq On : 14-Sep-2009, 10:32 Operator: MD
Sample : P0903011-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 12:55 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.53min 250.743ng/ml

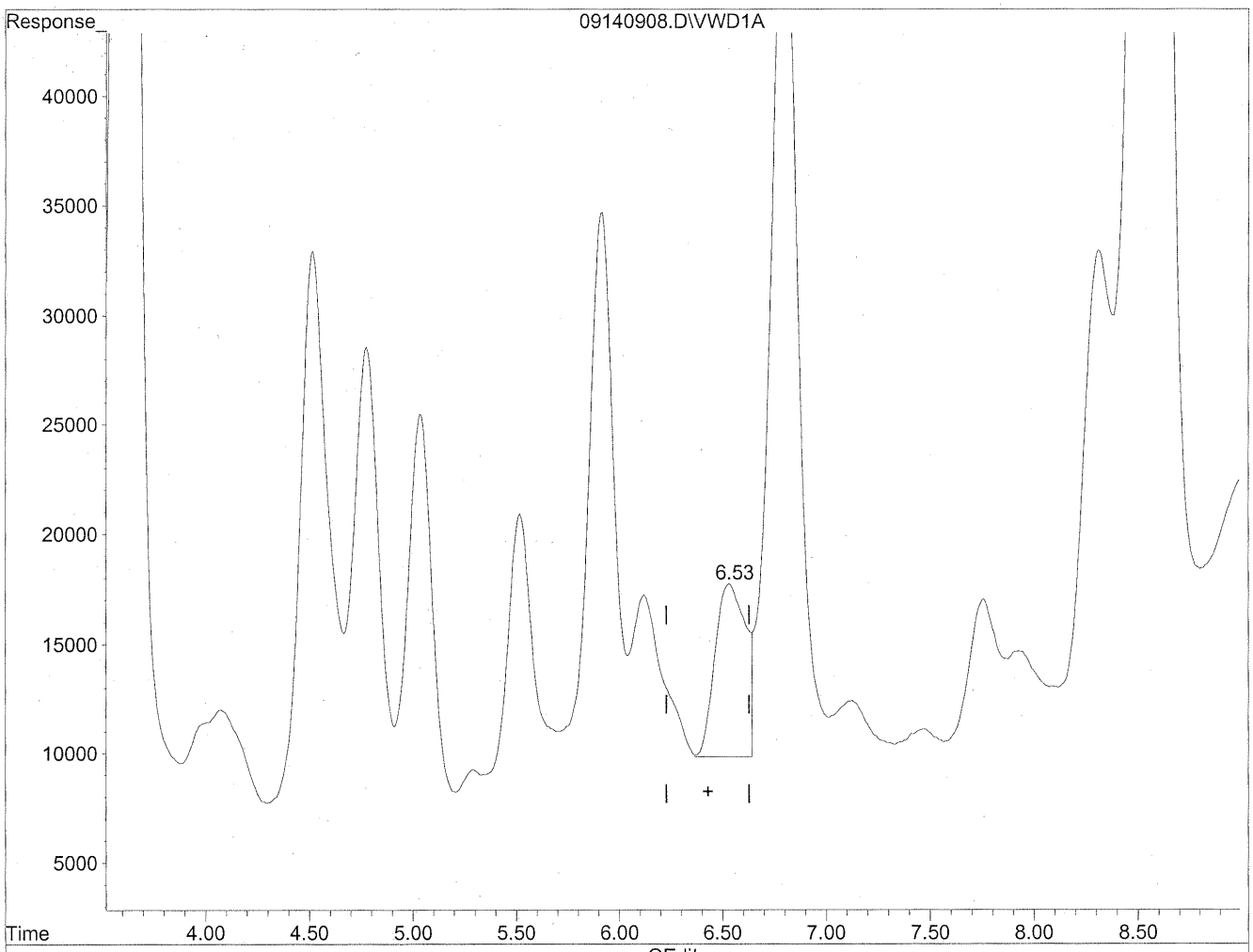
response 863003

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140908.D Vial: 104
Acq On : 14-Sep-2009, 10:32 Operator: MD
Sample : P0903011-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 12:55 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



QEdit

(7) Isovaleraldehyde

6.53min 245.339ng/ml m

response 844404

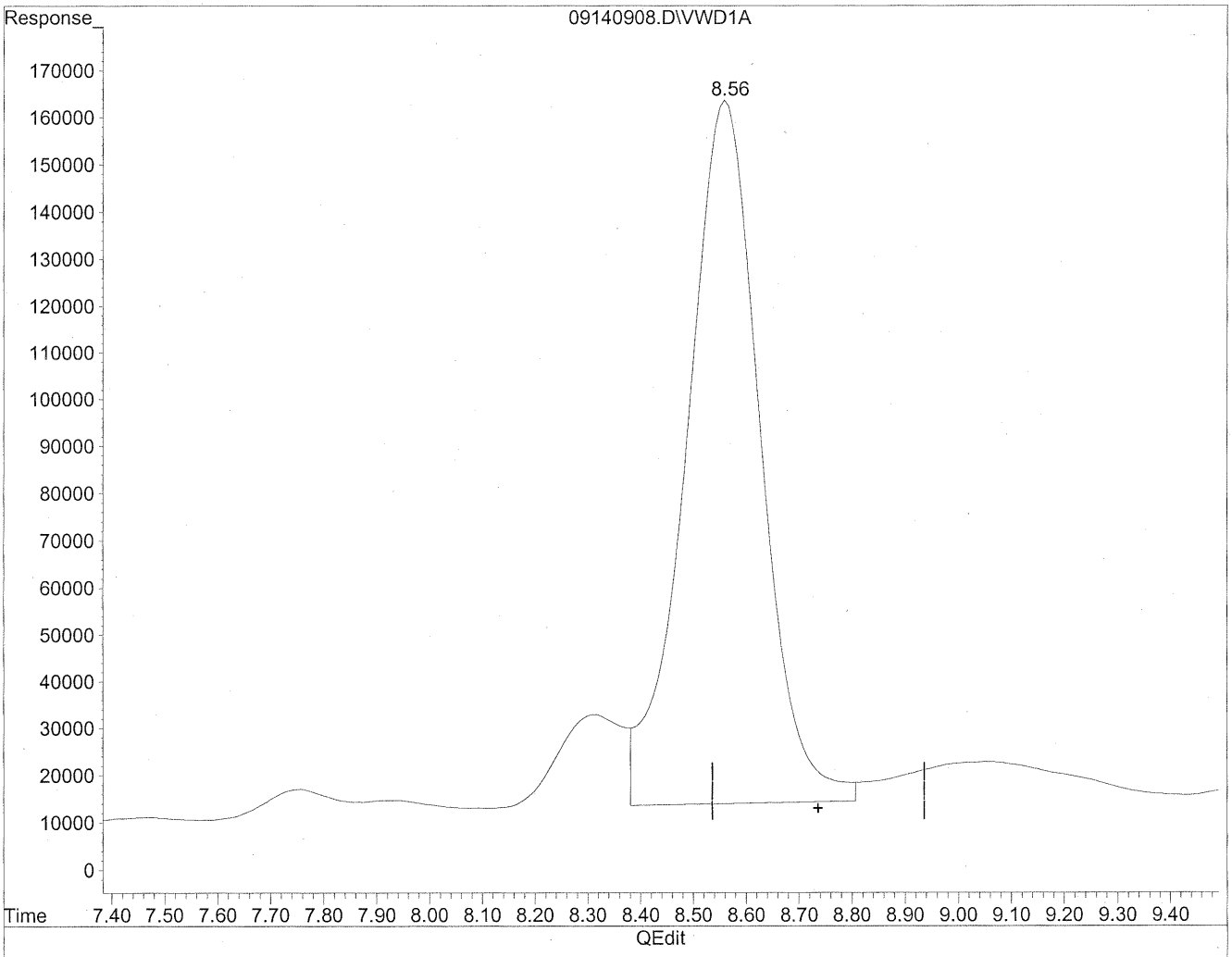
9/15/09
12

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140908.D Vial: 104
Acq On : 14-Sep-2009, 10:32 Operator: MD
Sample : P0903011-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 12:55 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.56min 7303.608ng/ml

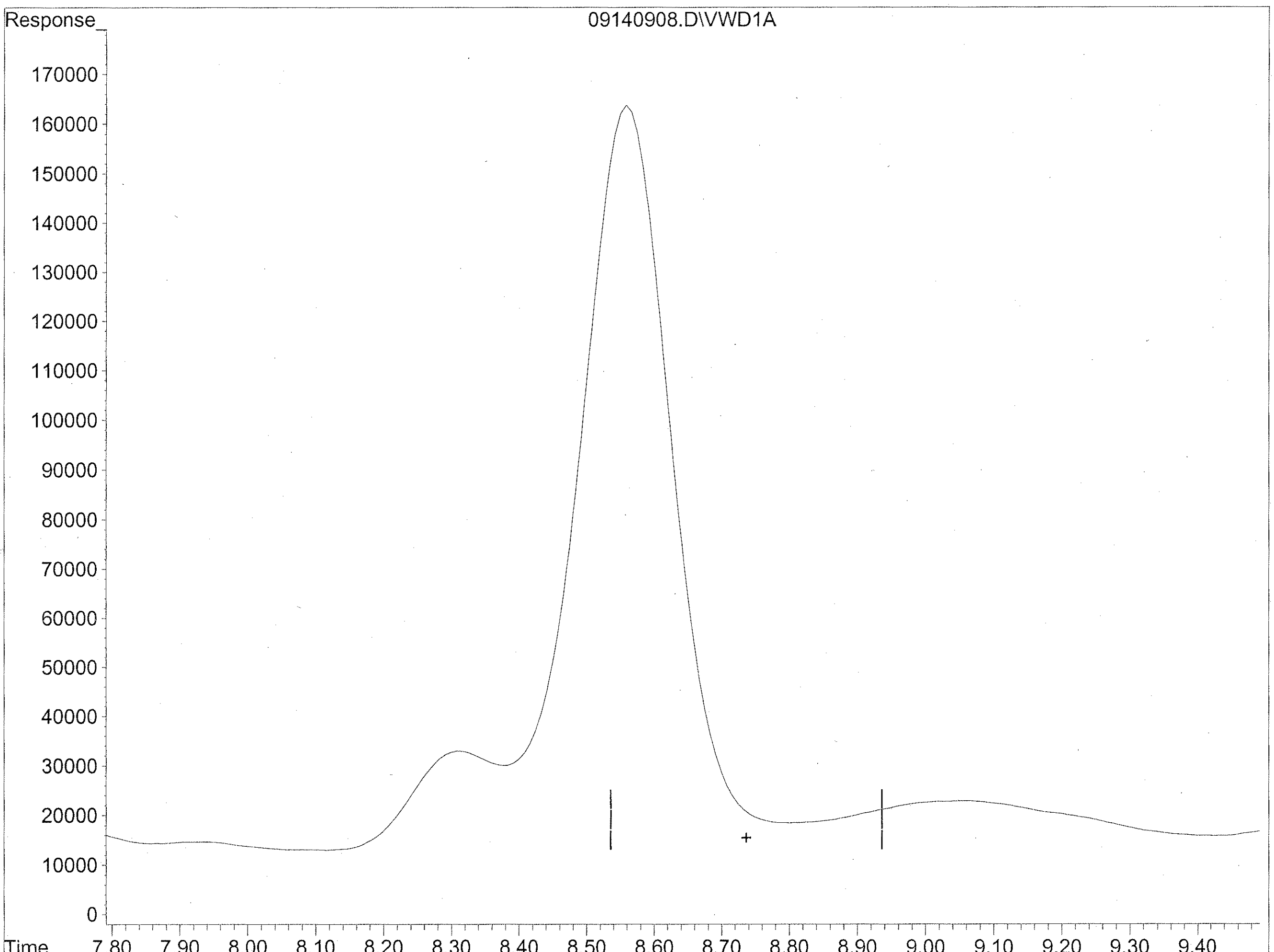
response 14574290

(+) = Expected Retention Time

Quantitation Report

```
Data File : J:\LC02\DATA\TO11A\2009_09\14\09140908.D      Vial: 104
Acq On    : 14-Sep-2009, 10:32                          Operator: MD
Sample    : P0903011-002 front 1.0ml                    Inst    : VWD
Misc      :                                             Multiplr: 1.00
IntFile   : events.e
Quant Time: Sep 14 12:55 19109  Quant Results File: TO110909.RES

Method         : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title          : LC-1050 TO-11A ICAL
Last Update    : Tue Sep 15 08:58:18 2009
Response via   : Multiple Level Calibration
```



QEdit

(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

MR 9/15/09 MP

HC 9/15/09

(+) = Expected Retention Time

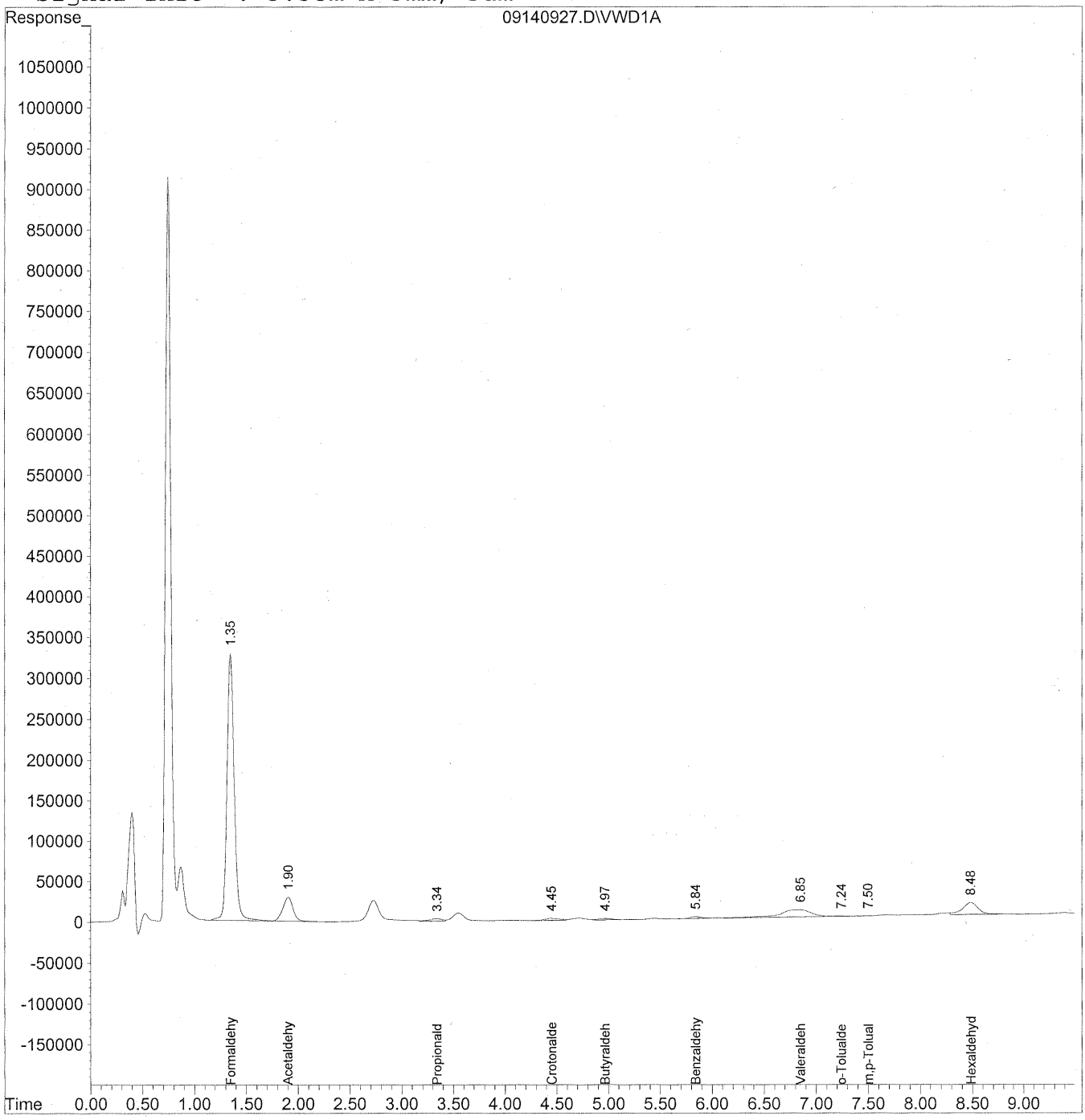
09140908.D TO110909.M Tue Sep 15 09:44:20 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140927.D Vial: 121
Acq On : 14-Sep-2009, 14:41 Operator: MD
Sample : P0903011-002 front 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:18 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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\2009_09\14\09140927.D Vial: 121
Acq On : 14-Sep-2009, 14:41 Operator: MD
Sample : P0903011-002 front 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:18 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

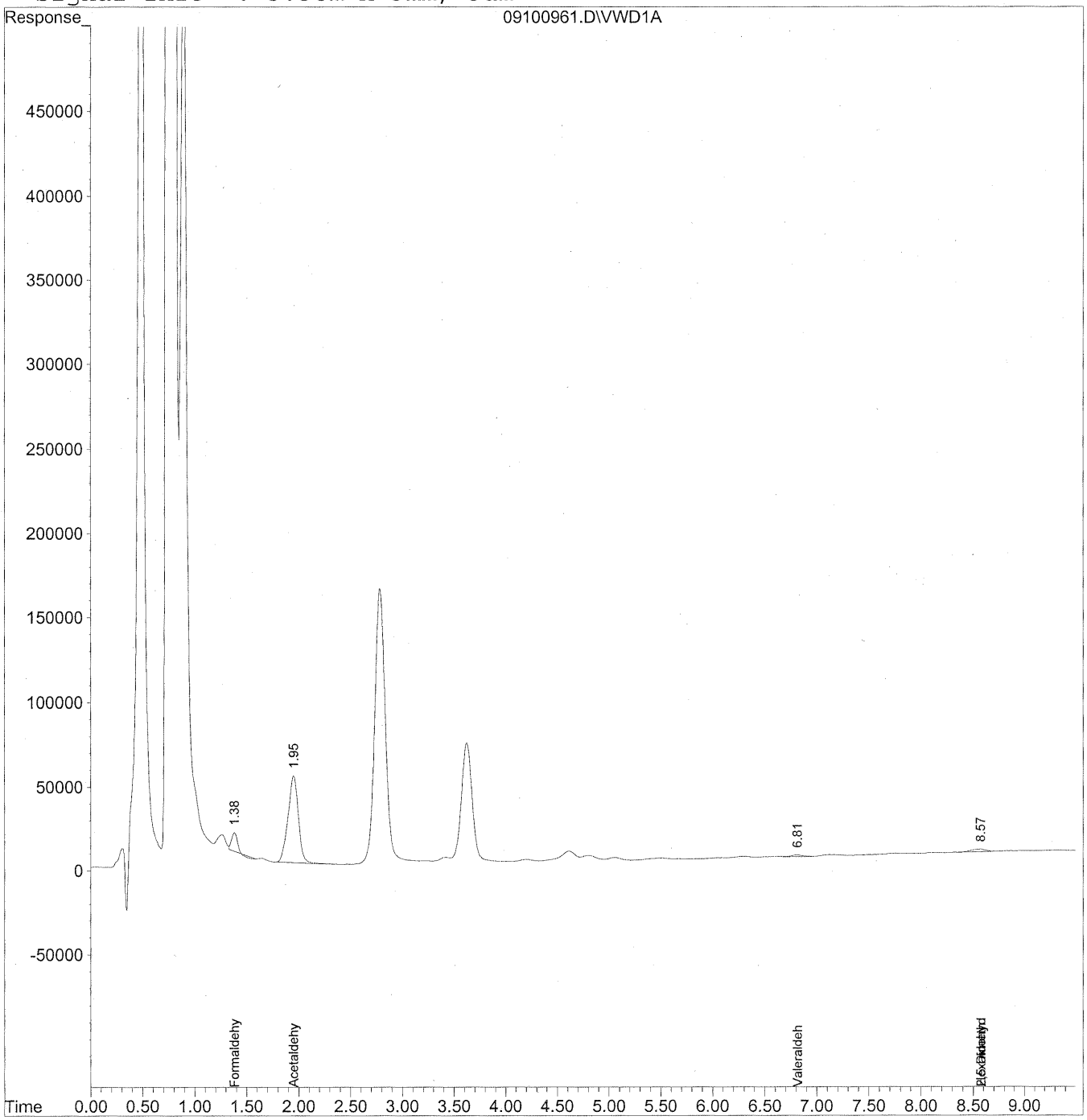
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	15835186	1772.179	ng/ml
2)	Acetaldehyde	1.91	1998933	307.490	ng/ml
3)	Propionaldehyde	3.34	251079	48.305	ng/ml
4)	Crotonaldehyde	4.45	227562	56.056	ng/ml
5)	Butyraldehyde	4.97	140200	34.594	ng/ml
6)	Benzaldehyde	5.85	186971	68.528	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	6.86f	1899644	558.778	ng/ml
9)	o-Tolualdehyde	7.25	15482	7.055	ng/ml
10)	m,p-Tolualdehyde	7.50	20723	9.022	ng/ml
11)	Hexaldehyde	8.49	1559065	526.582	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100961.D Vial: 134
Acq On : 11-Sep-2009, 13:41 Operator: MD
Sample : P0903011-002 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:51 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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\2009_09\10\09100961.D Vial: 134
Acq On : 11-Sep-2009, 13:41 Operator: MD
Sample : P0903011-002 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:51 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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	1.39	389841	43.629	ng/ml
2)	Acetaldehyde	1.96	3619662	556.803	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	6.81	83435	24.542	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	8.58	152426	51.483	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.58f	152426	76.385	ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103556**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-003

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: 105.6 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**450**	**4.3**	0.95	**3.5**	0.77	
75-07-0	**Acetaldehyde**	**150**	**1.4**	0.95	**0.78**	0.53	
123-38-6	Propionaldehyde	< 100	ND	0.95	ND	0.40	
4170-30-3	Crotonaldehyde, Total	< 100	ND	0.95	ND	0.33	
123-72-8	Butyraldehyde	< 100	ND	0.95	ND	0.32	
100-52-7	**Benzaldehyde**	**150**	**1.5**	0.95	**0.33**	0.22	
590-86-3	Isovaleraldehyde	< 100	ND	0.95	ND	0.27	
110-62-3	Valeraldehyde	< 100	ND	0.95	ND	0.27	
529-20-4	o-Tolualdehyde	< 100	ND	0.95	ND	0.19	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	1.9	ND	0.39	
66-25-1	n-Hexaldehyde	< 100	ND	0.95	ND	0.23	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	0.95	ND	0.17	

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.

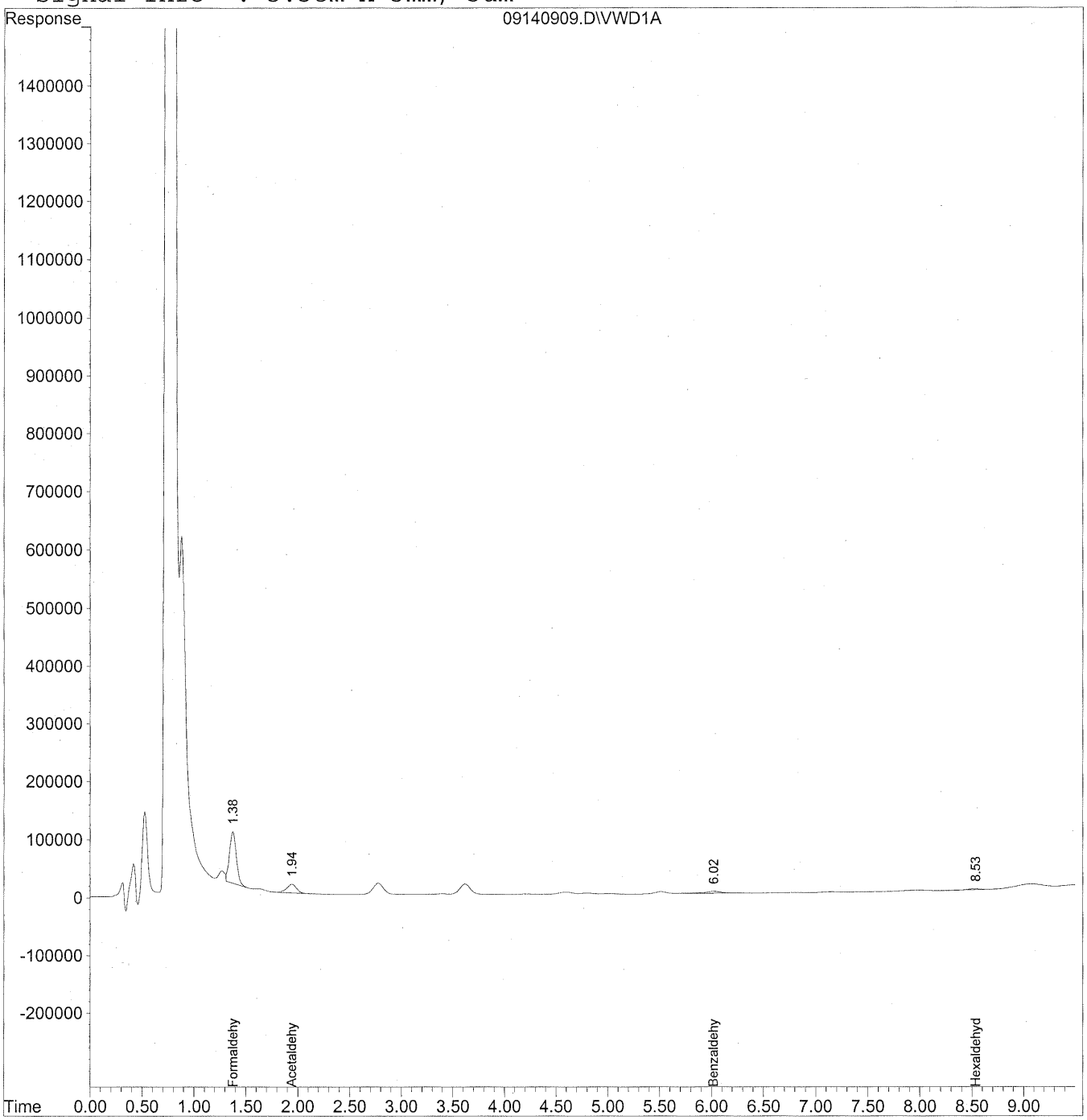
Verified By: _____ Date: 9/16/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140909.D Vial: 105
Acq On : 14-Sep-2009, 10:44 Operator: MD
Sample : P0903011-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:41 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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\2009_09\14\09140909.D Vial: 105
Acq On : 14-Sep-2009, 10:44 Operator: MD
Sample : P0903011-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:41 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

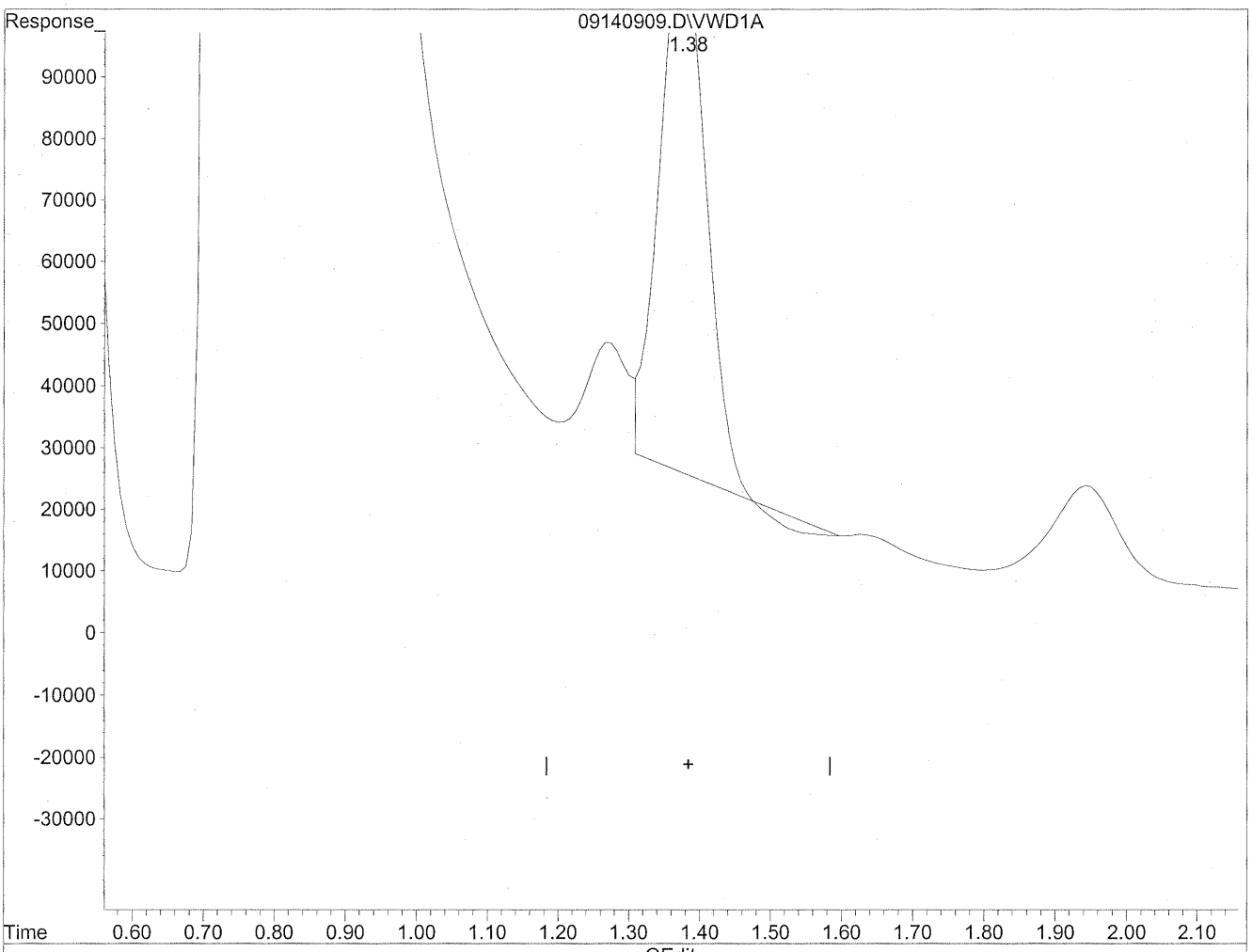
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.38	4012071	449.007	ng/mlm
2)	Acetaldehyde	1.94	963509	148.214	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	6.02	418547	153.405	ng/mlm
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	8.54	98649	33.319	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140909.D Vial: 105
Acq On : 14-Sep-2009, 10:44 Operator: MD
Sample : P0903011-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:45 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(1) Formaldehyde

1.38min 435.562ng/ml

response 3891934

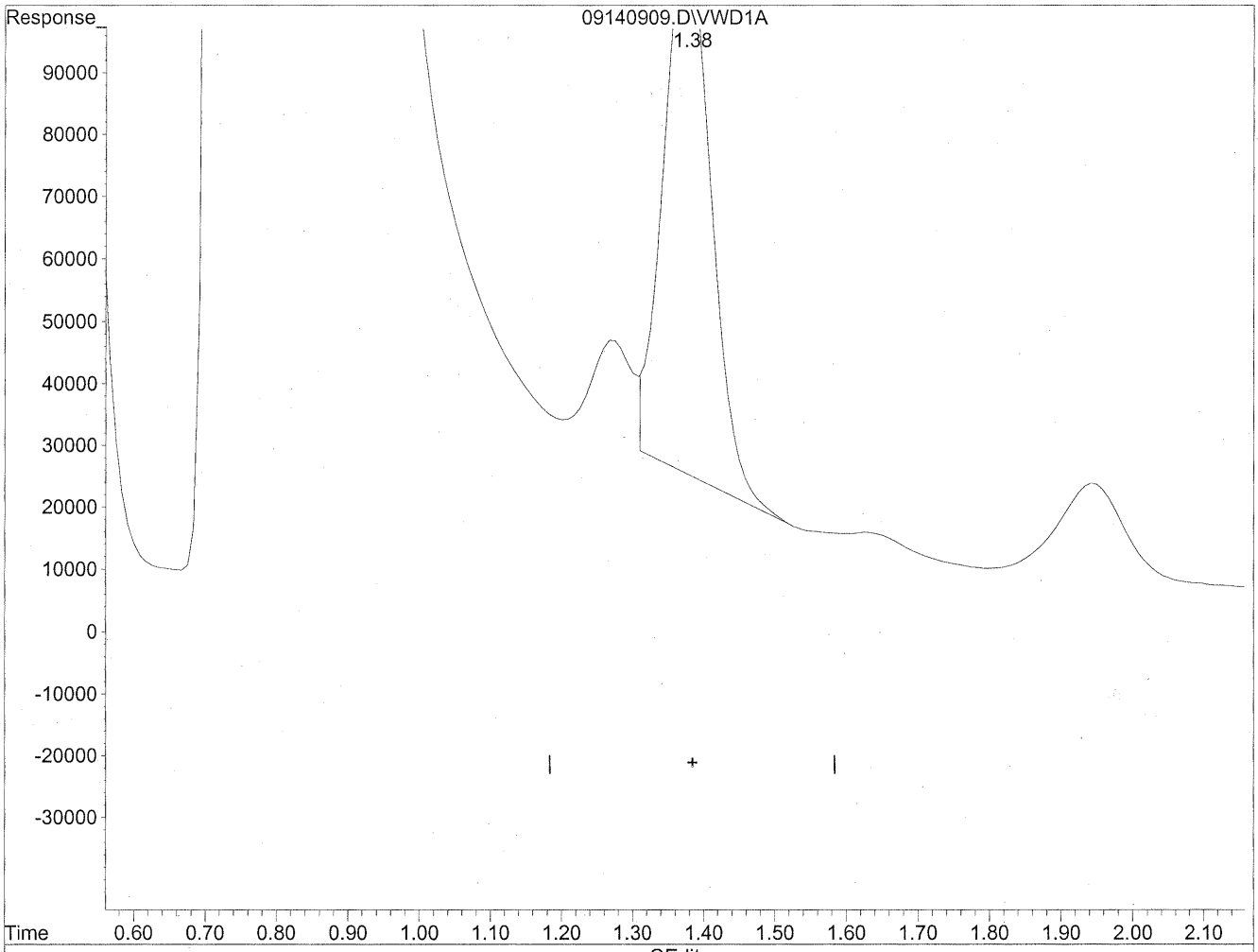
(+) = Expected Retention Time

09140909.D TO110909.M Tue Sep 15 10:41:27 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140909.D Vial: 105
Acq On : 14-Sep-2009, 10:44 Operator: MD
Sample : P0903011-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:45 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(1) Formaldehyde

1.38min 449.007ng/ml m

response 4012071

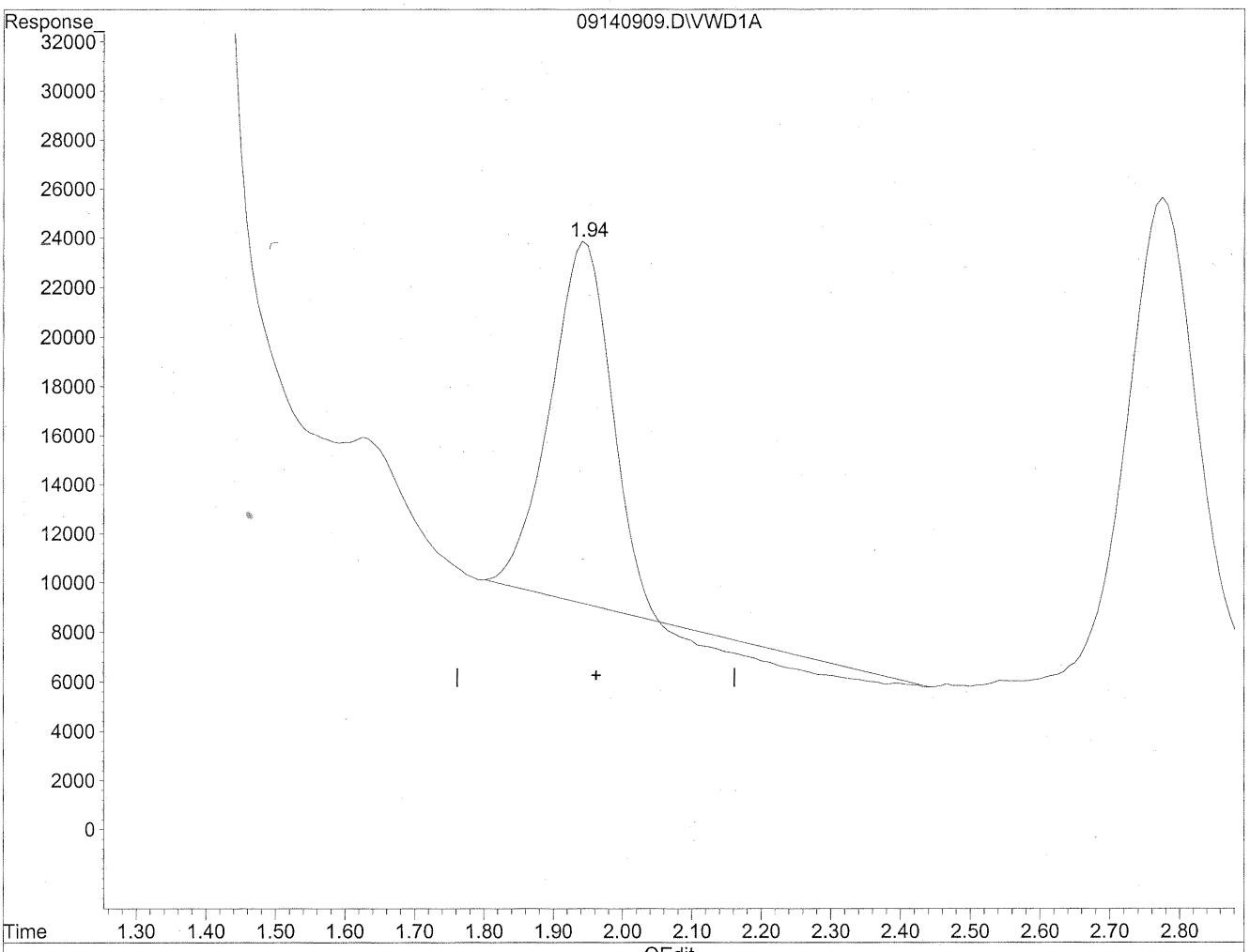
9/15/09 tle 09/15/09

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140909.D Vial: 105
Acq On : 14-Sep-2009, 10:44 Operator: MD
Sample : P0903011-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:45 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.95min 126.569ng/ml

response 822798

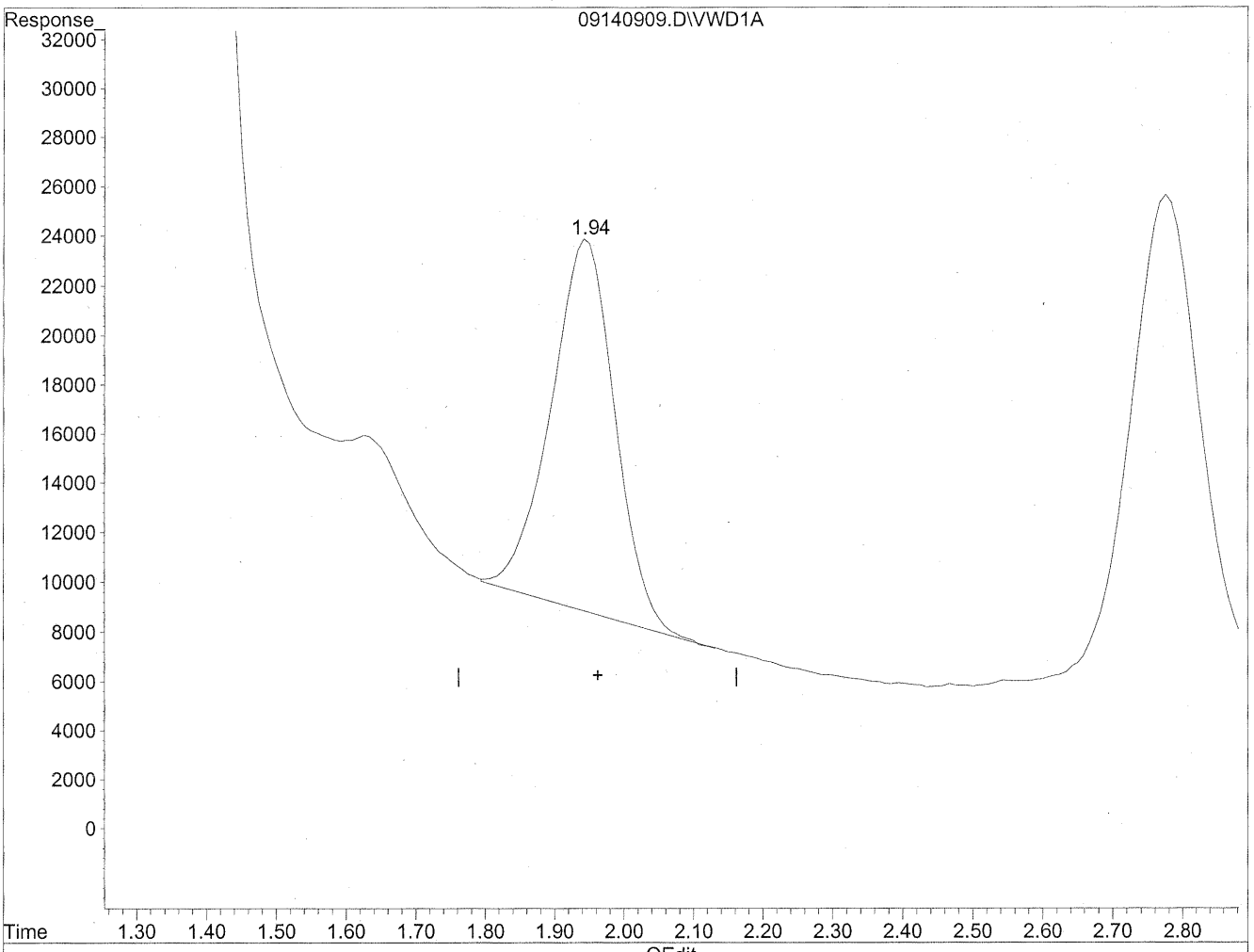
(+) = Expected Retention Time

09140909.D TO110909.M Tue Sep 15 09:45:09 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140909.D Vial: 105
Acq On : 14-Sep-2009, 10:44 Operator: MD
Sample : P0903011-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:45 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.94min 148.214ng/ml m

response 963509

9/15/09 TC 9/15/09

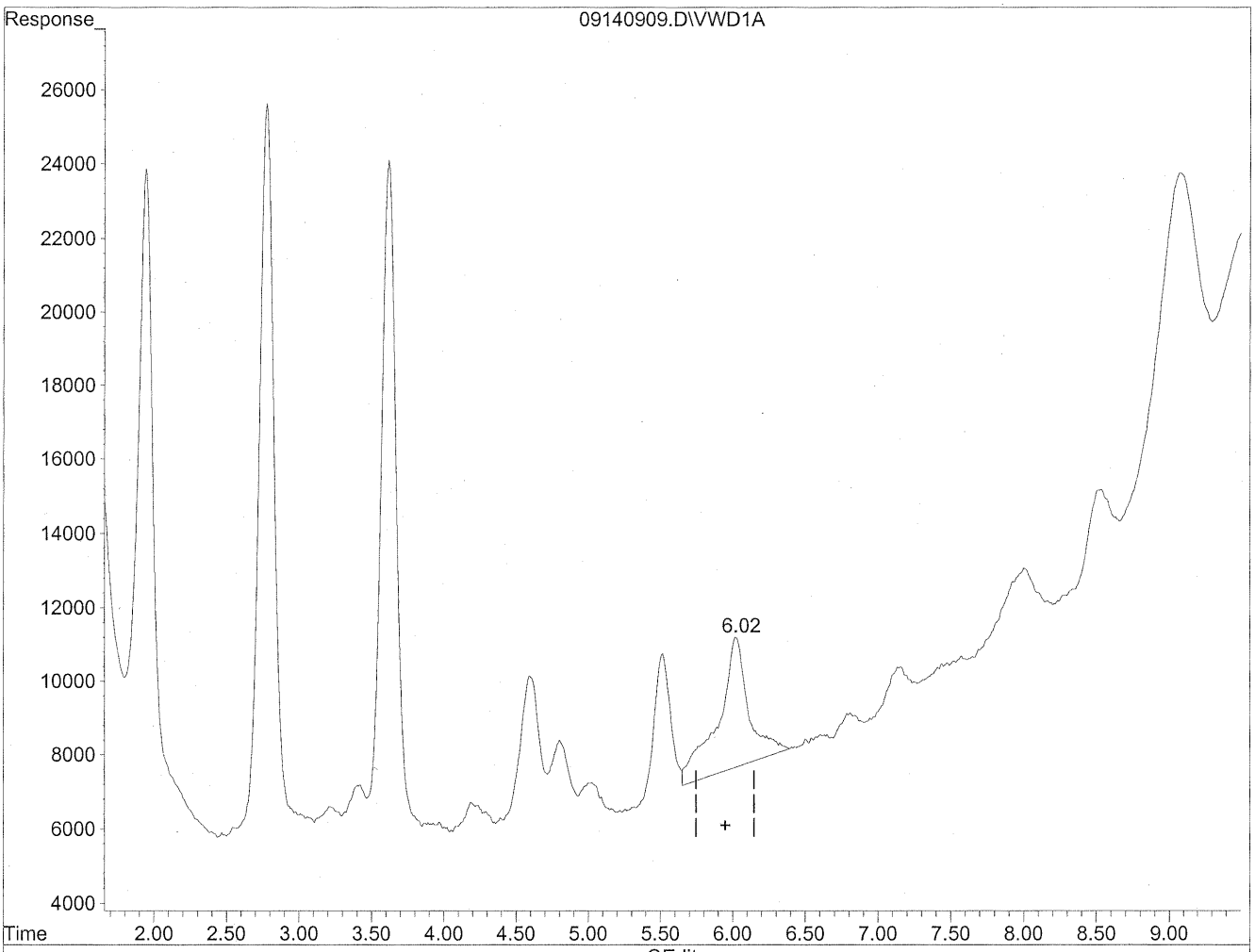
(+) = Expected Retention Time

09140909.D TO110909.M Tue Sep 15 09:45:15 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140909.D Vial: 105
Acq On : 14-Sep-2009, 10:44 Operator: MD
Sample : P0903011-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:45 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

6.02min 189.136ng/ml

response 516035

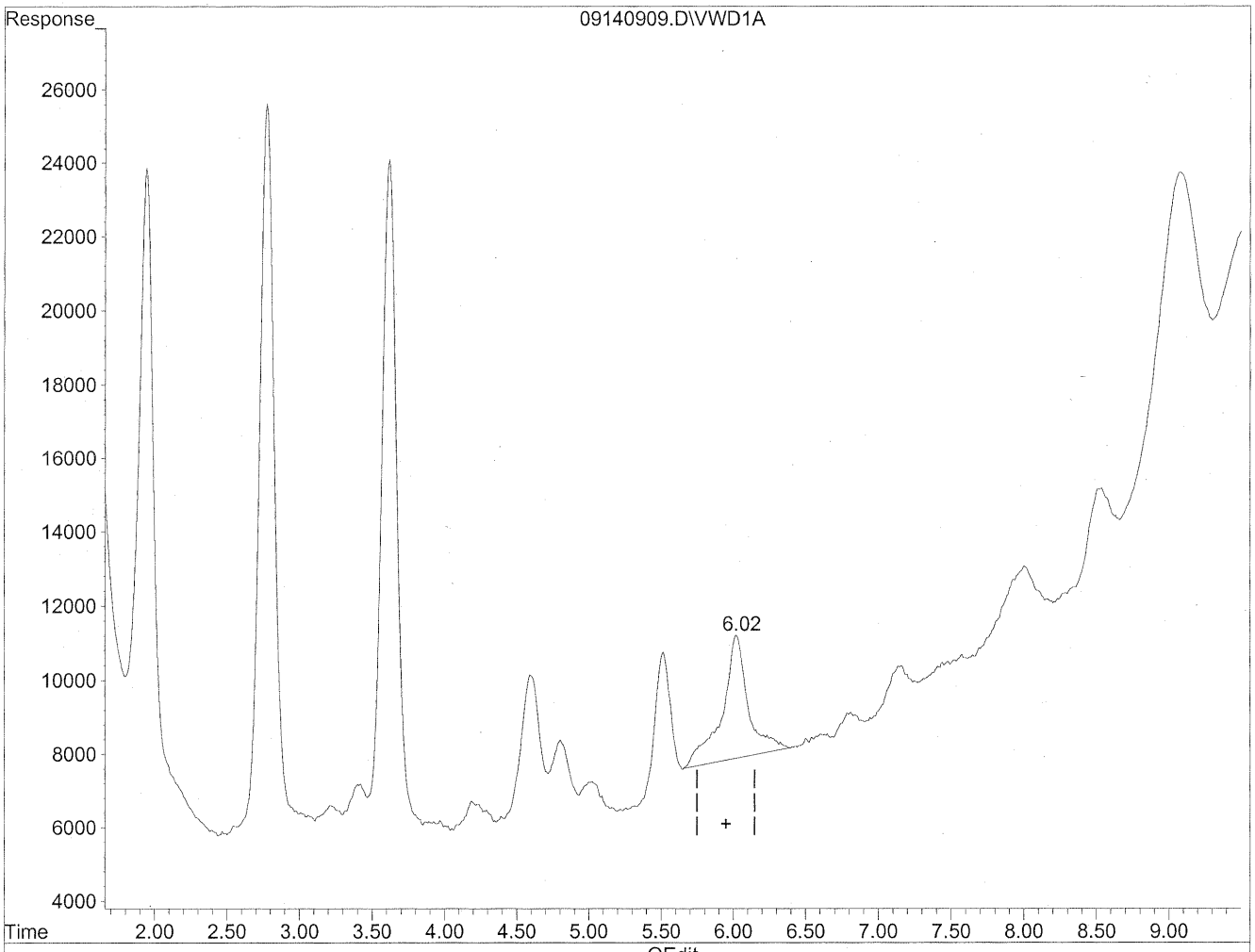
(+) = Expected Retention Time

09140909.D TO110909.M Tue Sep 15 09:45:38 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140909.D Vial: 105
Acq On : 14-Sep-2009, 10:44 Operator: MD
Sample : P0903011-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:45 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

6.02min 153.405ng/ml m

response 418547

9/15/09 TC

TC 9/15/09

42

(+) = Expected Retention Time

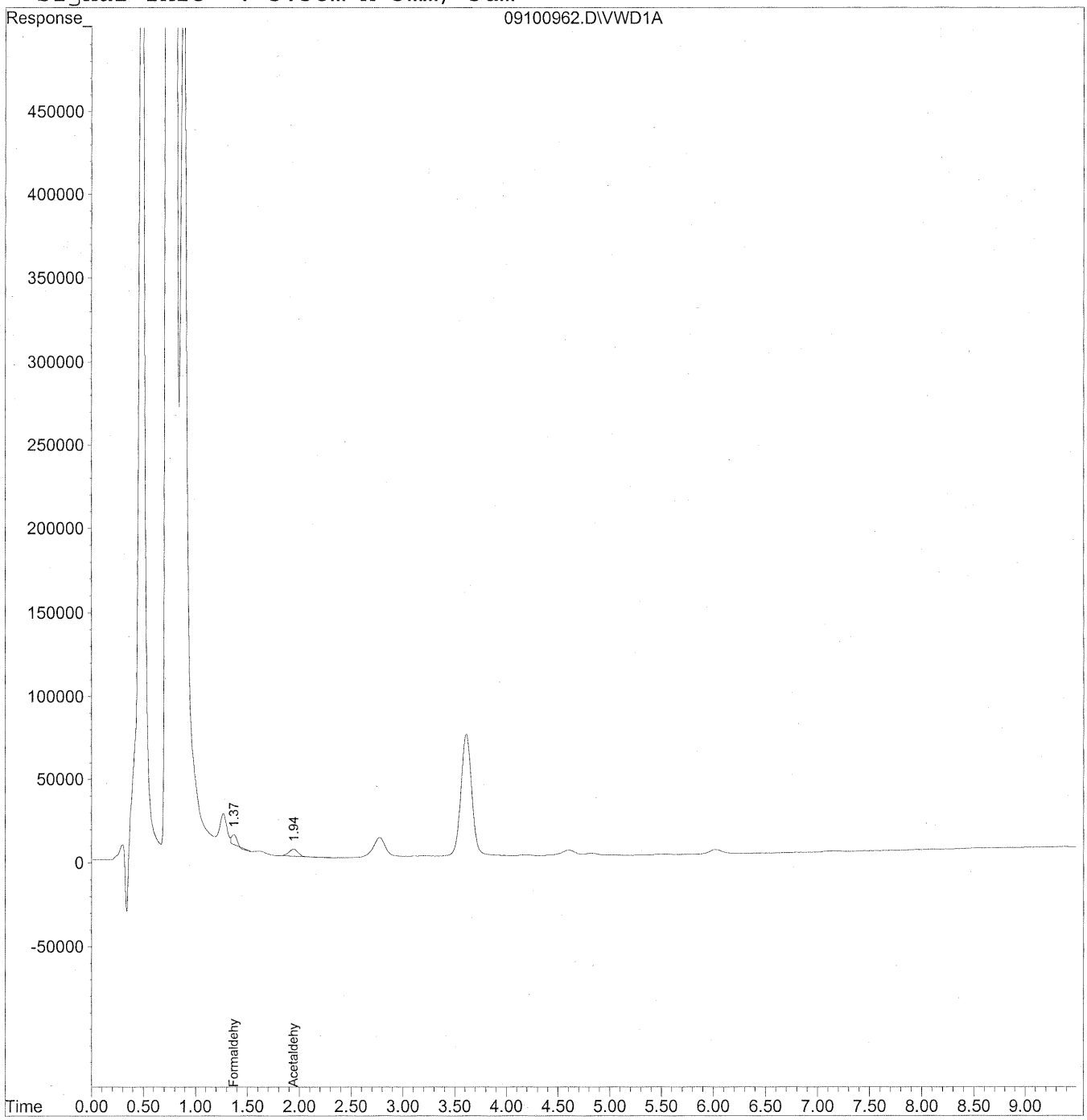
09140909.D TO110909.M Tue Sep 15 09:45:49 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100962.D Vial: 135
Acq On : 11-Sep-2009, 13:53 Operator: MD
Sample : P0903011-003 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:51 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100962.D Vial: 135
Acq On : 11-Sep-2009, 13:53 Operator: MD
Sample : P0903011-003 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:51 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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	1.37	193307	21.634	ng/ml
2)	Acetaldehyde	1.95	257745	39.648	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

(f)=RT Delta > 1/2 Window (m)=manual int.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103557**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-004

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: 107.6 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**13,000**	**120**	0.93	**95**	0.76	
75-07-0	**Acetaldehyde**	**4,400**	**41**	0.93	**23**	0.52	**BT**
123-38-6	**Propionaldehyde**	**460**	**4.3**	0.93	**1.8**	0.39	
4170-30-3	Crotonaldehyde, Total	< 100	ND	0.93	ND	0.32	
123-72-8	**Butyraldehyde**	**360**	**3.3**	0.93	**1.1**	0.32	
100-52-7	**Benzaldehyde**	**770**	**7.2**	0.93	**1.7**	0.21	
590-86-3	**Isovaleraldehyde**	**220**	**2.1**	0.93	**0.59**	0.26	
110-62-3	**Valeraldehyde**	**1,100**	**10**	0.93	**2.9**	0.26	
529-20-4	o-Tolualdehyde	< 100	ND	0.93	ND	0.19	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	1.9	ND	0.38	
66-25-1	**n-Hexaldehyde**	**4,500**	**42**	0.93	**10**	0.23	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	0.93	ND	0.17	

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.
BT = Results indicated possible breakthrough; back section > 10% front section.

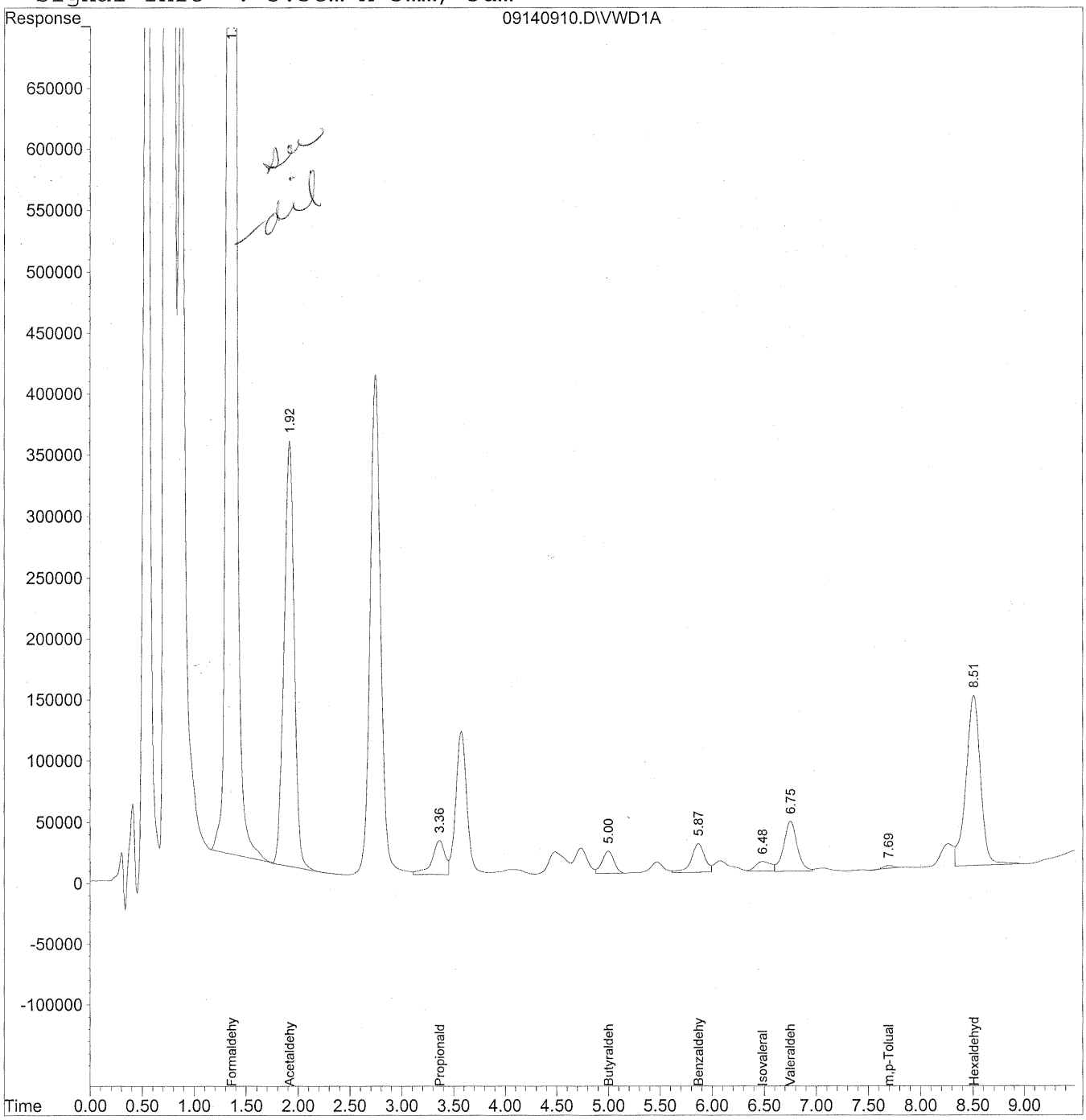
Verified By: _____ Date: 9/16/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140910.D Vial: 106
Acq On : 14-Sep-2009, 10:57 Operator: MD
Sample : P0903011-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:58 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140910.D Vial: 106
Acq On : 14-Sep-2009, 10:57 Operator: MD
Sample : P0903011-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:58 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

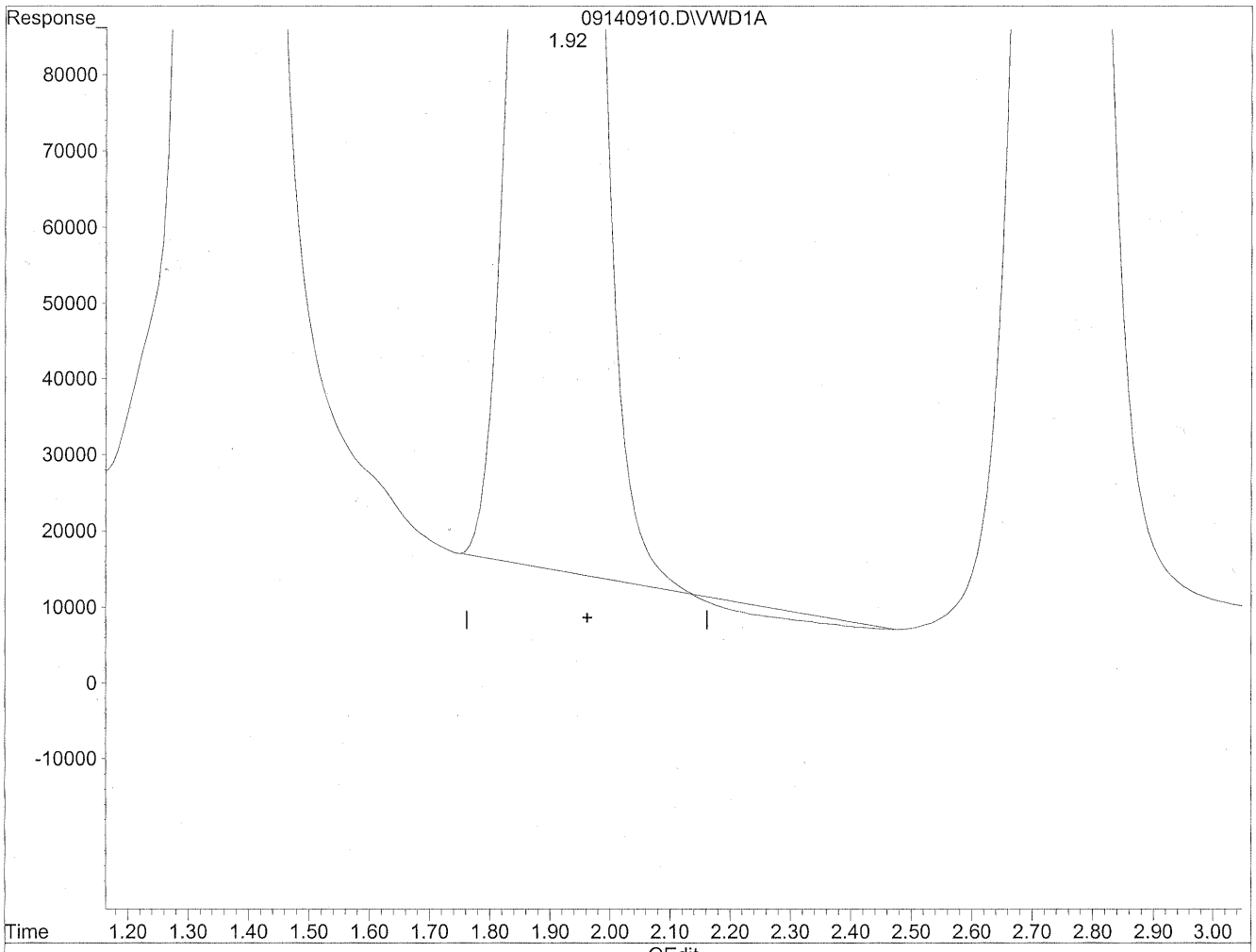
	Compound	R.T.	Response	Conc	Units	
Target Compounds						
1)	Formaldehyde	1.36	112348410	~~12573.362~~	~~ng/ml~~	See add
2)	Acetaldehyde	1.92	23605219	3631.127	ng/mlm	
3)	Propionaldehyde	3.37	2416272	464.862	ng/ml	
4)	Crotonaldehyde	0.00	0	N.D.	ng/mld	
5)	Butyraldehyde	5.00	1444660	356.462	ng/ml	
6)	Benzaldehyde	5.87	2103259	770.883	ng/ml	
7)	Isovaleraldehyde	6.48	766226	222.624	ng/mlm	
8)	Valeraldehyde	6.75	3696391	1087.289	ng/ml	
9)	o-Tolualdehyde	0.00	0	N.D.	ng/ml	
10)	m,p-Tolualdehyde	7.70f	99419	43.284	ng/ml	
11)	Hexaldehyde	8.51	13364926	4514.073	ng/ml	
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml	

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140910.D Vial: 106
Acq On : 14-Sep-2009, 10:57 Operator: MD
Sample : P0903011-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:54 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.92min 3576.292ng/ml

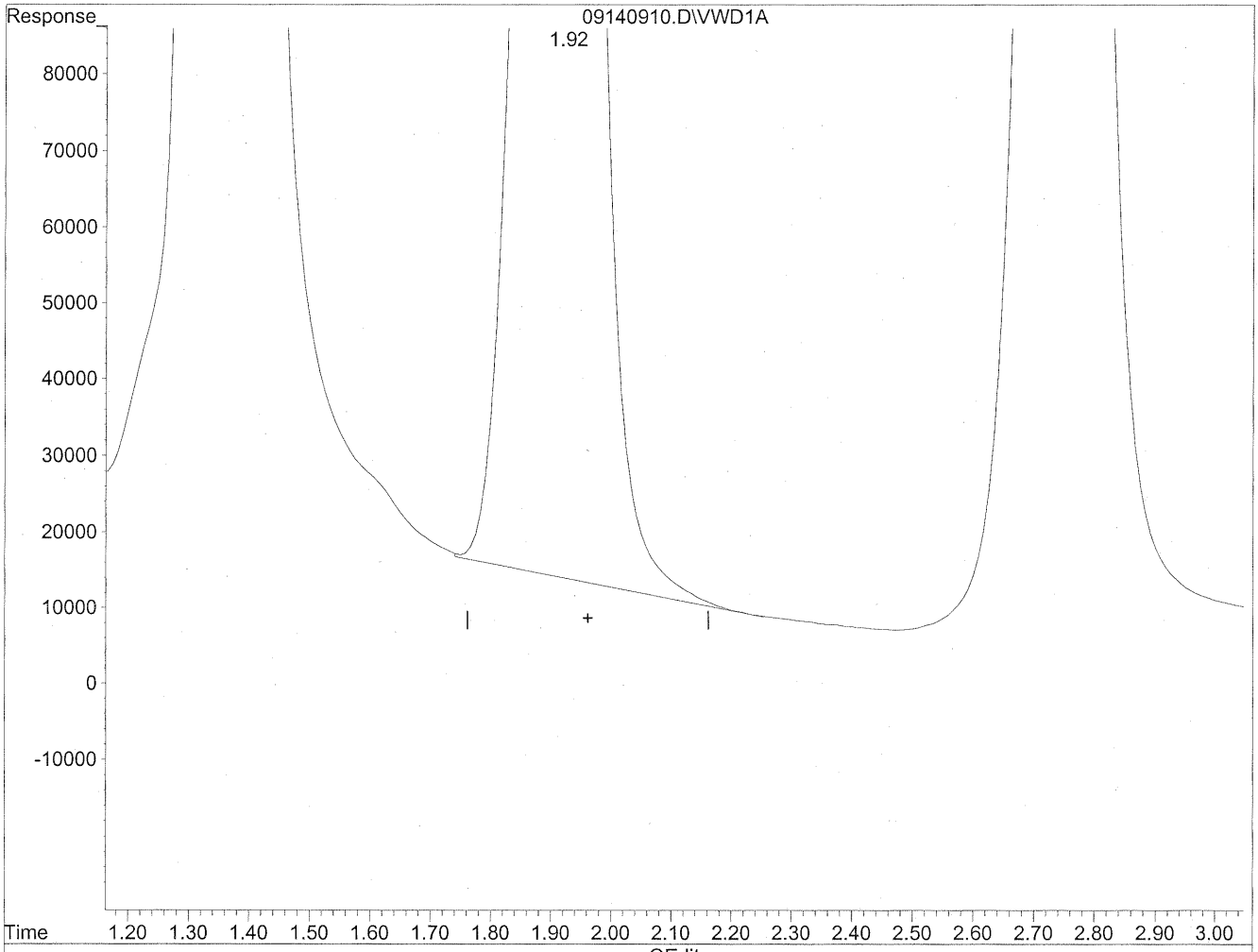
response 23248748

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140910.D Vial: 106
Acq On : 14-Sep-2009, 10:57 Operator: MD
Sample : P0903011-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:54 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.92min 3631.127ng/ml m

response 23605219

9/15/09 pc

tc 9/15/09

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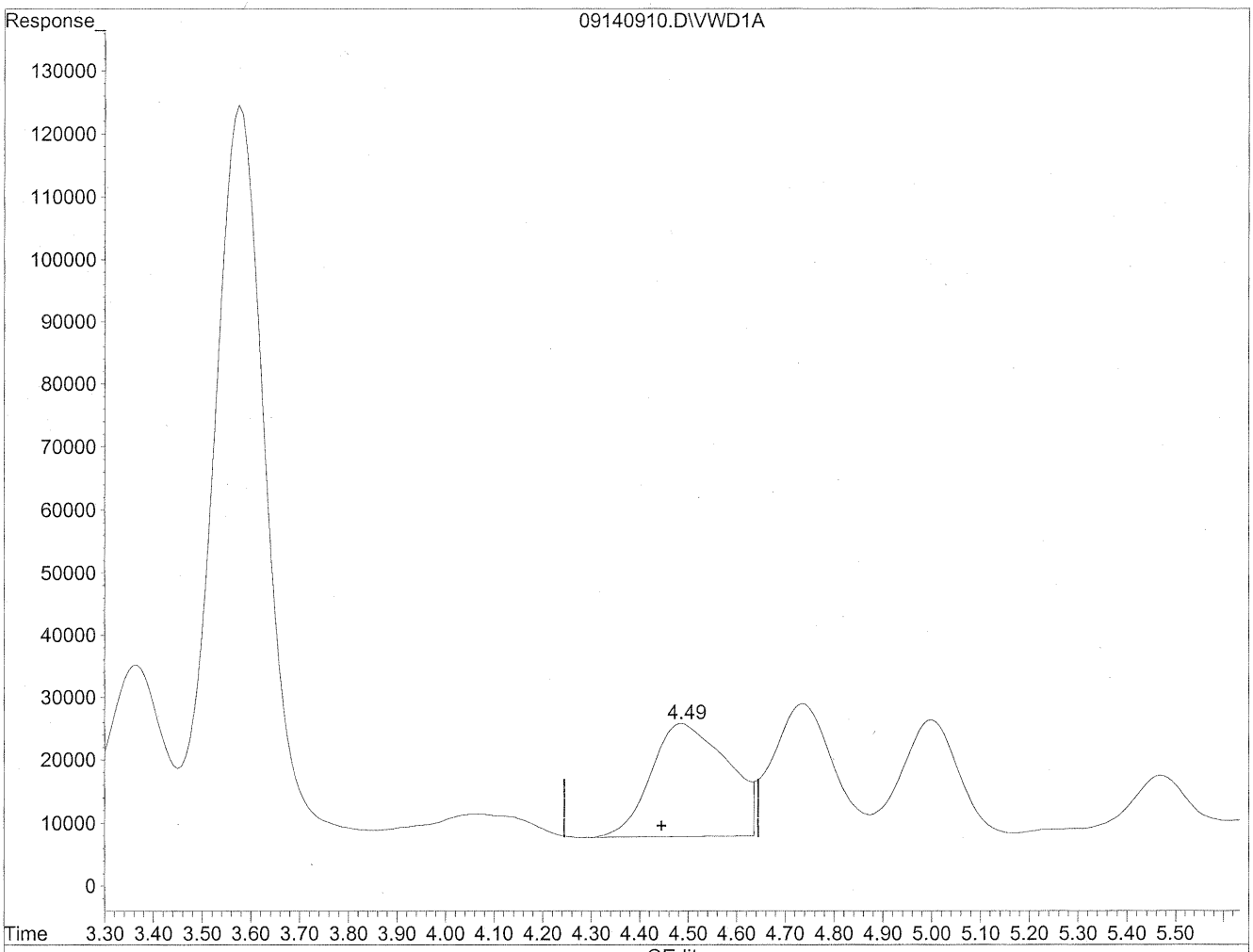
(+) = Expected Retention Time
09140910.D TO110909.M Tue Sep 15 09:54:51 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140910.D Vial: 106
Acq On : 14-Sep-2009, 10:57 Operator: MD
Sample : P0903011-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:54 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

4.49min 481.420ng/ml

response 1954360

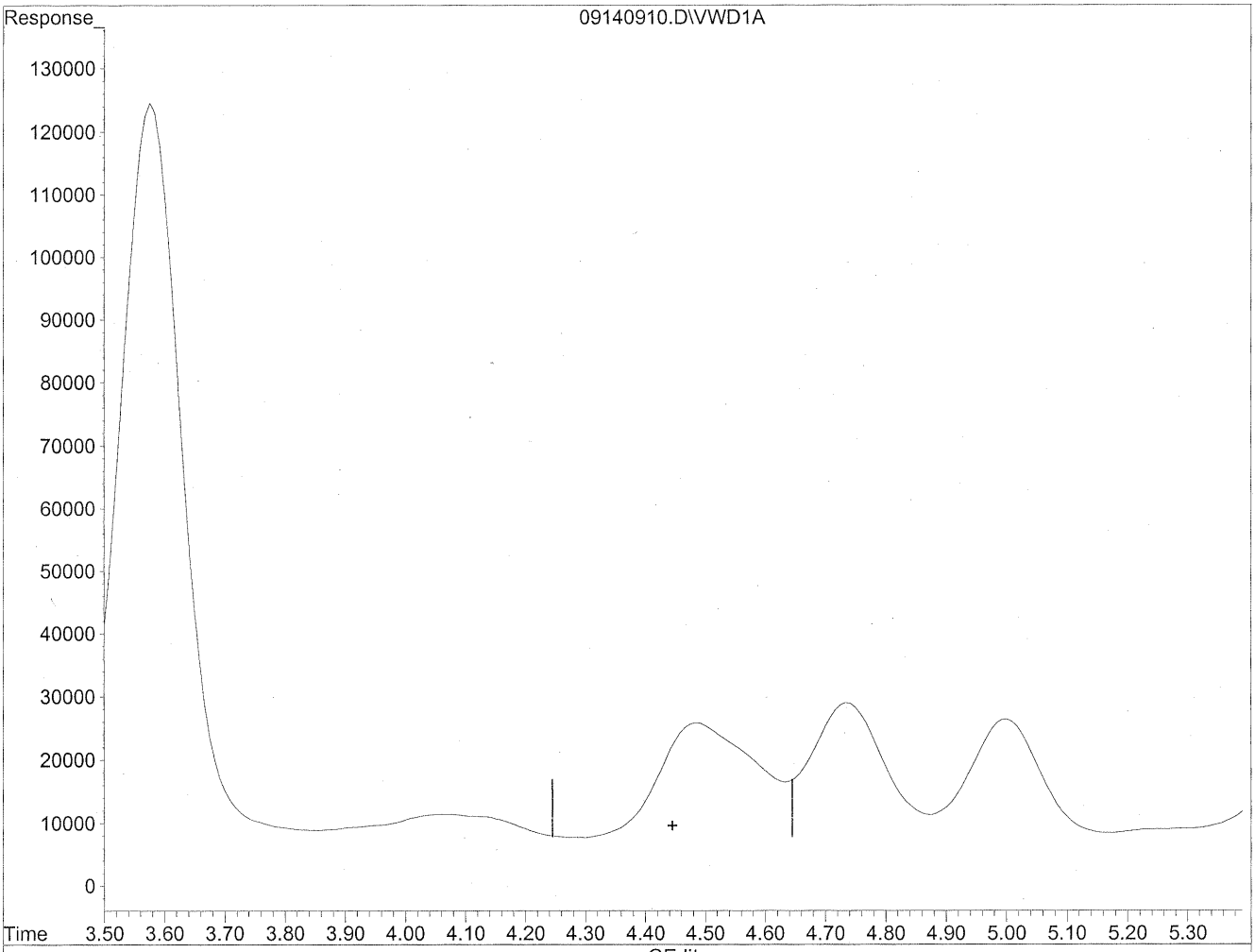
(+) = Expected Retention Time

09140910.D TO110909.M Tue Sep 15 09:57:38 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140910.D Vial: 106
Acq On : 14-Sep-2009, 10:57 Operator: MD
Sample : P0903011-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:54 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

0.00min 0.000ng/ml d

response 0

HC 9/15/09

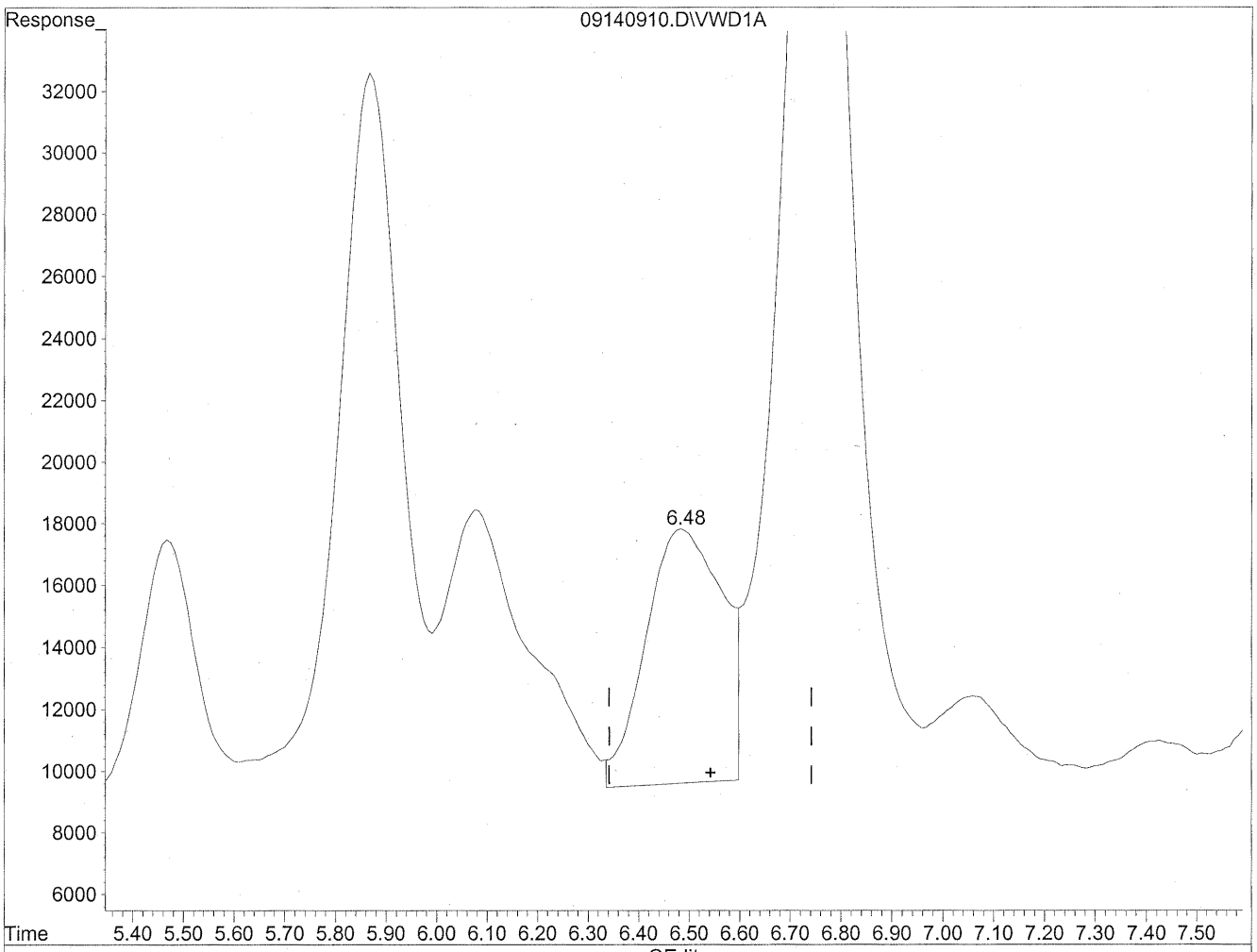
9/15/09 mp (RT)

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140910.D Vial: 106
Acq On : 14-Sep-2009, 10:57 Operator: MD
Sample : P0903011-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:54 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.49min 249.207ng/ml

response 857716

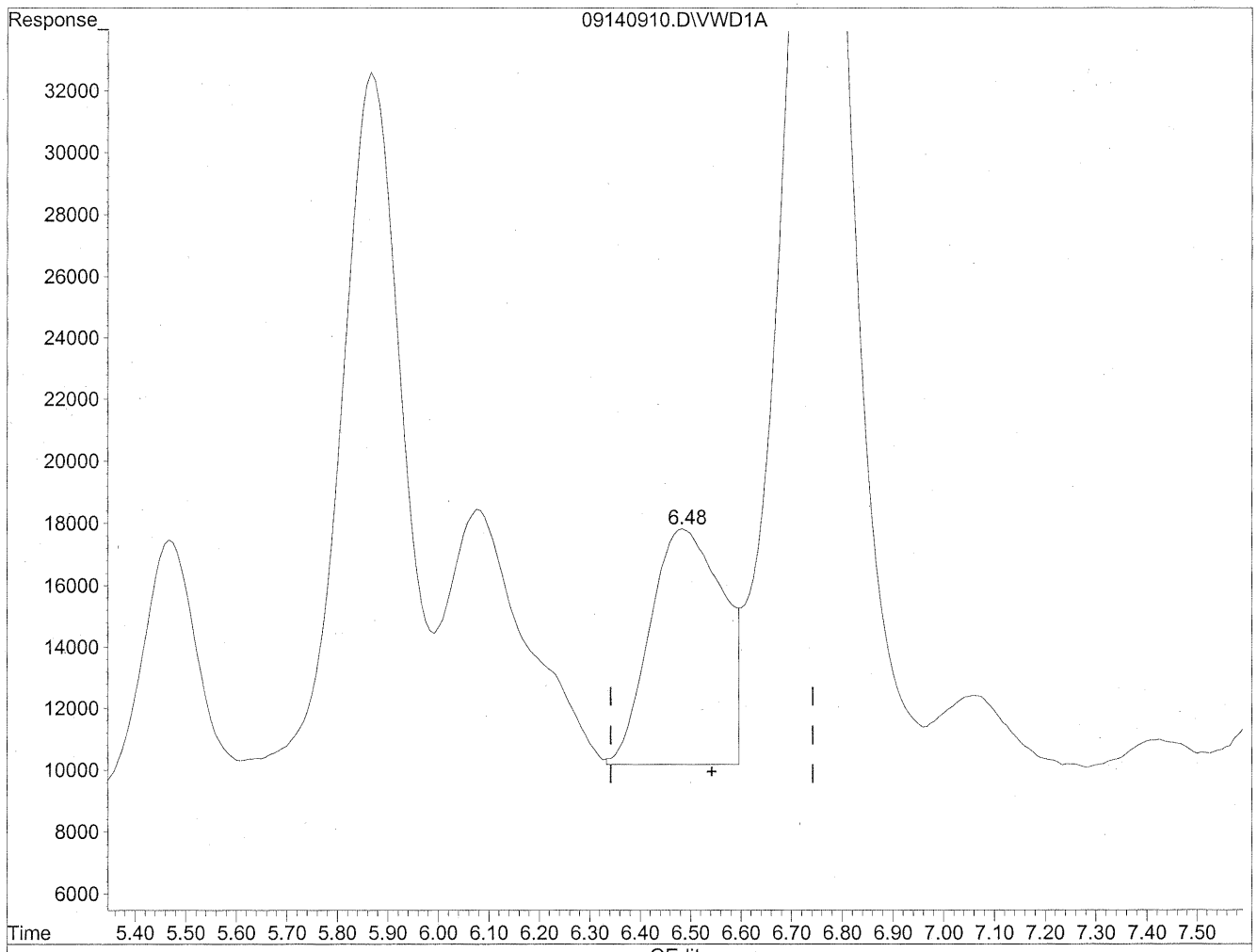
(+) = Expected Retention Time

09140910.D TO110909.M Tue Sep 15 09:58:07 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140910.D Vial: 106
Acq On : 14-Sep-2009, 10:57 Operator: MD
Sample : P0903011-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:54 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



QEdit

(7) Isovaleraldehyde

6.48min 222.624ng/ml m

response 766226

9/15/09

9/15/09

(+) = Expected Retention Time

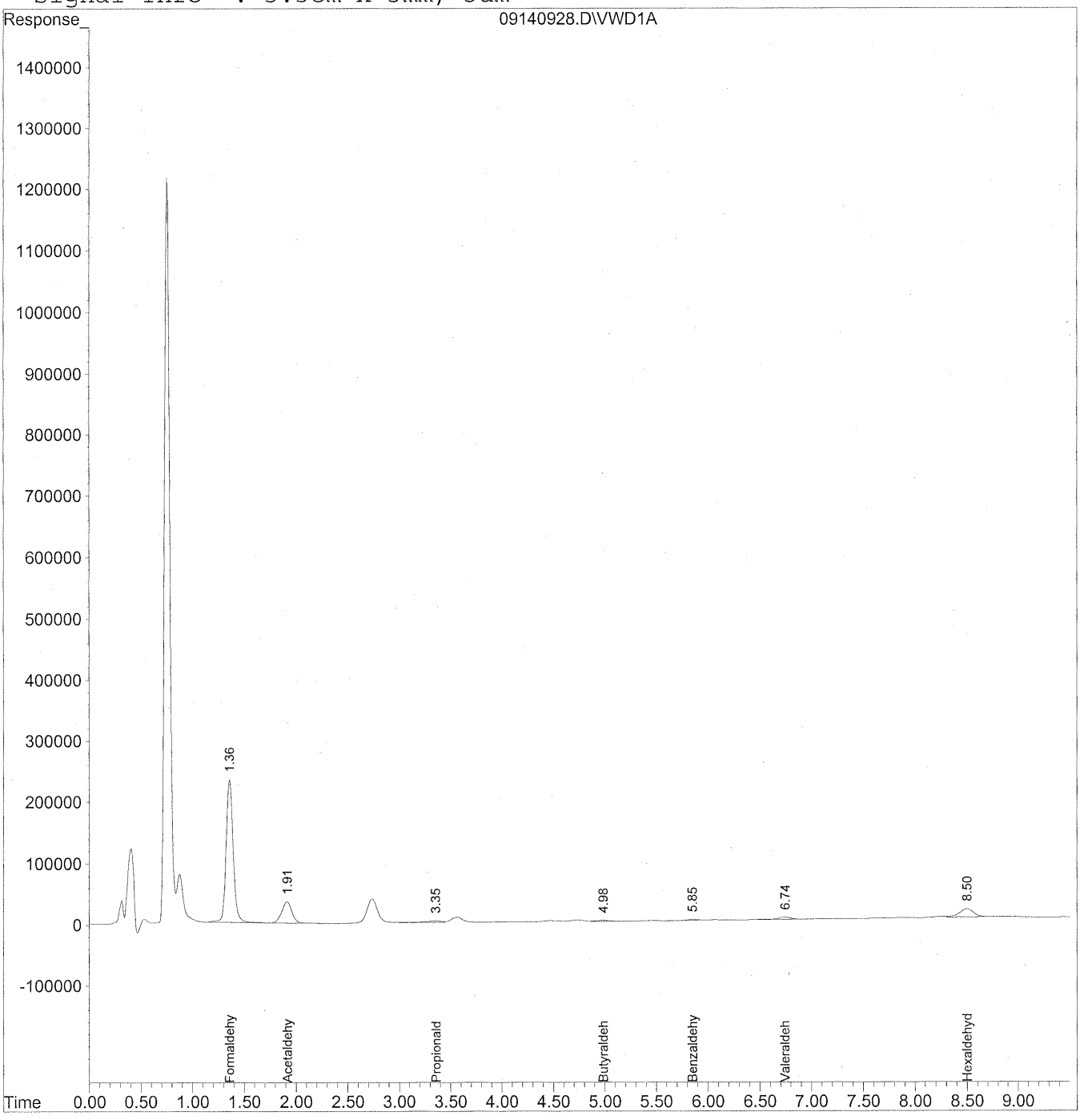
09140910.D TO110909.M Tue Sep 15 09:58:14 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140928.D Vial: 123
Acq On : 14-Sep-2009, 14:53 Operator: MD
Sample : P0903011-004 front 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:19 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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\2009_09\14\09140928.D Vial: 123
Acq On : 14-Sep-2009, 14:53 Operator: MD
Sample : P0903011-004 front 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:19 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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	1.36	11183501	1251.591	ng/ml
2)	Acetaldehyde	1.92	2364682	363.753	ng/ml
3)	Propionaldehyde	3.36	299851	57.688	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	4.99	140946	34.778	ng/ml
6)	Benzaldehyde	5.86	104316	38.234	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	6.75	356216	104.780	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	8.50	1279860	432.279	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

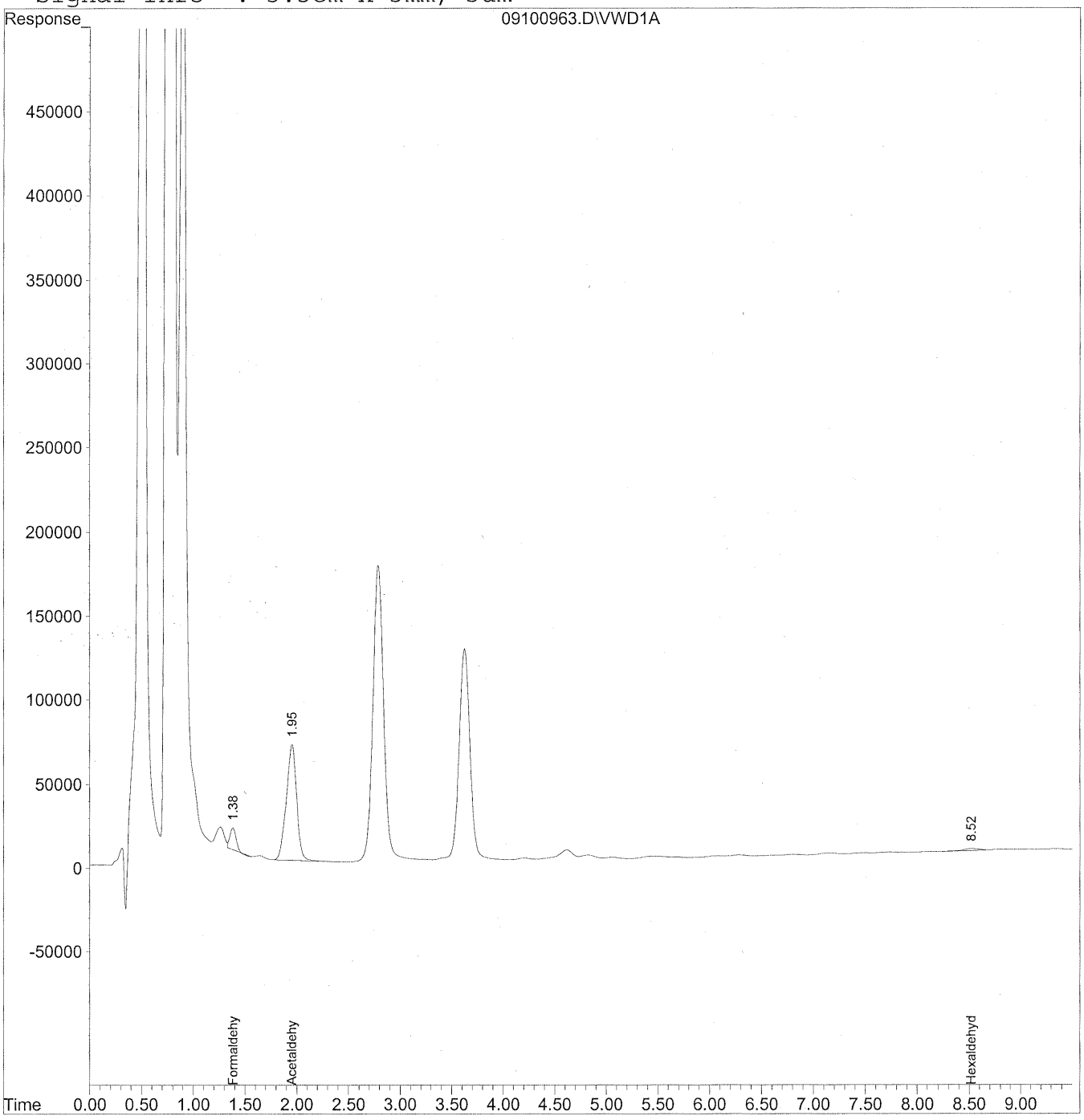
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100963.D Vial: 136
Acq On : 11-Sep-2009, 14:05 Operator: MD
Sample : P0903011-004 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:51 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100963.D Vial: 136
Acq On : 11-Sep-2009, 14:05 Operator: MD
Sample : P0903011-004 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:51 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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	1.39	529924	59.306	ng/ml
2)	Acetaldehyde	1.96	4792252	737.179	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	8.52	110782	37.417	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103558**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-005

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: 108.7 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**20,000**	**180**	0.92	**150**	0.75	
75-07-0	**Acetaldehyde**	**4,400**	**40**	0.92	**22**	0.51	**BT**
123-38-6	**Propionaldehyde**	**470**	**4.3**	0.92	**1.8**	0.39	
4170-30-3	Crotonaldehyde, Total	< 100	ND	0.92	ND	0.32	
123-72-8	**Butyraldehyde**	**430**	**3.9**	0.92	**1.3**	0.31	
100-52-7	**Benzaldehyde**	**960**	**8.8**	0.92	**2.0**	0.21	
590-86-3	**Isovaleraldehyde**	**280**	**2.6**	0.92	**0.74**	0.26	
110-62-3	**Valeraldehyde**	**1,300**	**12**	0.92	**3.4**	0.26	
529-20-4	o-Tolualdehyde	< 100	ND	0.92	ND	0.19	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	1.8	ND	0.37	
66-25-1	**n-Hexaldehyde**	**5,700**	**52**	0.92	**13**	0.22	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	0.92	ND	0.17	

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.
BT = Results indicated possible breakthrough; back section > 10% front section.

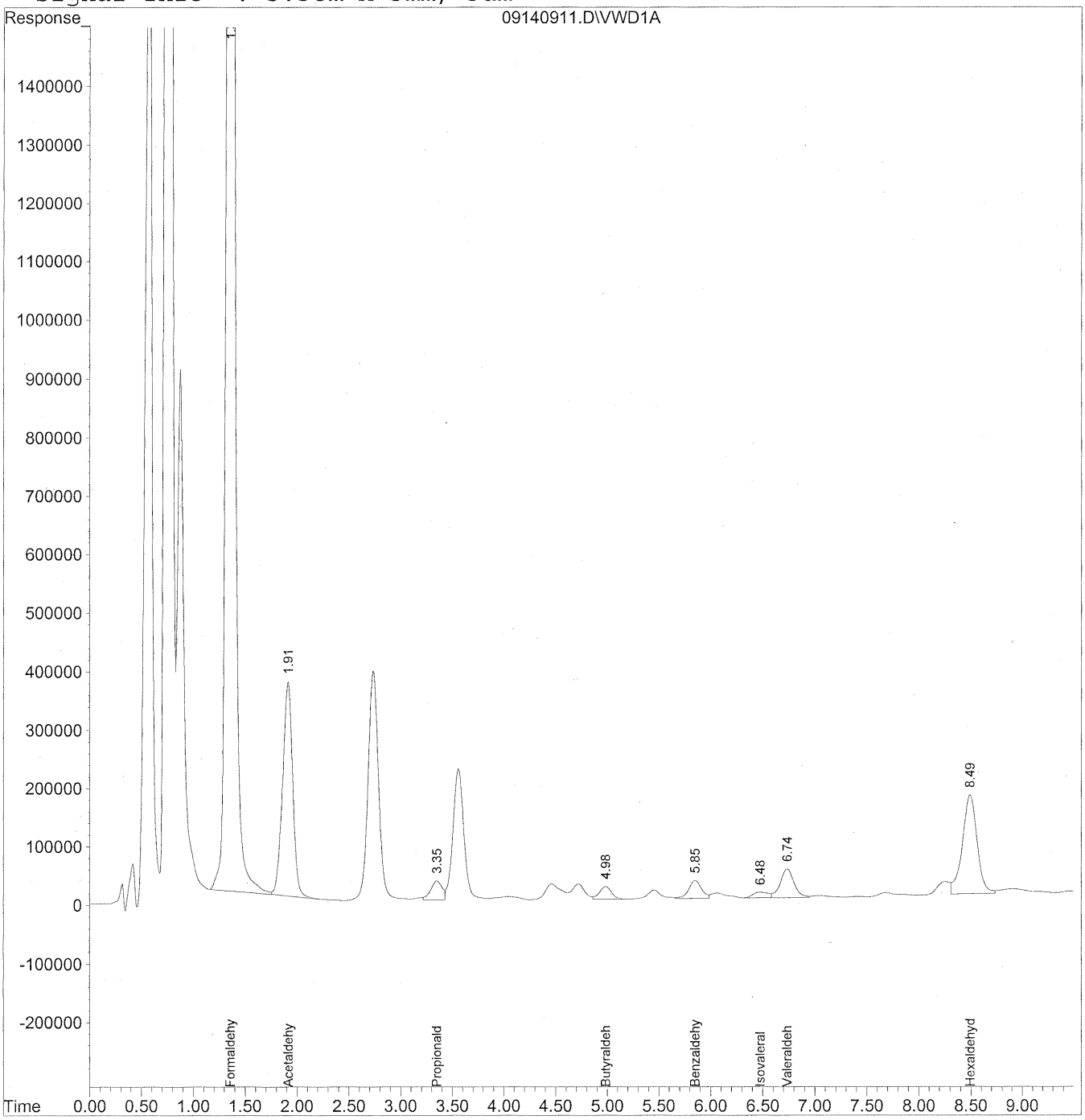
Verified By: _____ Date: 9/16/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 16 7:58 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 16 7:58 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

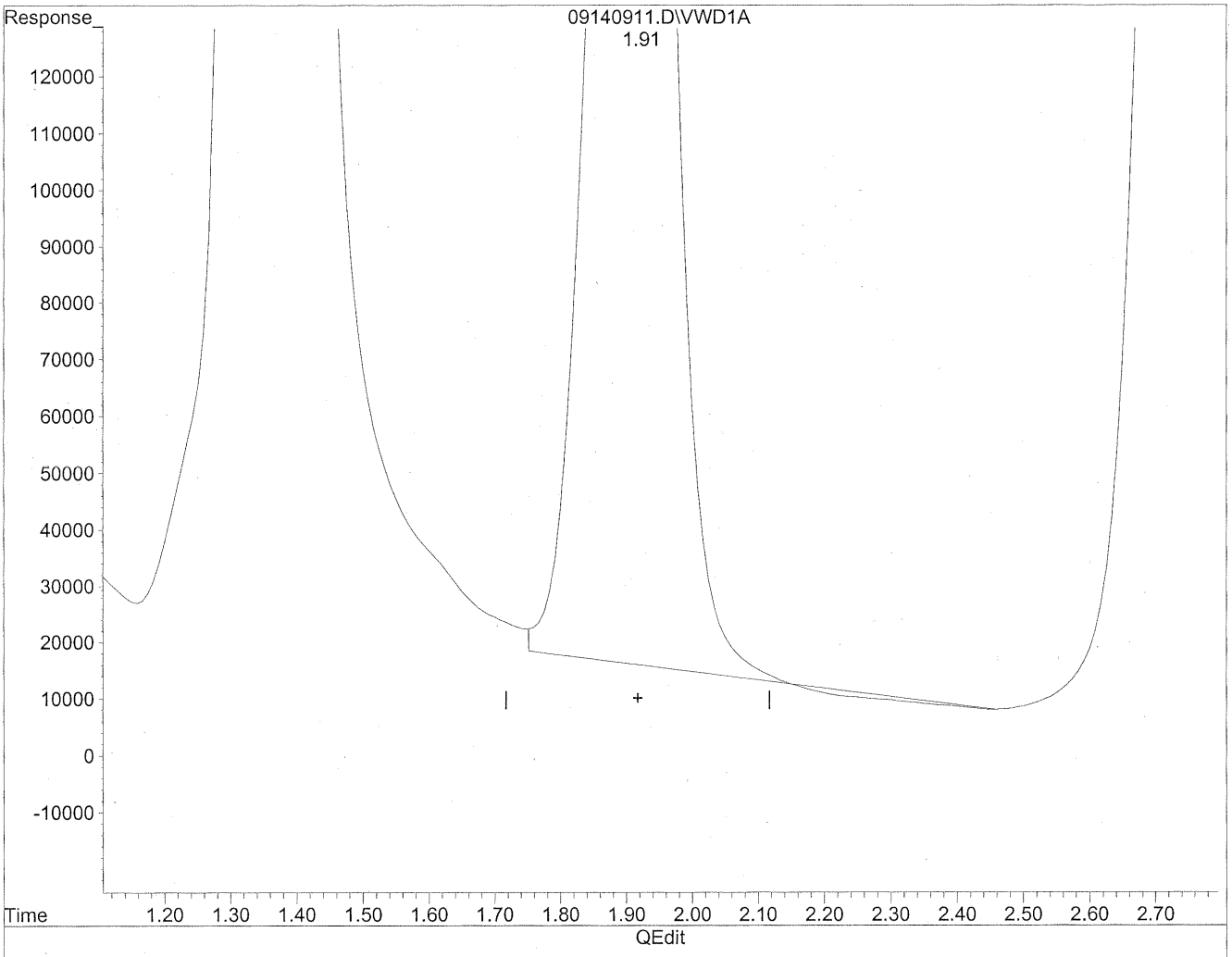
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.36	177579958	19873.687	ng/ml
2)	Acetaldehyde	1.91	25007752	3846.875	ng/mlm
3)	Propionaldehyde	3.35	2441119	469.642	ng/mlm
4)	Crotonaldehyde	0.00	0	N.D.	ng/mld
5)	Butyraldehyde	4.99	1737316	428.674	ng/ml
6)	Benzaldehyde	5.85	2605853	955.093	ng/ml
7)	Isovaleraldehyde	6.48	974235	283.061	ng/ml
8)	Valeraldehyde	6.74	4482089	1318.401	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	8.50	16747717	5656.628	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/mld

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.92min 3816.433ng/ml

response 24809858

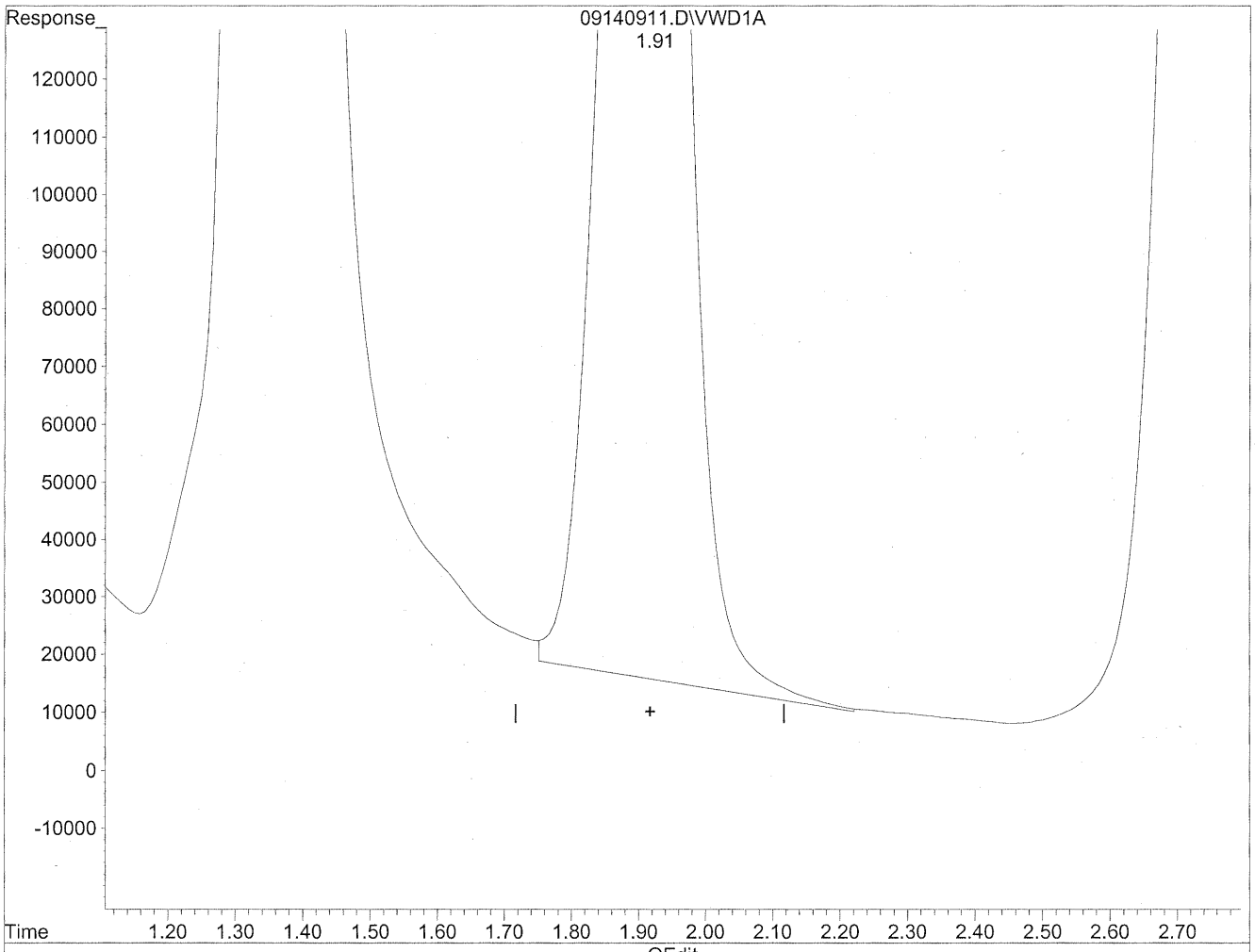
(+) = Expected Retention Time

09140911.D TO110909.M Tue Sep 15 09:58:49 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.91min 3846.875ng/ml m

response 25007752

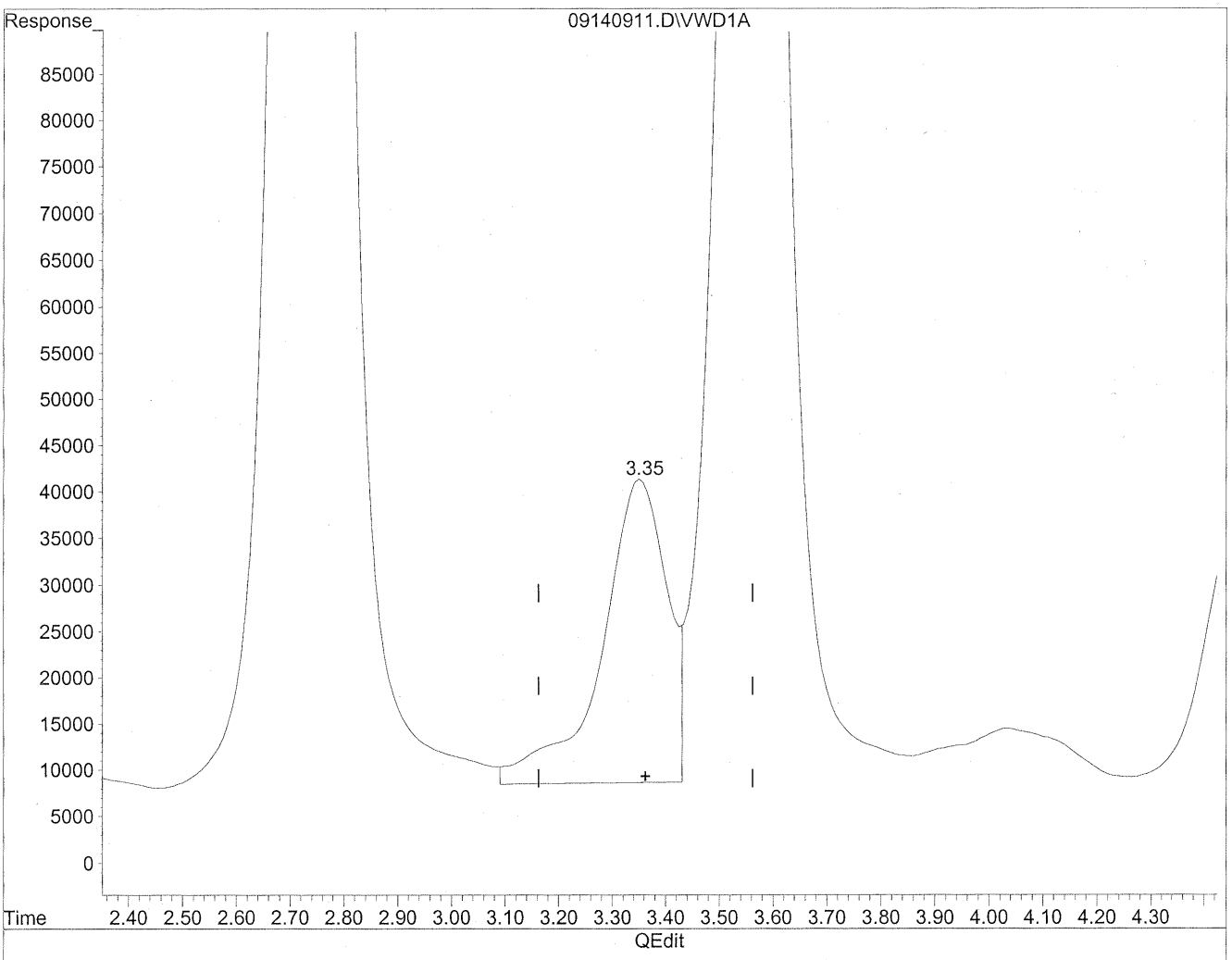
9/15/09

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.35min 529.666ng/ml

response 2753111

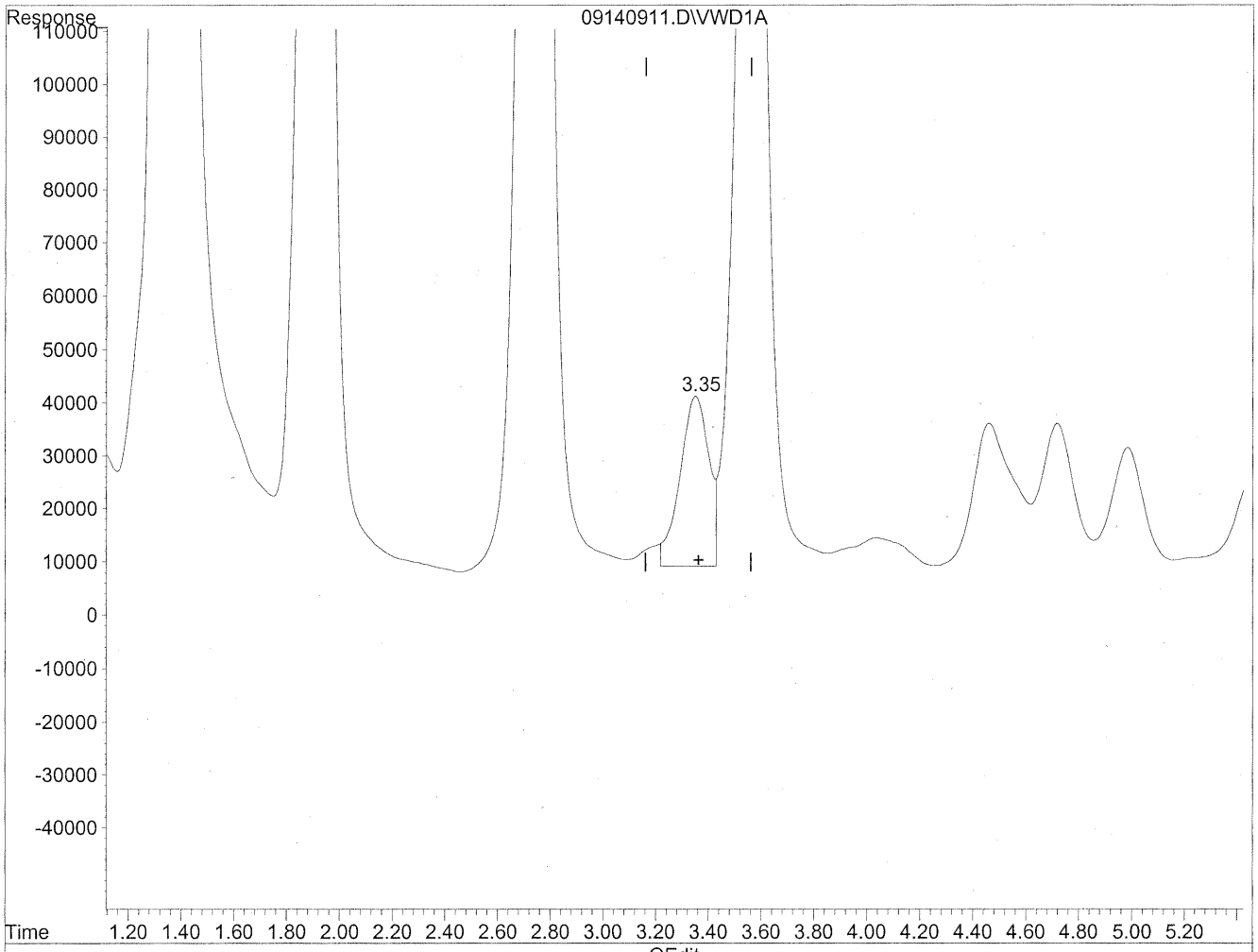
(+) = Expected Retention Time

09140911.D TO110909.M Tue Sep 15 09:59:00 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:00 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 11 13:54:46 2008
Response via : Multiple Level Calibration



QEdit

(3) Propionaldehyde

3.35min 469.642ng/ml m

response 2441119

9/15/09

9/15/09

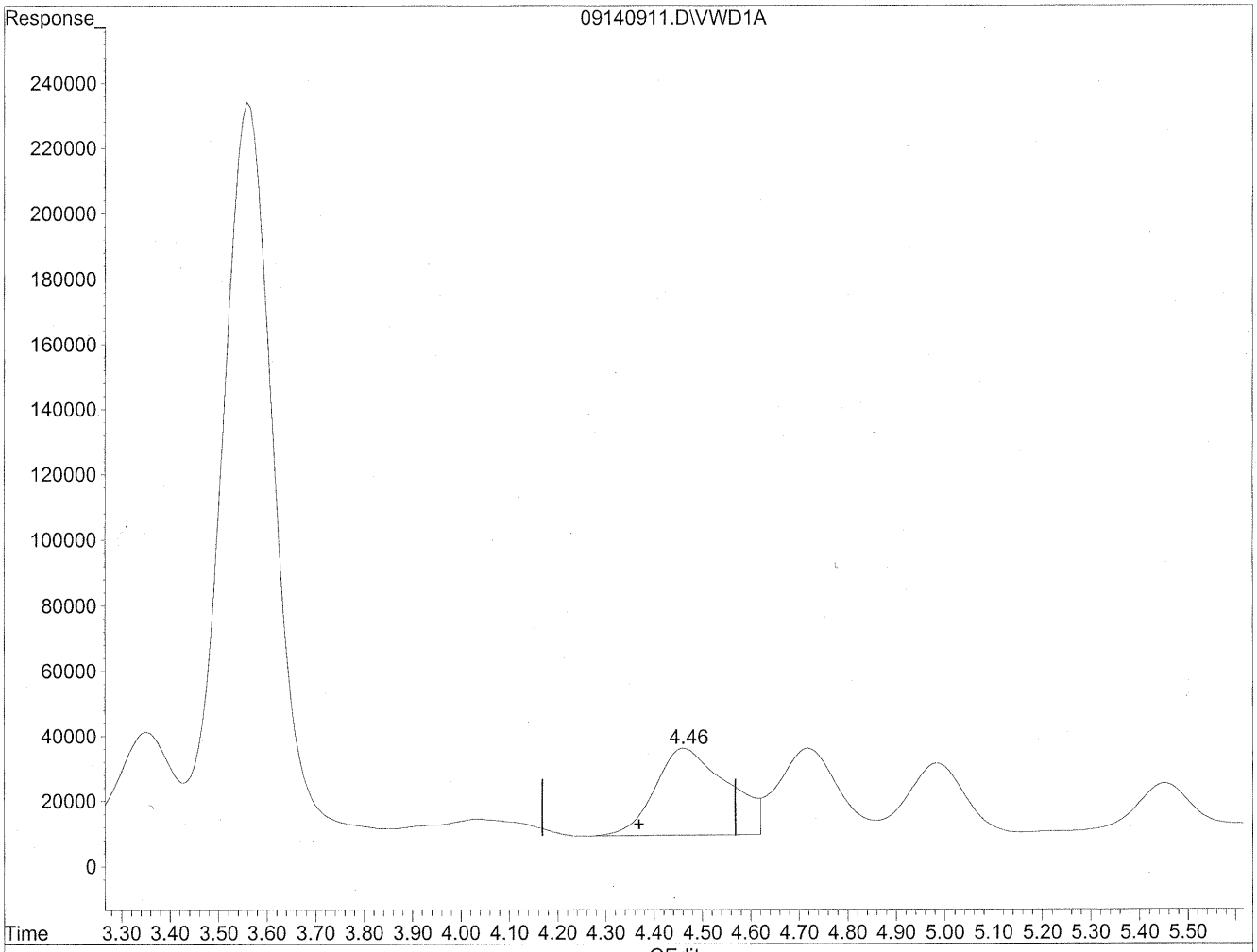
(+) = Expected Retention Time

09140911.D TO110909.M Wed Sep 16 07:58:45 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

4.46min 685.289ng/ml

response 2781980

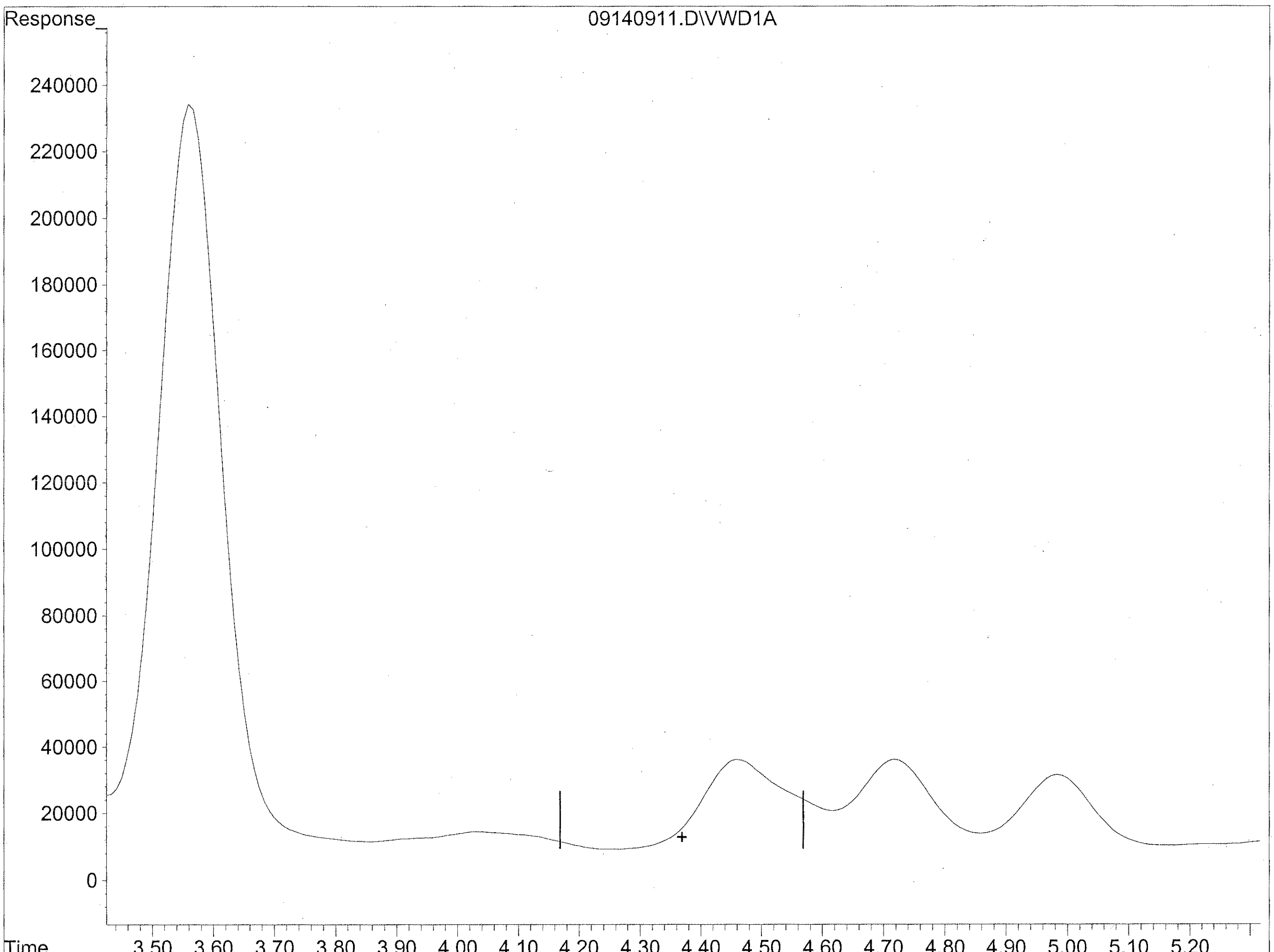
(+) = Expected Retention Time

09140911.D TO110909.M Tue Sep 15 09:59:19 2009

Quantitation Report

```
Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D      Vial: 107
Acq On    : 14-Sep-2009, 11:09                         Operator: MD
Sample    : P0903011-005 front 1.0ml                   Inst    : VWD
Misc      :                                            Multiplr: 1.00
IntFile   : events.e
Quant Time: Sep 15  9:58 19109  Quant Results File: TO110909.RES

Method        : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title         : LC-1050 TO-11A ICAL
Last Update   : Tue Sep 15 09:56:03 2009
Response via  : Multiple Level Calibration
```



QEdit

(4) Crotonaldehyde

0.00min 0.000ng/ml d

response 0

(m) 9/15/09 mp, RT
HC 9/15/09

66

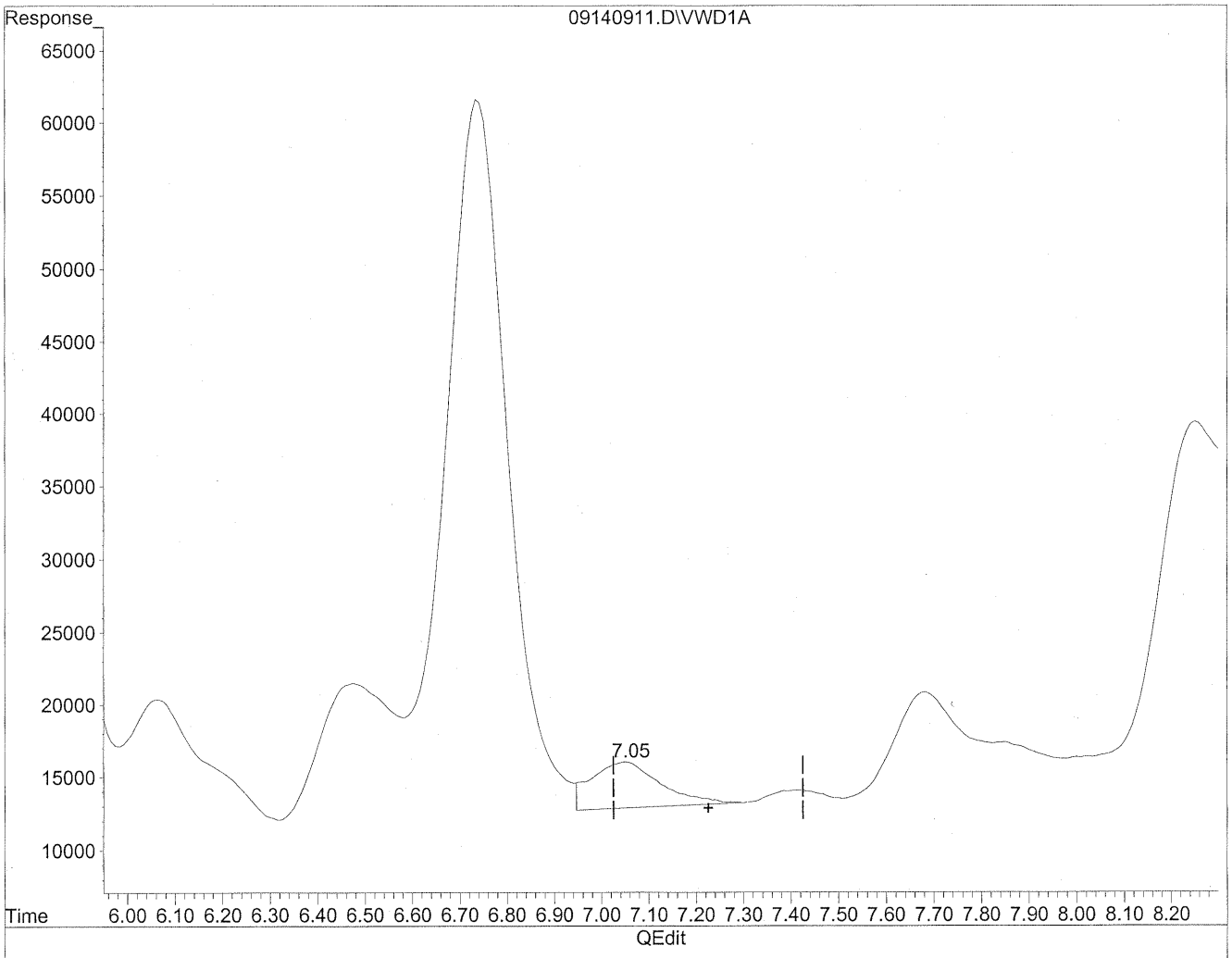
(+) = Expected Retention Time

09140911.D TO110909.M Tue Sep 15 09:59:22 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

7.05min 147.861ng/ml

response 324490

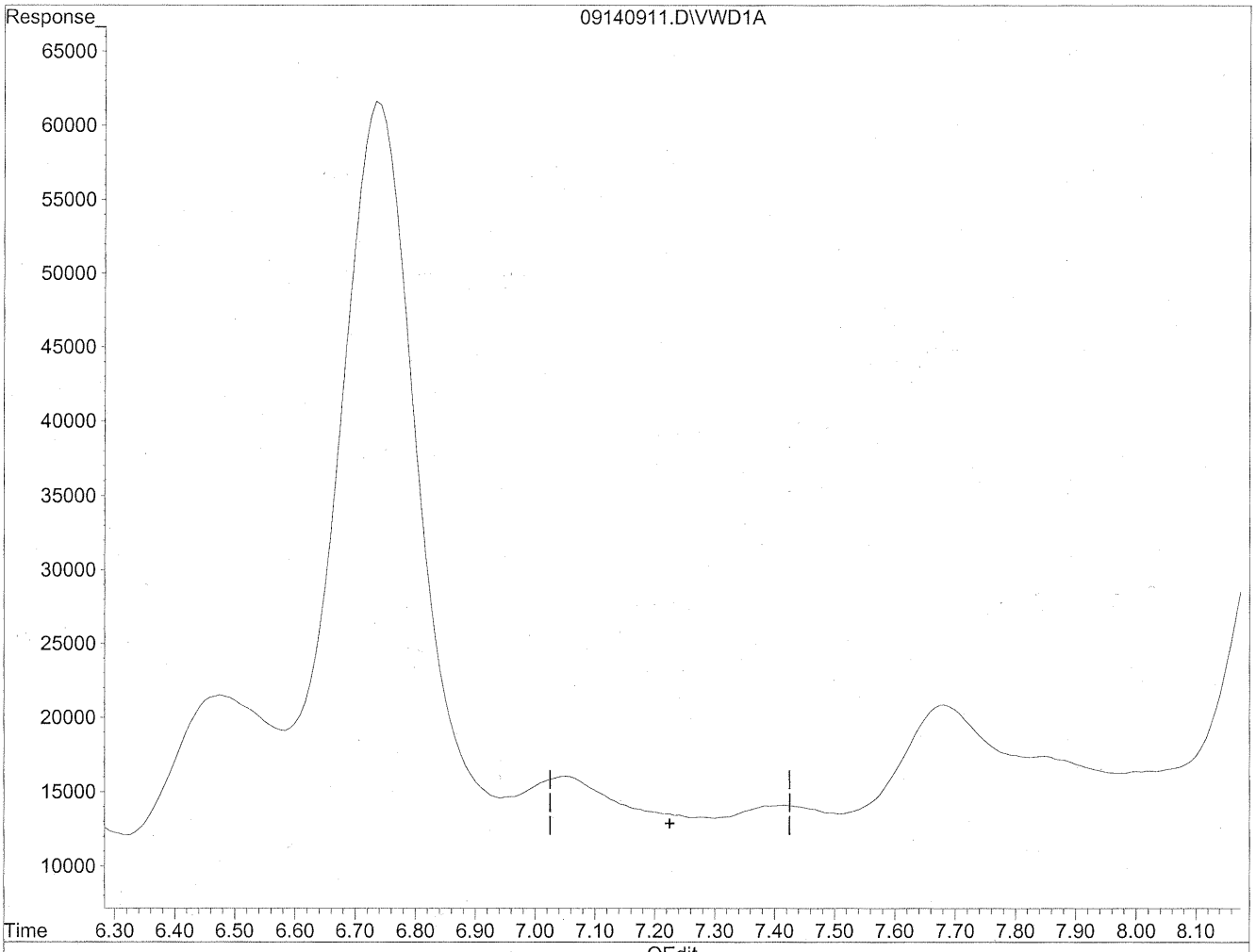
(+) = Expected Retention Time

09140911.D TO110909.M Tue Sep 15 09:59:53 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

0.00min 0.000ng/ml d

response 0

9/15/09 MP

TIC 9/15/09

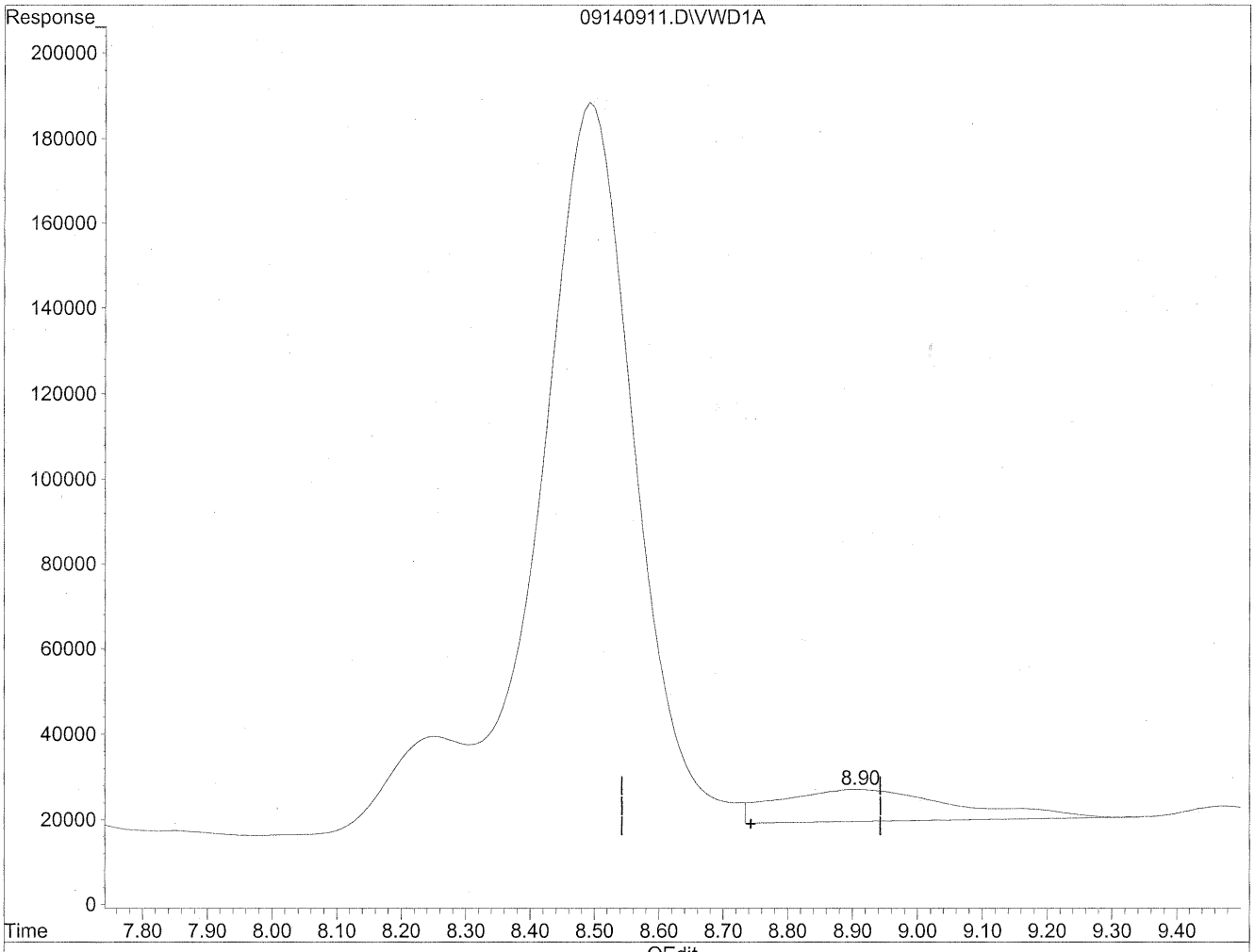
(+) = Expected Retention Time

09140911.D TO110909.M Tue Sep 15 10:00:00 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.91min 727.548ng/ml

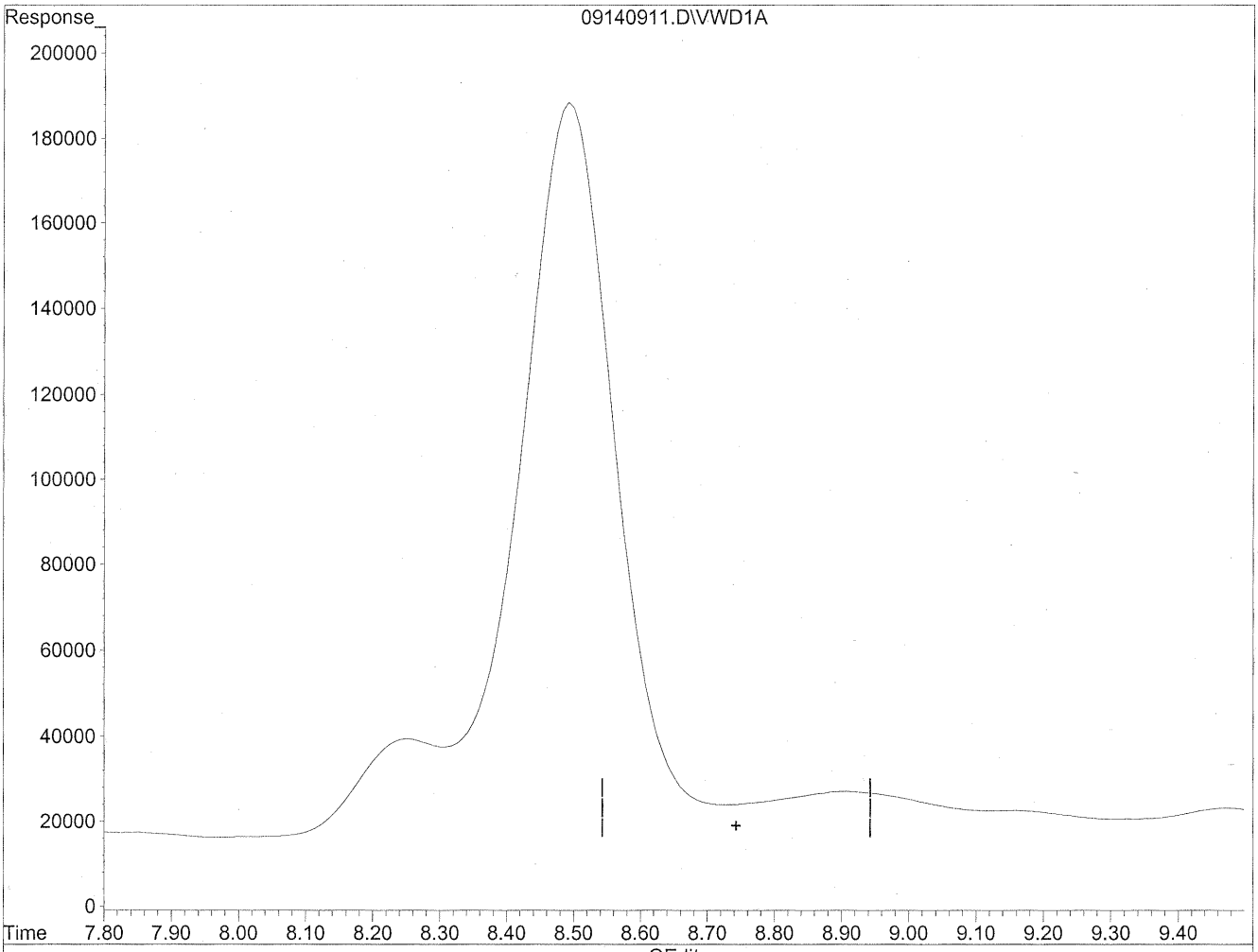
response 1451817

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140911.D Vial: 107
Acq On : 14-Sep-2009, 11:09 Operator: MD
Sample : P0903011-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

9/15/09 MP (RT)

1st 9/15/09

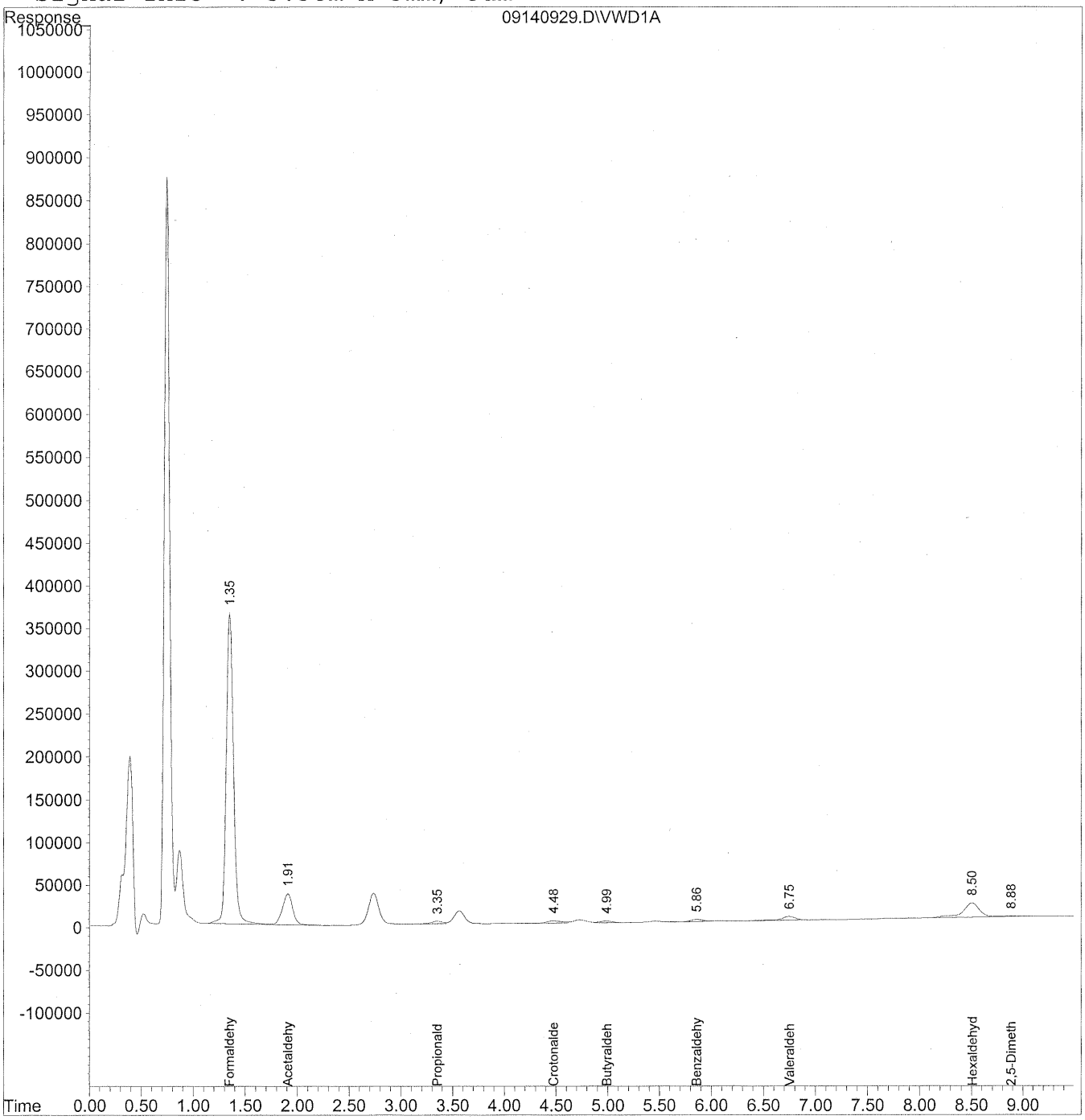
(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140929.D Vial: 125
Acq On : 14-Sep-2009, 15:05 Operator: MD
Sample : P0903011-005 front 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:19 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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



71

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140929.D Vial: 125
Acq On : 14-Sep-2009, 15:05 Operator: MD
Sample : P0903011-005 front 10x dil Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:19 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

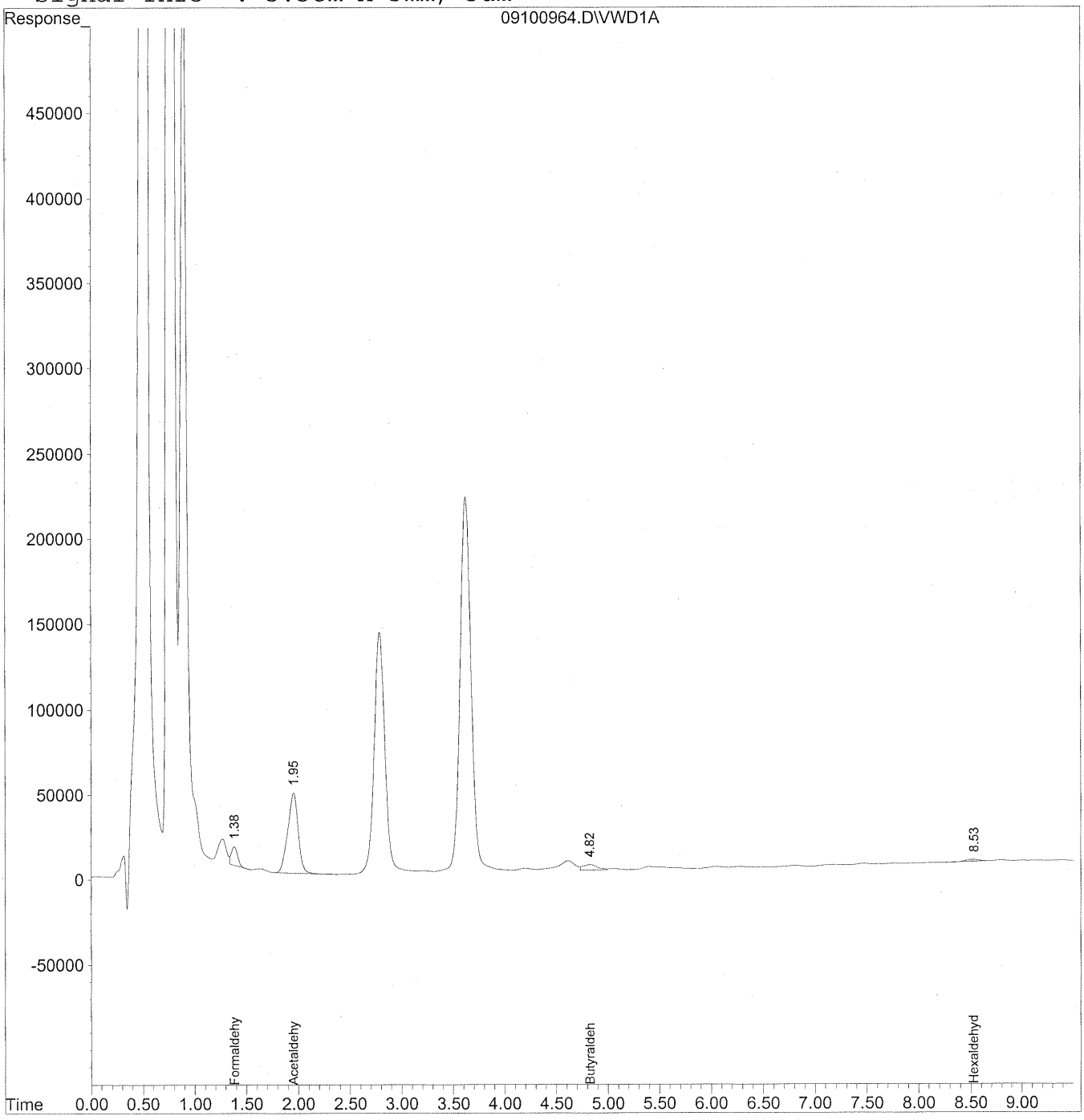
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.36	17594229	1969.041	ng/ml
2)	Acetaldehyde	1.91	2517936	387.327	ng/ml
3)	Propionaldehyde	3.35	253387	48.749	ng/ml
4)	Crotonaldehyde	4.48f	259731	63.980	ng/ml
5)	Butyraldehyde	4.99	157079	38.759	ng/ml
6)	Benzaldehyde	5.86	193568	70.946	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	6.75	472531	138.994	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	8.51	1859956	628.210	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.89f	61040	30.589	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100964.D Vial: 137
Acq On : 11-Sep-2009, 14:17 Operator: MD
Sample : P0903011-005 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:52 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100964.D Vial: 137
Acq On : 11-Sep-2009, 14:17 Operator: MD
Sample : P0903011-005 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:52 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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	1.39	486519	54.448	ng/ml
2)	Acetaldehyde	1.96	3316225	510.126	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	4.83f	318310	78.541	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	8.53	101289	34.211	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103559**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-006

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: NA Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 100	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 100	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 100	NA	NA	NA	NA	
4170-30-3	Crotonaldehyde, Total	< 100	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 100	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 100	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 100	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 100	NA	NA	NA	NA	
529-20-4	o-Tolualdehyde	< 100	NA	NA	NA	NA	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 100	NA	NA	NA	NA	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	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.

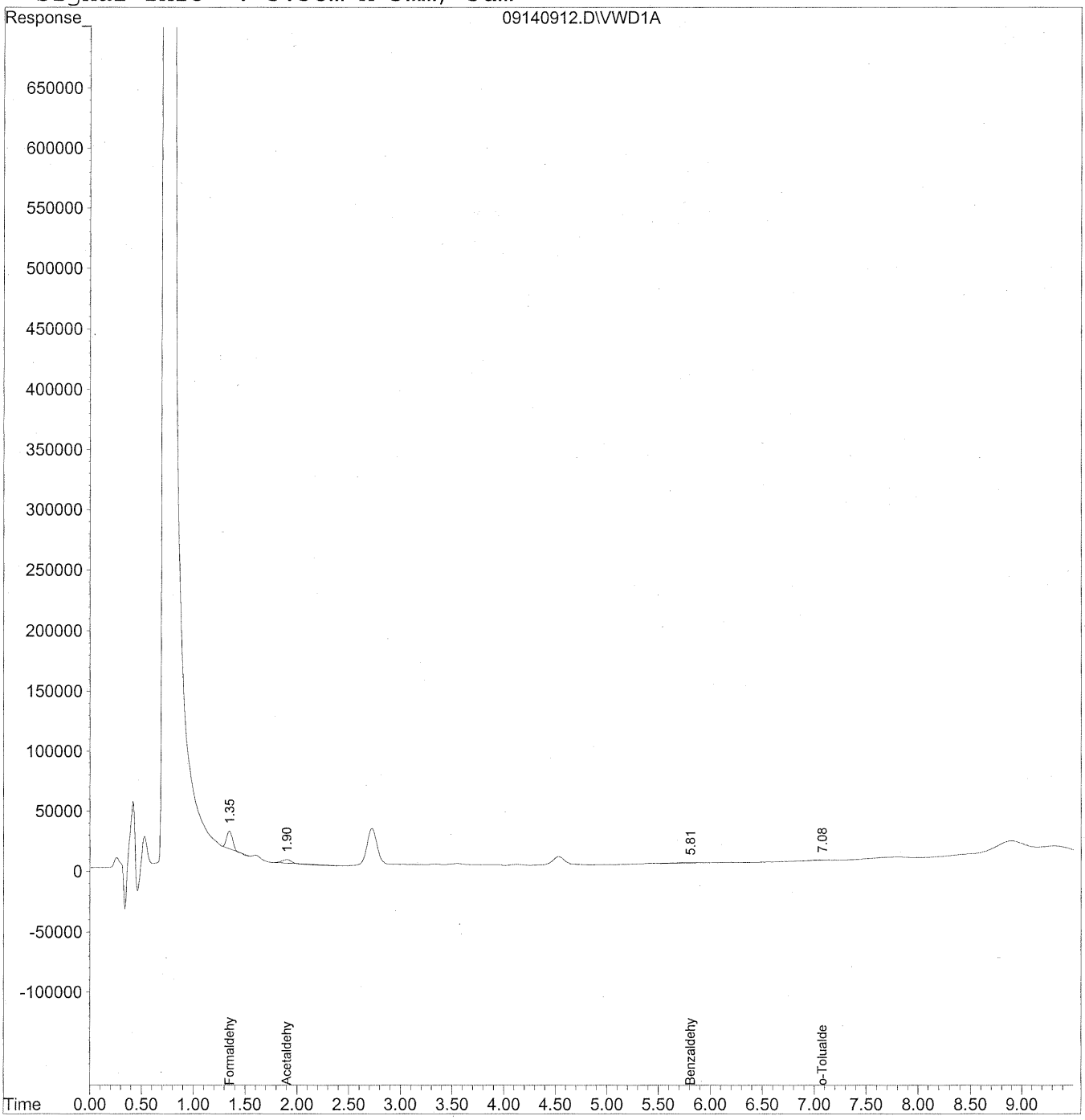
Verified By: _____ Date: 9/16/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140912.D Vial: 108
Acq On : 14-Sep-2009, 11:21 Operator: MD
Sample : P0903011-006 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:06 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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\2009_09\14\09140912.D Vial: 108
Acq On : 14-Sep-2009, 11:21 Operator: MD
Sample : P0903011-006 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:06 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

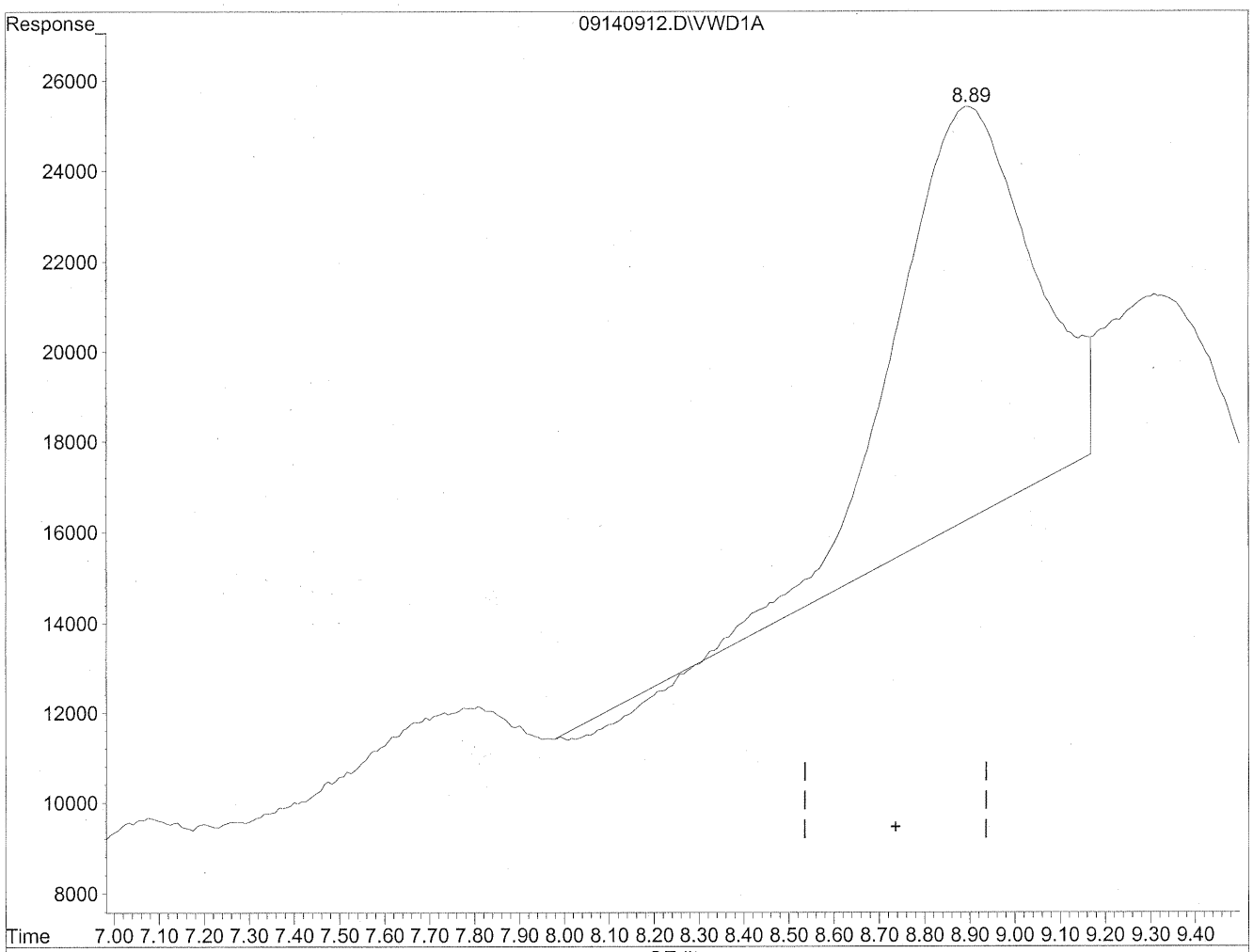
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	584359	65.398	ng/ml
2)	Acetaldehyde	1.90	93978	14.456	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	5.81	101910	37.352	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	0.00	0	N.D.	ng/ml
9)	o-Tolualdehyde	7.08f	17124	7.803	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/mld

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140912.D Vial: 108
Acq On : 14-Sep-2009, 11:21 Operator: MD
Sample : P0903011-006 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.90min 937.937ng/ml

response 1871646

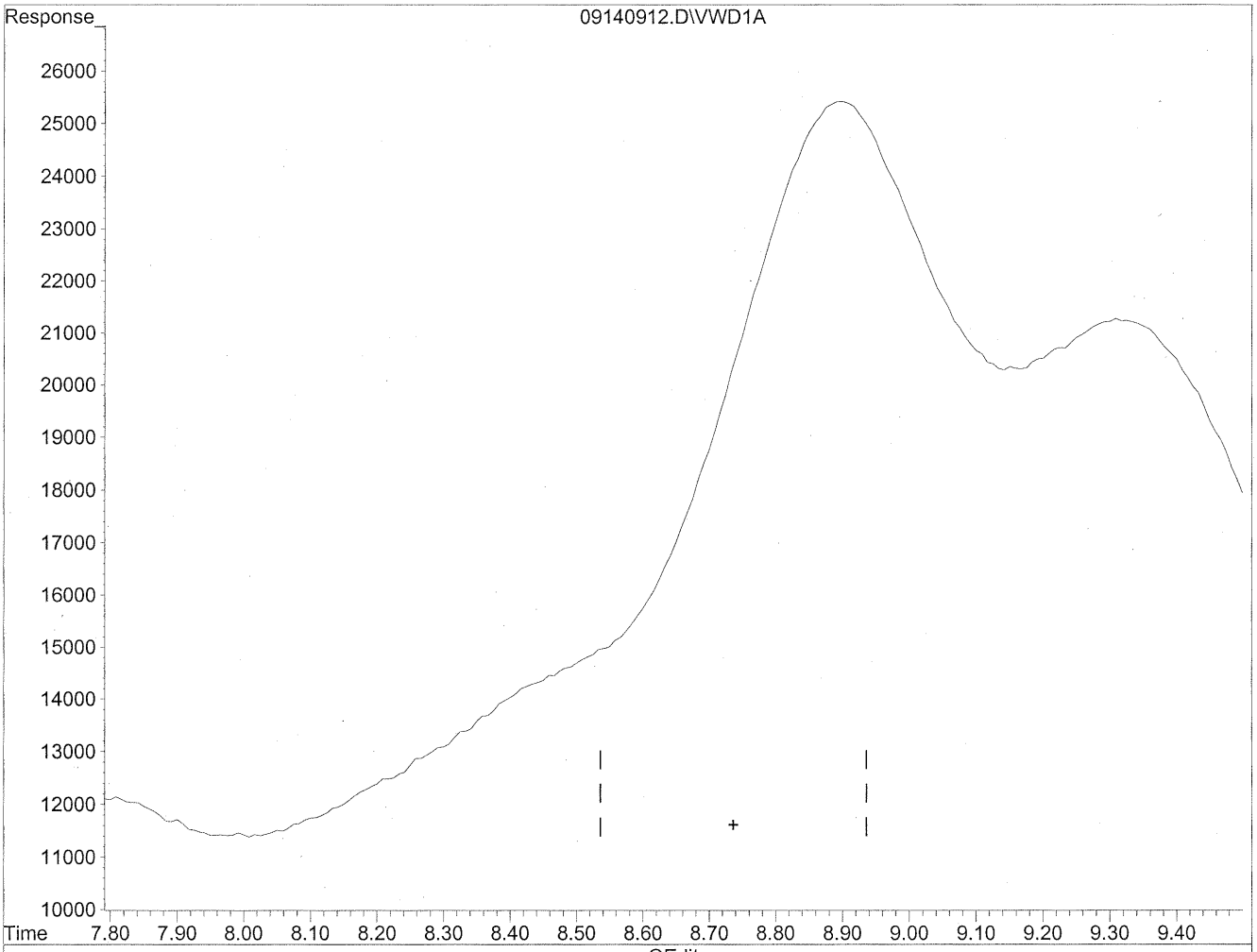
(+) = Expected Retention Time

09140912.D TO110909.M Tue Sep 15 10:06:38 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140912.D Vial: 108
Acq On : 14-Sep-2009, 11:21 Operator: MD
Sample : P0903011-006 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



QEdit

(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

9/15/09 MP (not real) 9/15/09

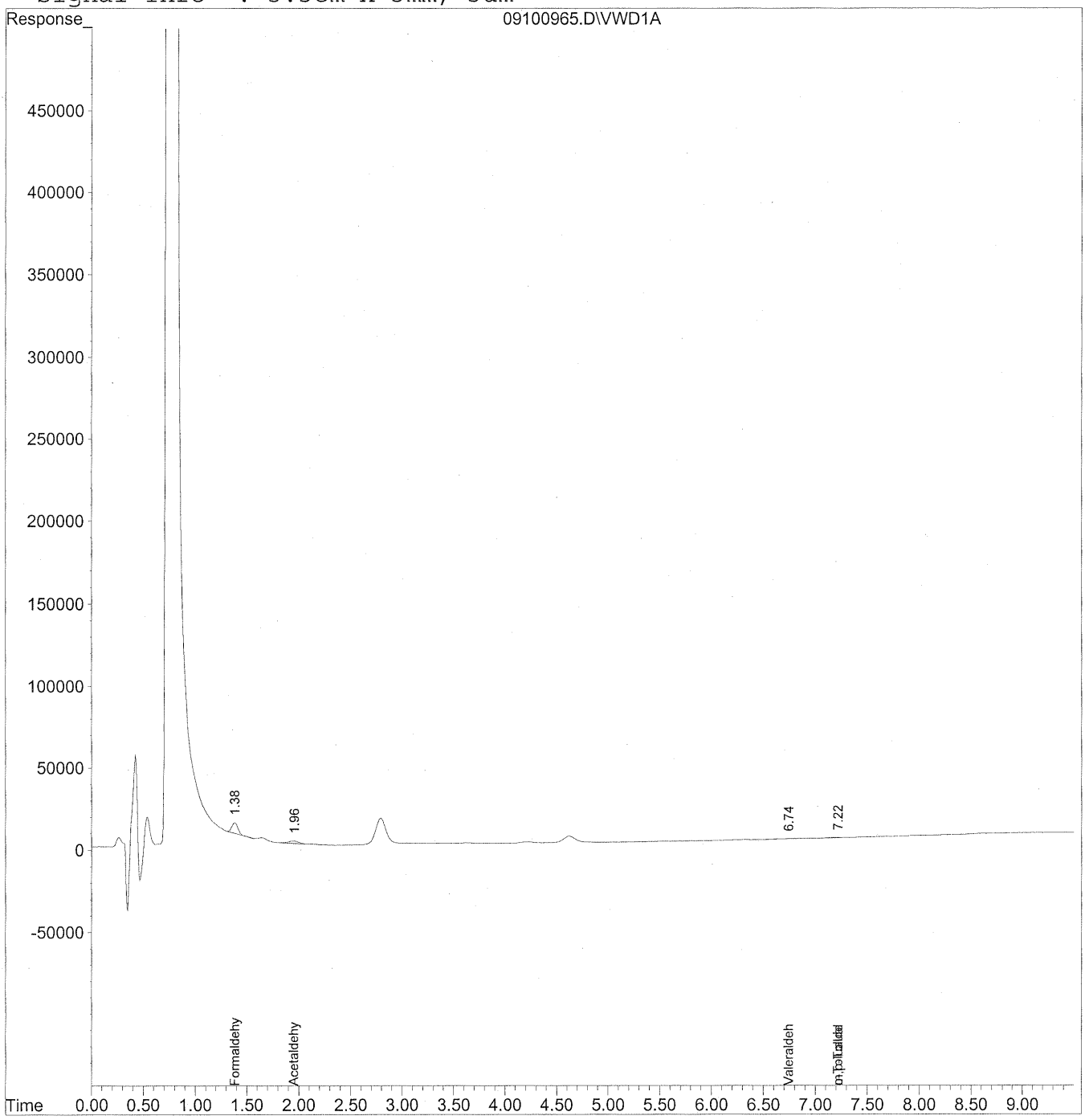
(+) = Expected Retention Time

09140912.D TO110909.M Tue Sep 15 10:06:40 2009

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100965.D Vial: 138
Acq On : 11-Sep-2009, 14:29 Operator: MD
Sample : P0903011-006 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:55 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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\2009_09\10\09100965.D Vial: 138
Acq On : 11-Sep-2009, 14:29 Operator: MD
Sample : P0903011-006 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:55 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

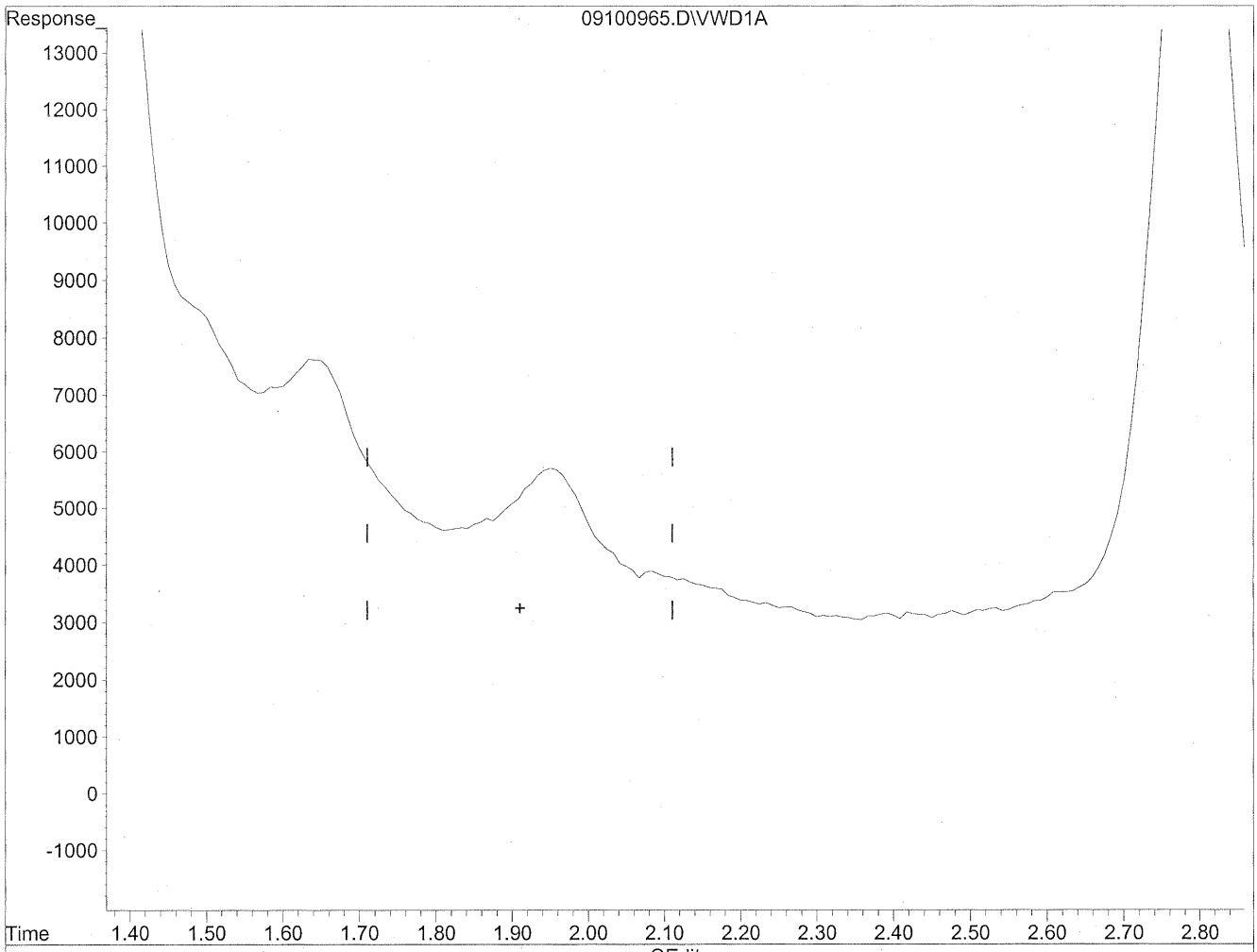
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.39	265350	29.696	ng/ml
2)	Acetaldehyde	1.96	106126	16.325	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	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	6.75	10904	3.207	ng/ml
9)	o-Tolualdehyde	7.22	14748	6.720	ng/ml
10)	m,p-Tolualdehyde	7.22f	14748	6.421	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\2009_09\10\09100965.D Vial: 138
Acq On : 11-Sep-2009, 14:29 Operator: MD
Sample : P0903011-006 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:52 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.91min 0.000ng/ml

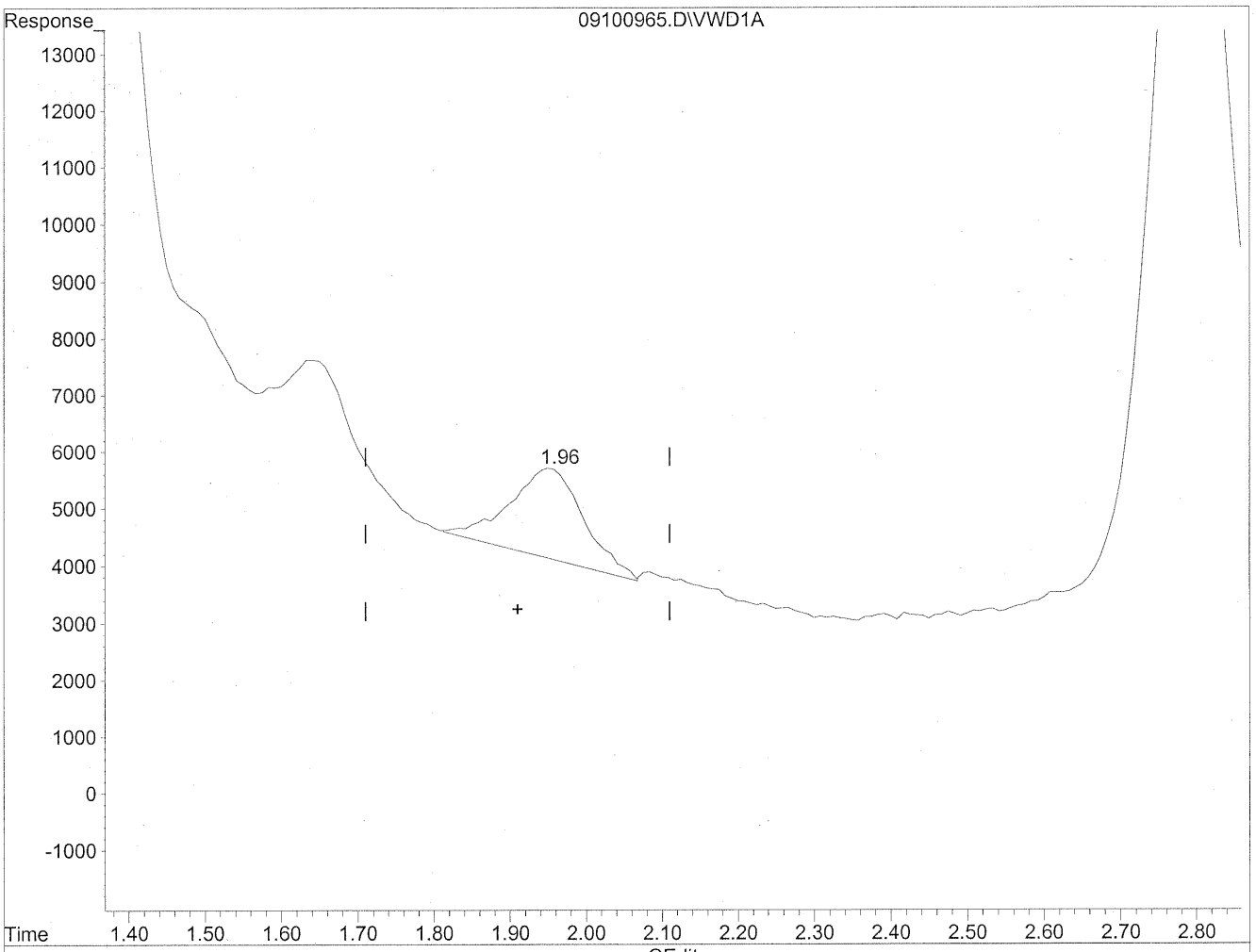
response 0

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100965.D Vial: 138
Acq On : 11-Sep-2009, 14:29 Operator: MD
Sample : P0903011-006 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:52 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.96min 16.325ng/ml m

response 106126

9/15/09 LPC

HC 9/15/09

(+) = Expected Retention Time

09100965.D TO110909.M Tue Sep 15 08:55:36 2009

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103582**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-007

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: 101 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**7,500**	**74**	0.99	**60**	0.81	
75-07-0	**Acetaldehyde**	**3,900**	**38**	0.99	**21**	0.55	**BT**
123-38-6	**Propionaldehyde**	**280**	**2.8**	0.99	**1.2**	0.42	
4170-30-3	Crotonaldehyde, Total	< 100	ND	0.99	ND	0.35	
123-72-8	**Butyraldehyde**	**380**	**3.7**	0.99	**1.3**	0.34	
100-52-7	**Benzaldehyde**	**720**	**7.1**	0.99	**1.6**	0.23	
590-86-3	**Isovaleraldehyde**	**180**	**1.8**	0.99	**0.51**	0.28	
110-62-3	**Valeraldehyde**	**1,100**	**11**	0.99	**3.2**	0.28	
529-20-4	o-Tolualdehyde	< 100	ND	0.99	ND	0.20	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	2.0	ND	0.40	
66-25-1	**n-Hexaldehyde**	**4,800**	**47**	0.99	**11**	0.24	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	0.99	ND	0.18	

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.
BT = Results indicated possible breakthrough; back section > 10% front section.

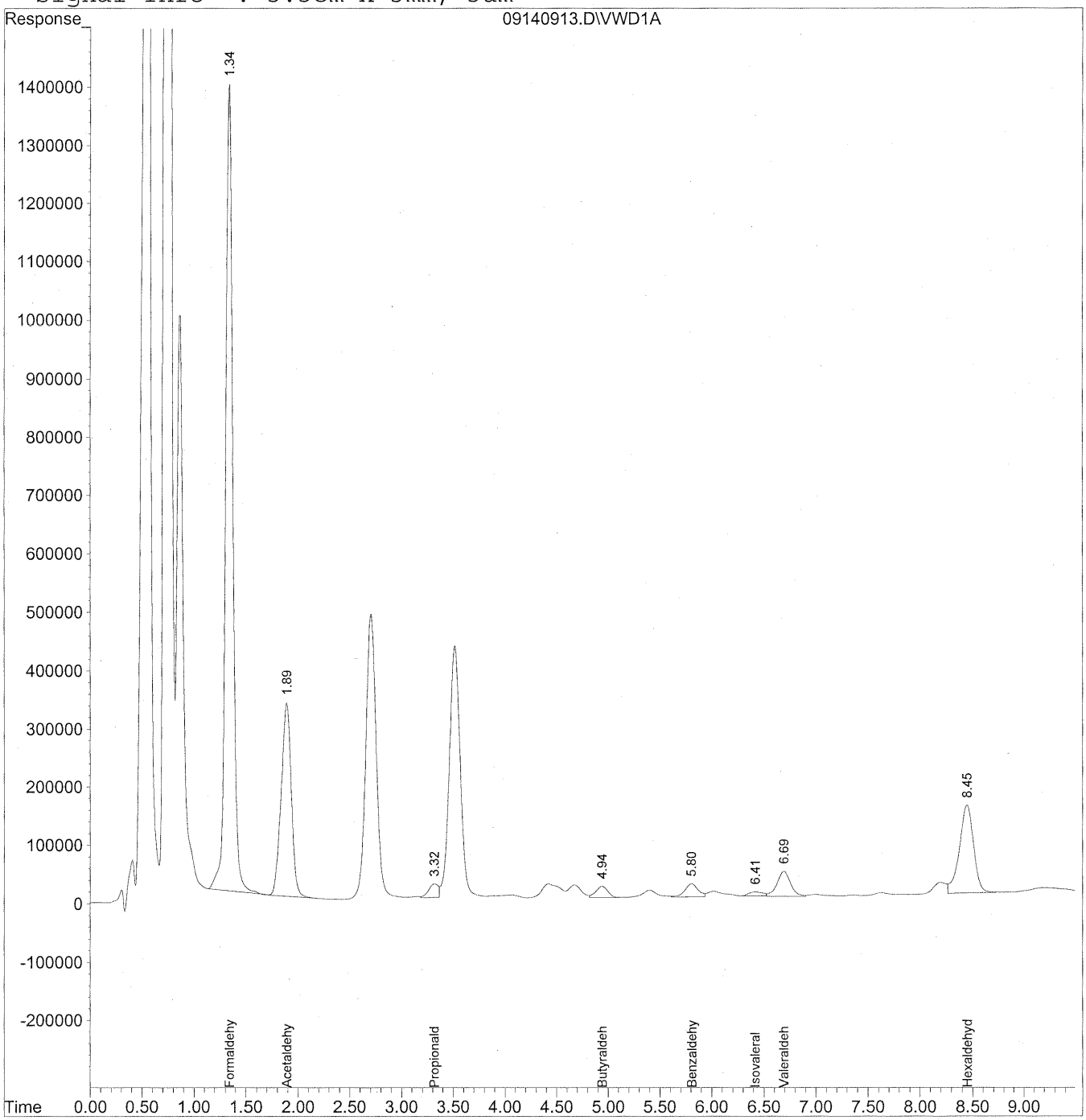
Verified By: _____ Date: 9/16/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:08 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



85

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:08 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

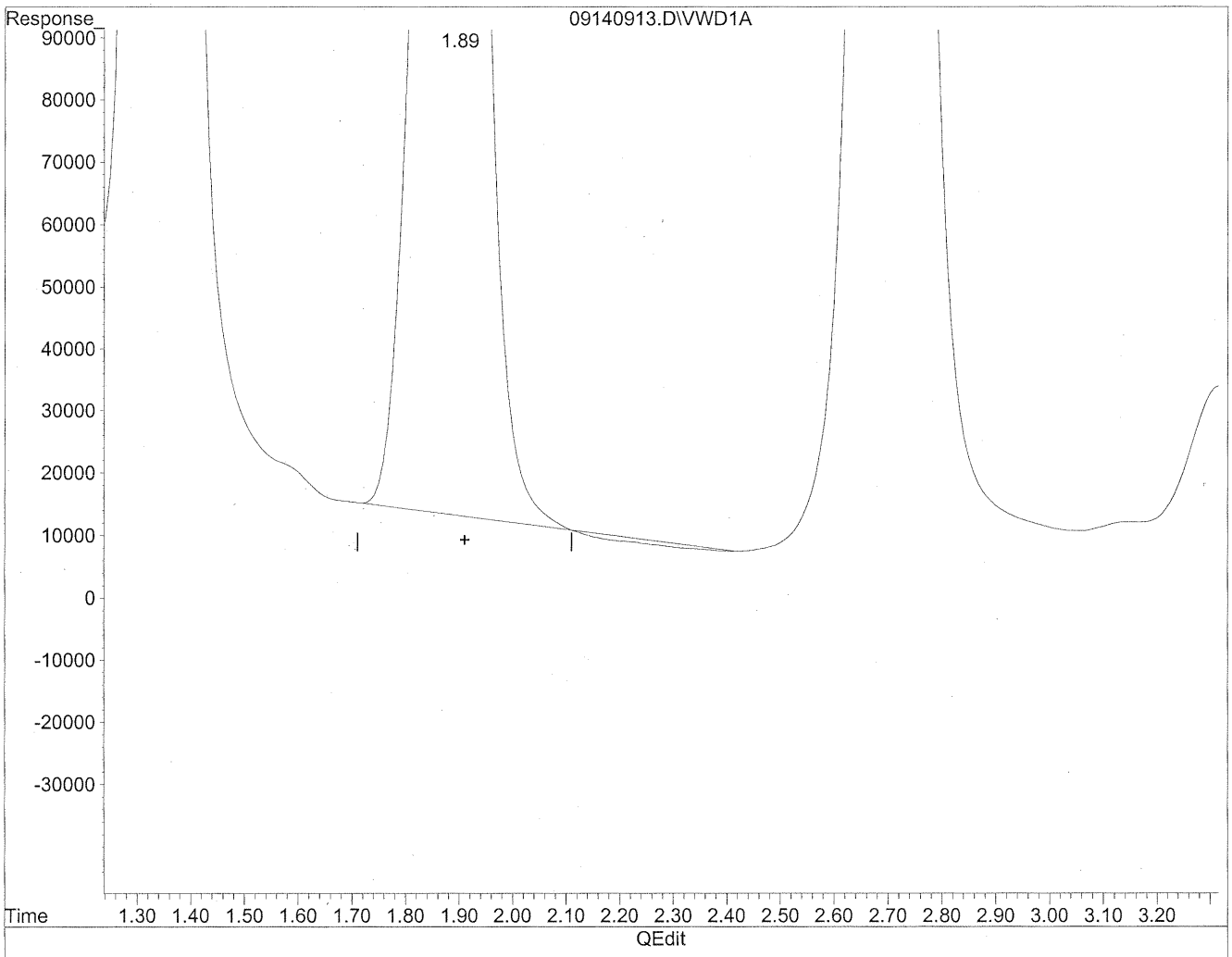
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	66834731	7479.743	ng/ml
2)	Acetaldehyde	1.89	22406485	3446.729	ng/mlm
3)	Propionaldehyde	3.32	1447587	278.499	ng/mlm
4)	Crotonaldehyde	0.00	0	N.D.	ng/mld
5)	Butyraldehyde	4.94	1533335	378.343	ng/ml
6)	Benzaldehyde	5.81	1965676	720.456	ng/ml
7)	Isovaleraldehyde	6.41	626111	181.915	ng/mlm
8)	Valeraldehyde	6.69	3870596	1138.531	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	8.45	14071877	4752.849	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.89min 3411.501ng/ml

response 22177473

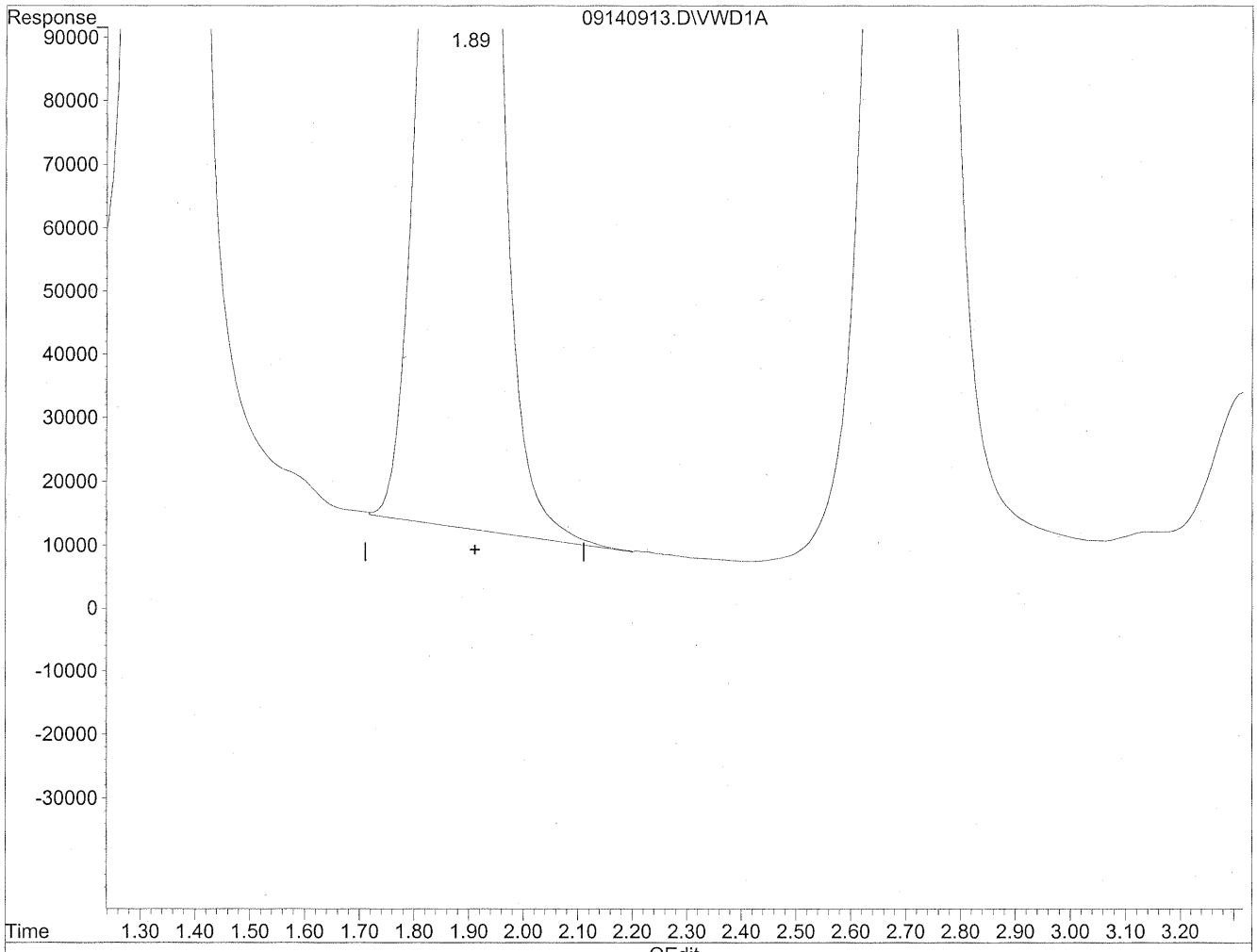
(+) = Expected Retention Time

09140913.D TO110909.M Tue Sep 15 10:06:58 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



QEdit

(2) Acetaldehyde

1.89min 3446.729ng/ml m

response 22406485

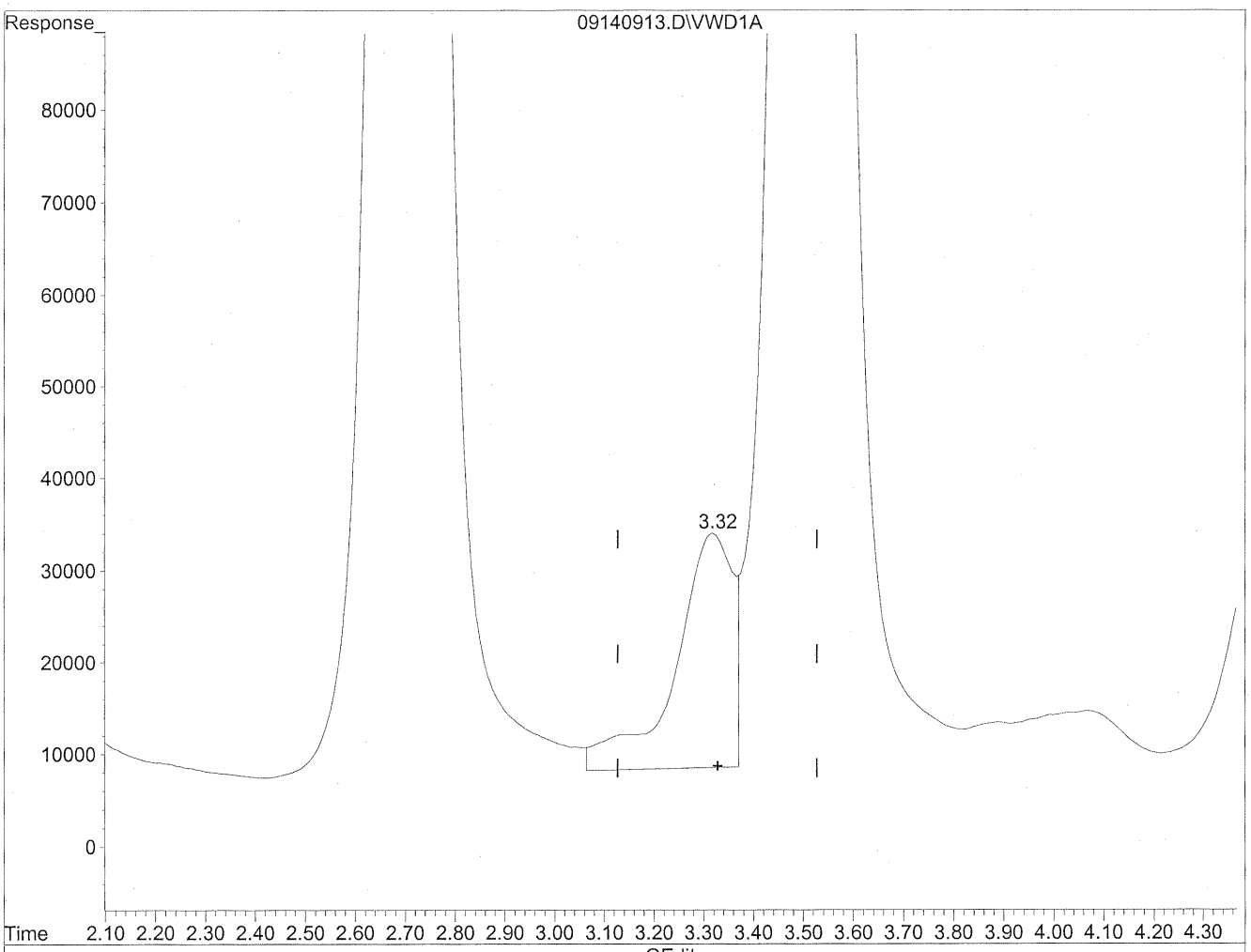
9/15/09 TC 9/15/09

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.32min 389.234ng/ml

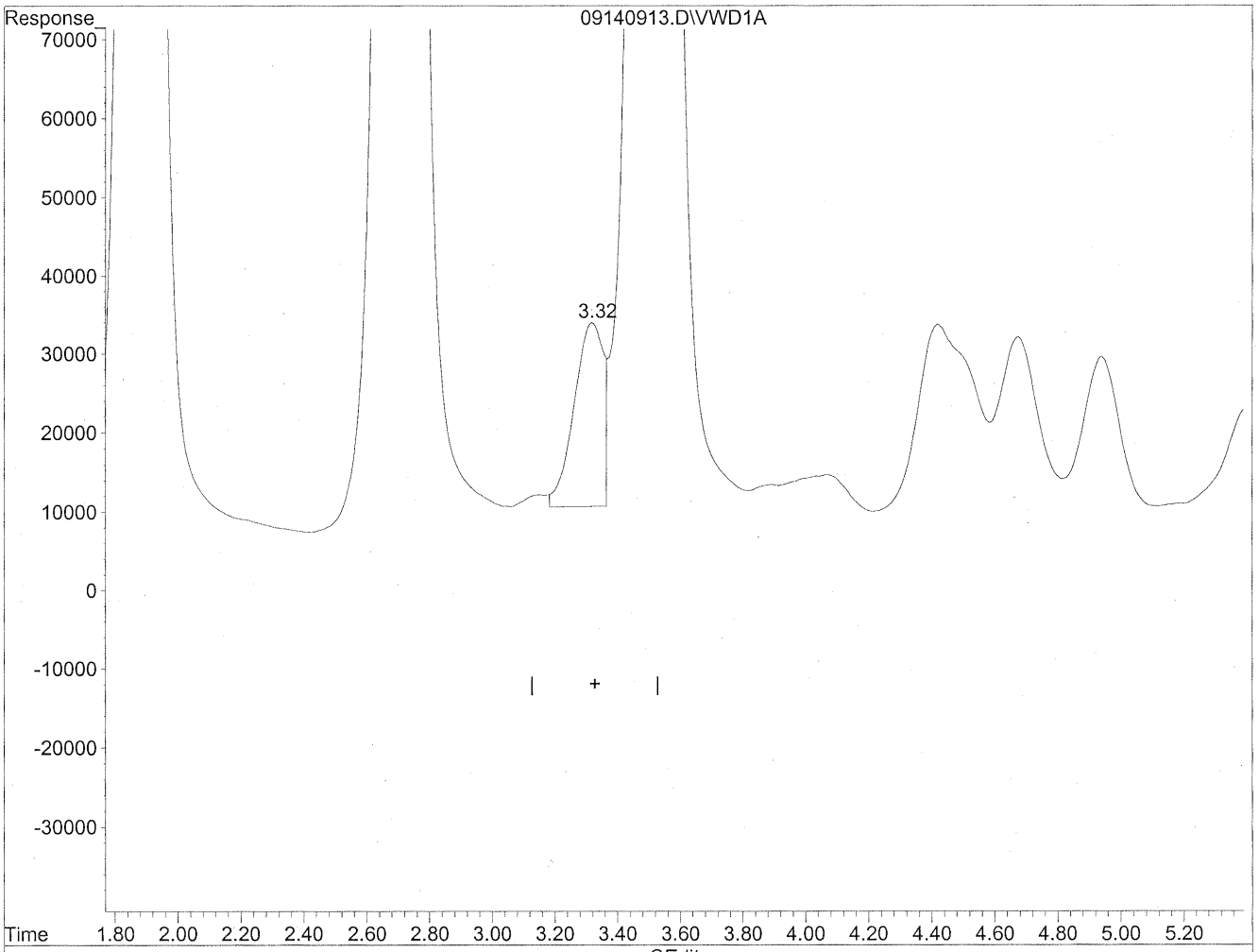
response 2023168

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.32min 278.499ng/ml m

response 1447587

9/15/09 TC

TC 9/15/09

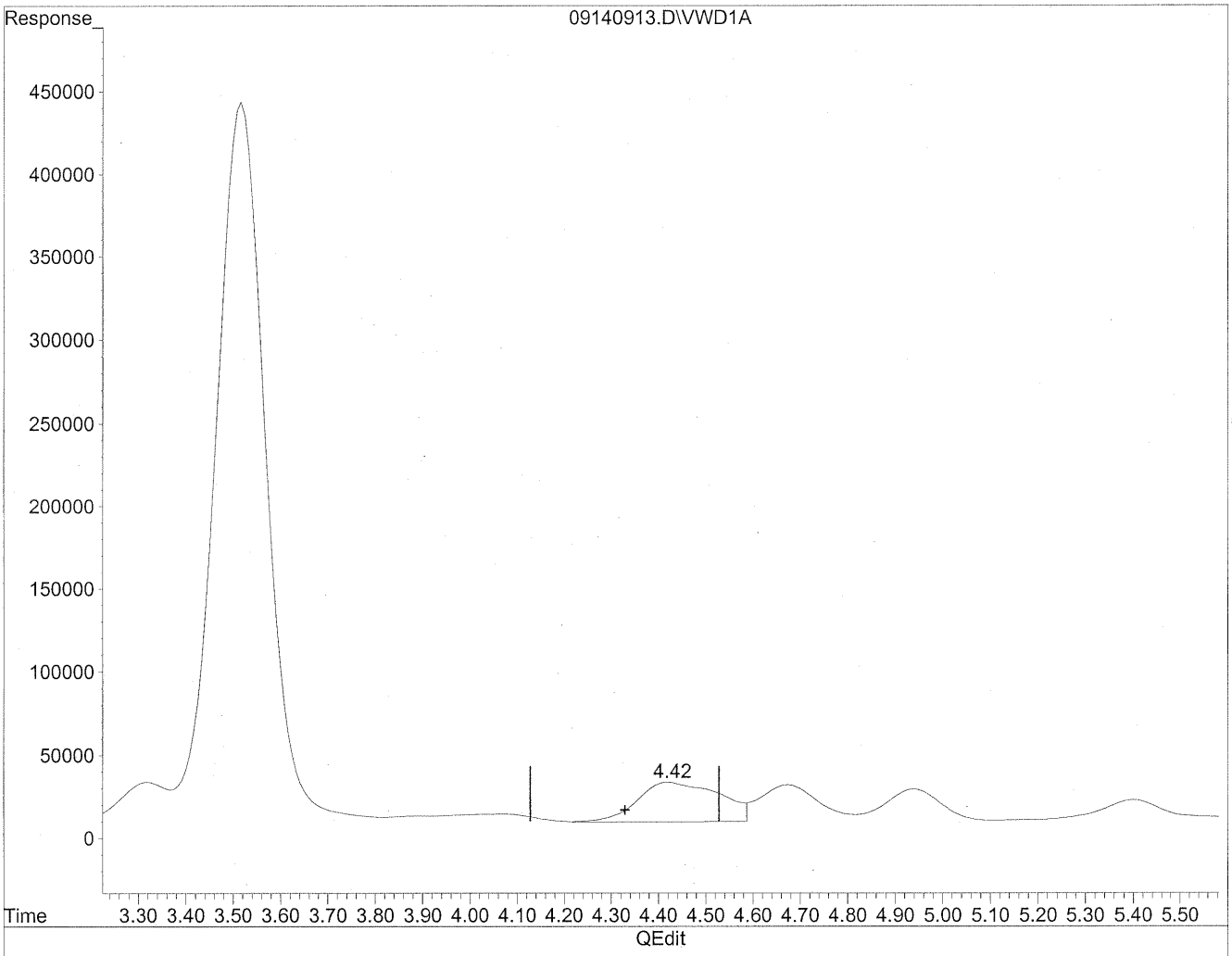
(+) = Expected Retention Time

09140913.D TO110909.M Tue Sep 15 10:07:42 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

4.42min 712.665ng/ml

response 2893114

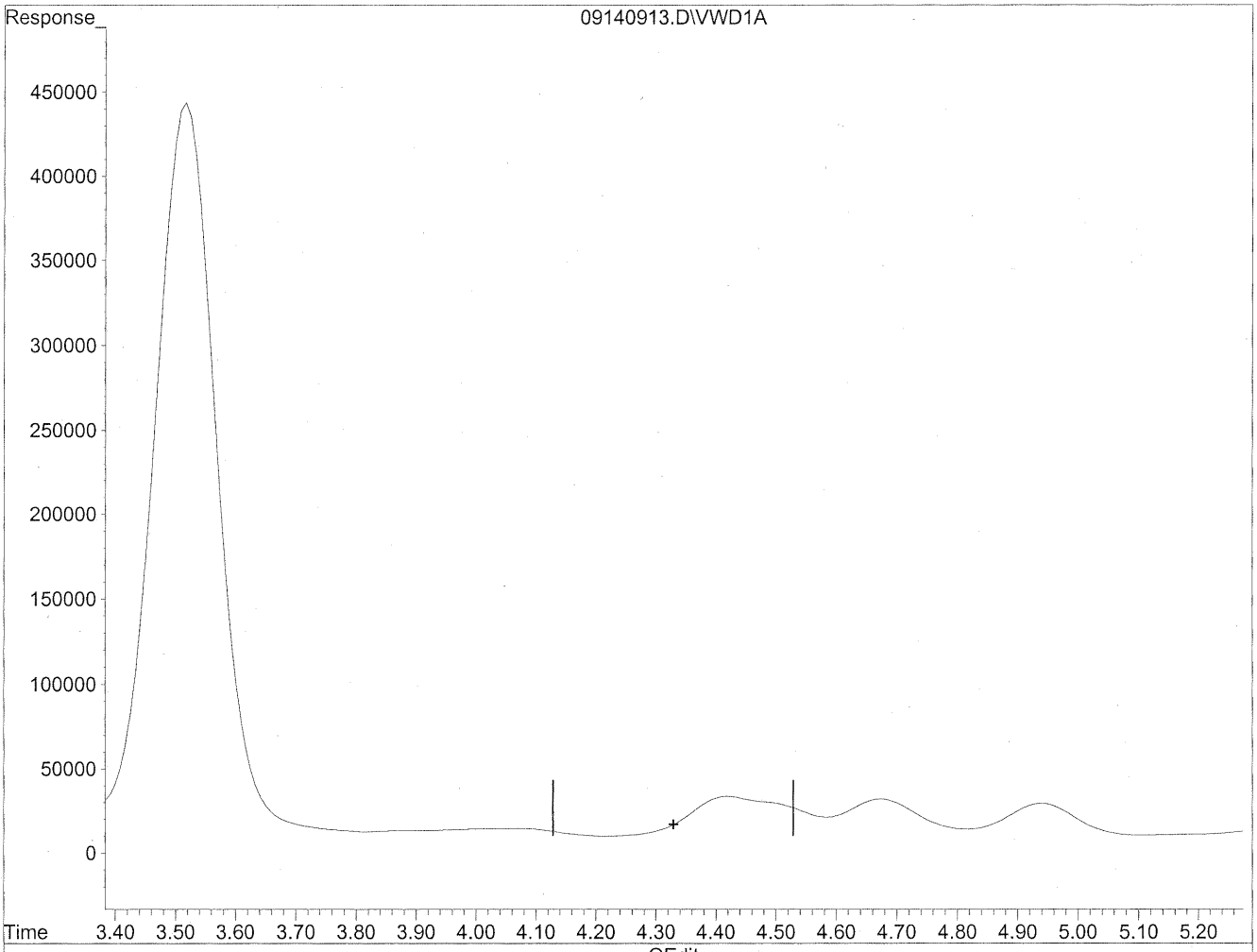
(+) = Expected Retention Time

09140913.D TO110909.M Tue Sep 15 10:07:49 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

0.00min 0.000ng/ml d

response 0

9/15/09 mp

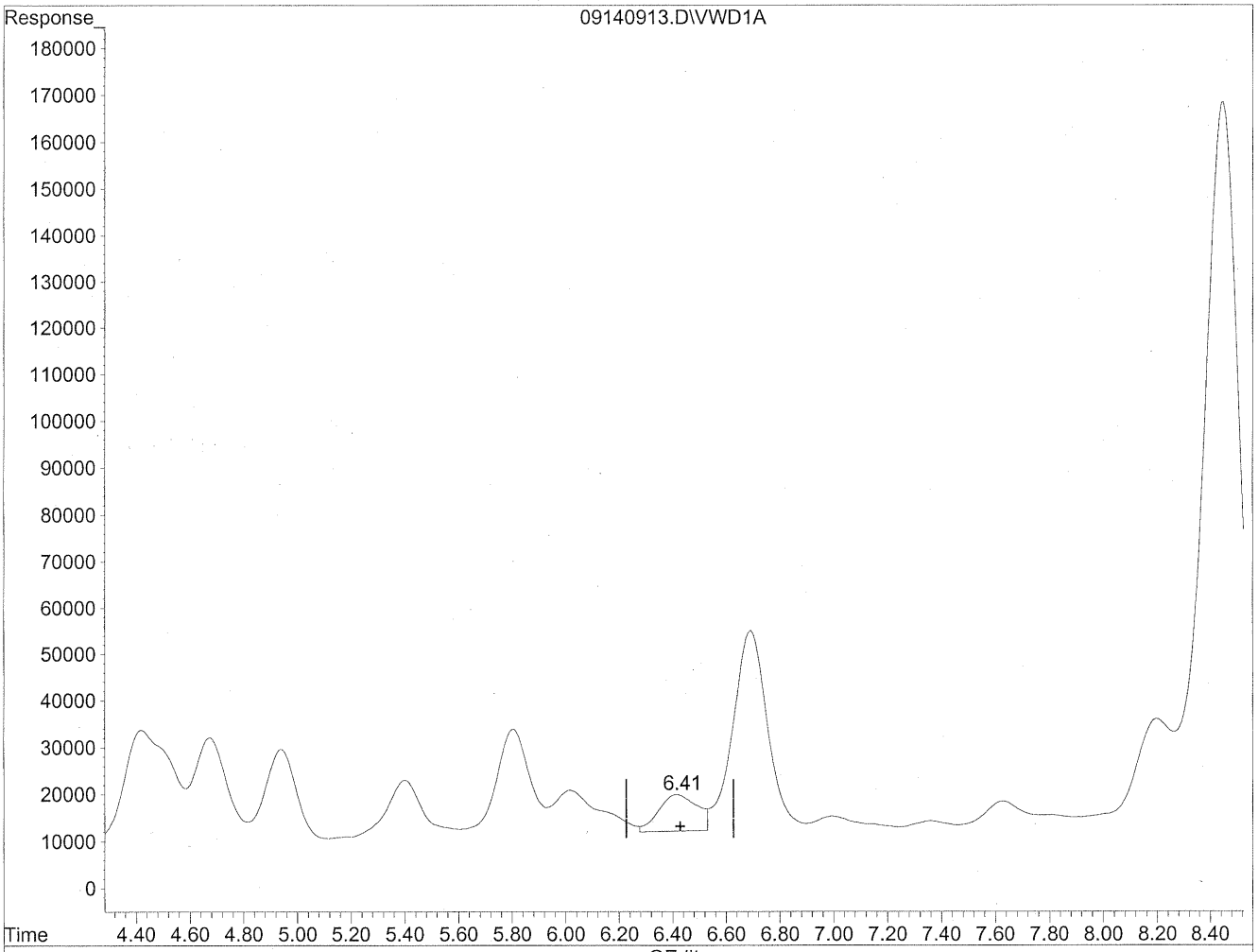
9/15/09

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.42min 223.950ng/ml

response 770787

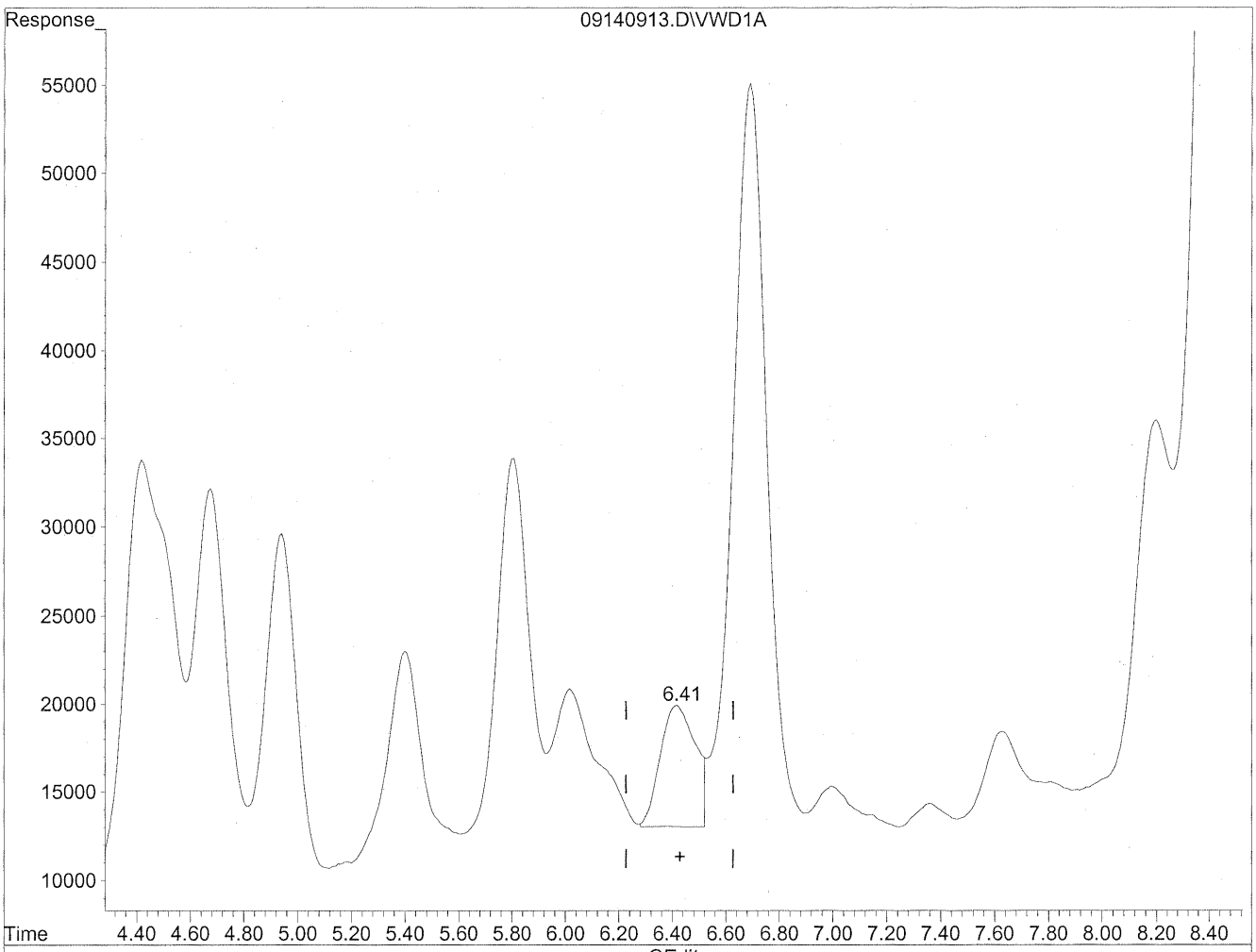
(+) = Expected Retention Time

09140913.D TO110909.M Tue Sep 15 10:08:18 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.41min 181.915ng/ml m

response 626111

9/15/09 BL

TIC 09/15/09

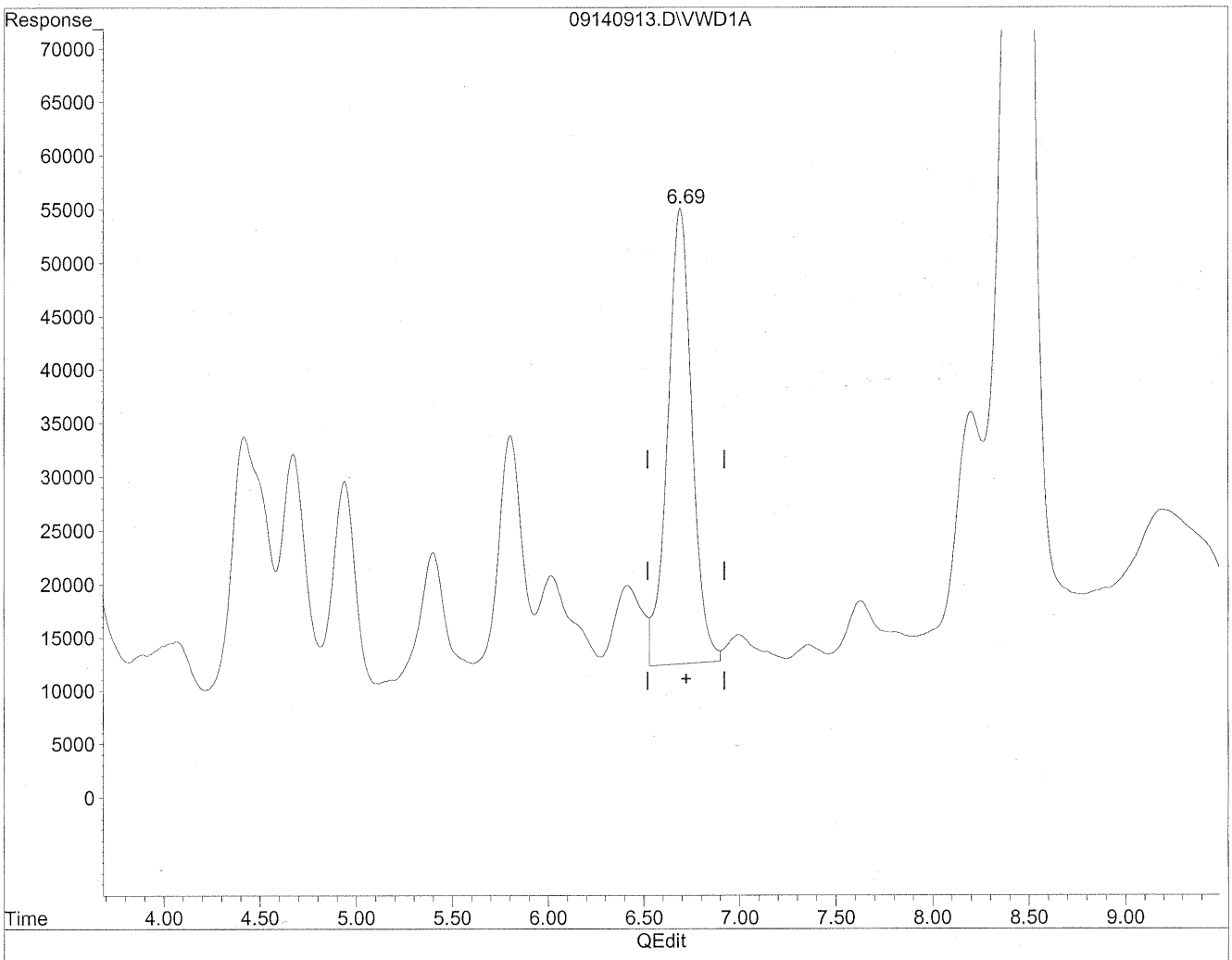
(+) = Expected Retention Time

09140913.D TO110909.M Tue Sep 15 10:08:27 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



QEdit

(8) Valeraldehyde

6.69min 1114.092ng/ml

response 3787511

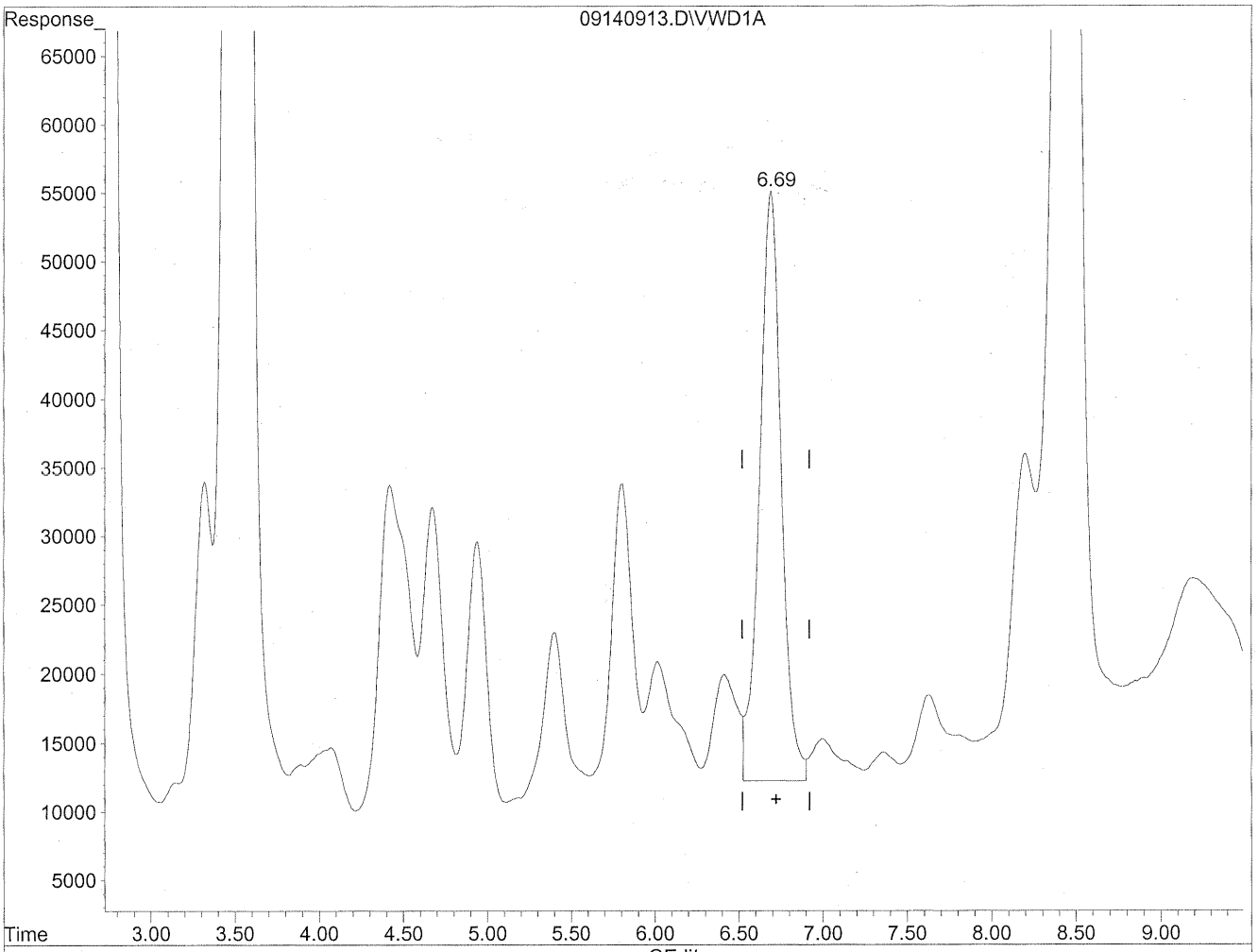
(+) = Expected Retention Time

09140913.D TO110909.M Tue Sep 15 10:08:42 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140913.D Vial: 109
Acq On : 14-Sep-2009, 11:33 Operator: MD
Sample : P0903011-007 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:49 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(8) Valeraldehyde

6.69min 1138.531ng/ml m

response 3870596

tic 9/15/09

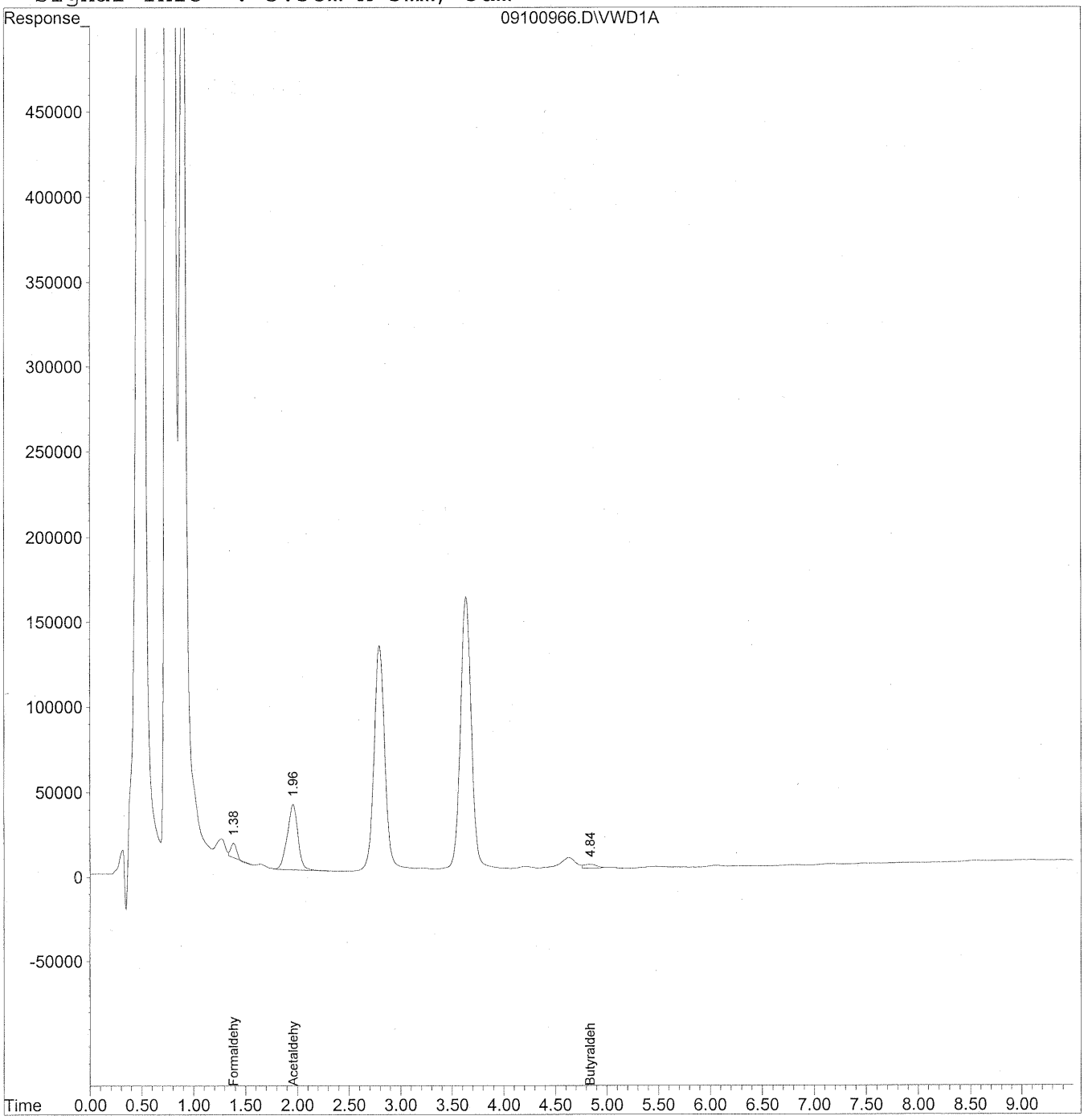
9/15/09 BC

(+) = Expected Retention Time

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100966.D Vial: 139
Acq On : 11-Sep-2009, 14:41 Operator: MD
Sample : P0903011-007 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:56 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



97

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100966.D Vial: 139
Acq On : 11-Sep-2009, 14:41 Operator: MD
Sample : P0903011-007 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:56 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

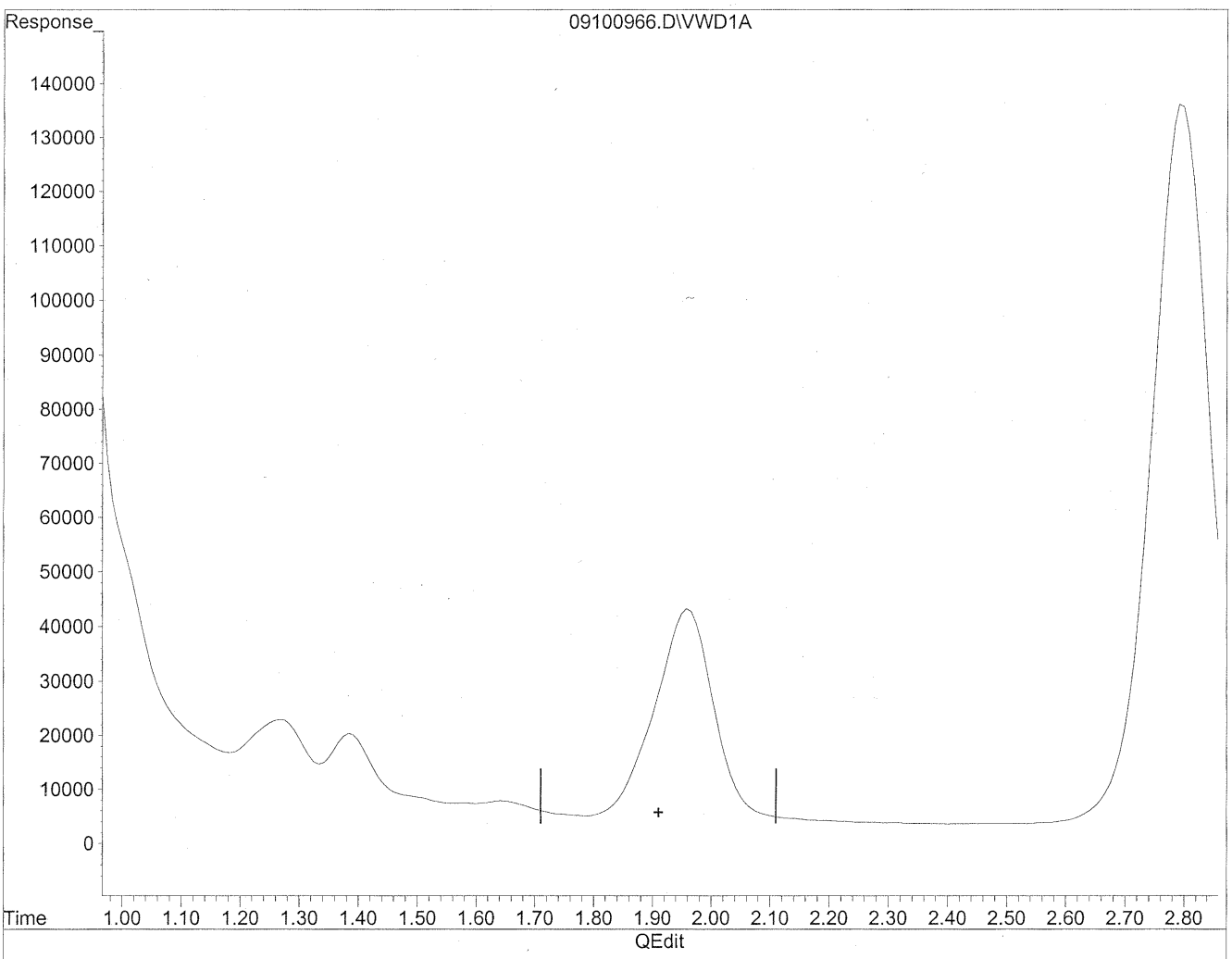
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.39	321855	36.020	ng/ml
2)	Acetaldehyde	1.96	2758251	424.294	ng/mlm
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	4.84f	191333	47.210	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

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100966.D Vial: 139
Acq On : 11-Sep-2009, 14:41 Operator: MD
Sample : P0903011-007 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:57 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.91min 0.000ng/ml

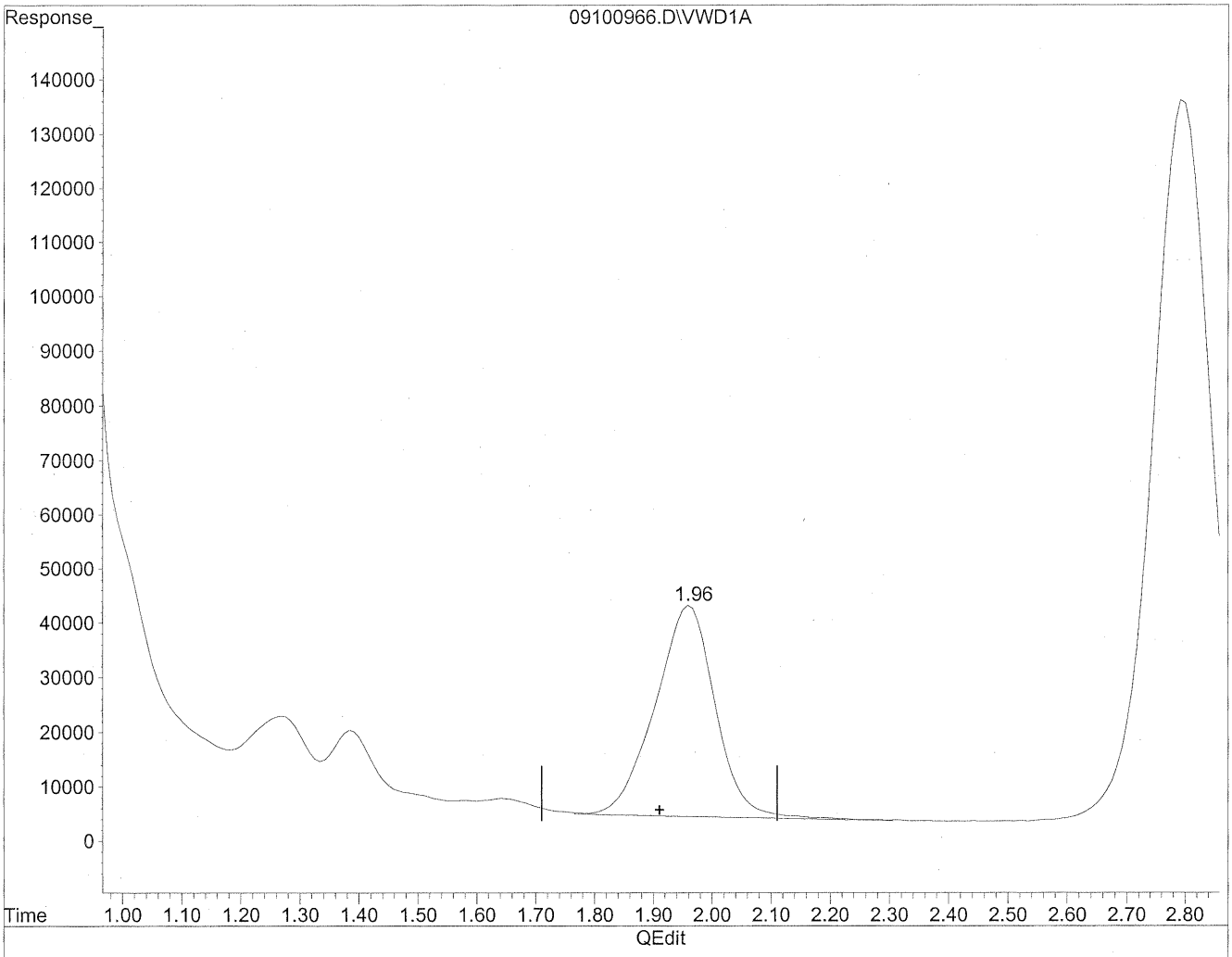
response 0

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100966.D Vial: 139
Acq On : 11-Sep-2009, 14:41 Operator: MD
Sample : P0903011-007 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 14:57 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.96min 424.294ng/ml m

response 2758251

9/15/09

9/15/09

100

(+) = Expected Retention Time

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103583**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-008

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: 101 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**7,100**	**70**	0.99	**57**	0.81	
75-07-0	**Acetaldehyde**	**3,800**	**38**	0.99	**21**	0.55	**BT**
123-38-6	**Propionaldehyde**	**270**	**2.7**	0.99	**1.1**	0.42	
4170-30-3	Crotonaldehyde, Total	< 100	ND	0.99	ND	0.35	
123-72-8	**Butyraldehyde**	**360**	**3.5**	0.99	**1.2**	0.34	
100-52-7	**Benzaldehyde**	**710**	**7.1**	0.99	**1.6**	0.23	
590-86-3	**Isovaleraldehyde**	**190**	**1.8**	0.99	**0.52**	0.28	
110-62-3	**Valeraldehyde**	**1,000**	**10**	0.99	**2.9**	0.28	
529-20-4	o-Tolualdehyde	< 100	ND	0.99	ND	0.20	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	2.0	ND	0.40	
66-25-1	**n-Hexaldehyde**	**4,600**	**45**	0.99	**11**	0.24	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	0.99	ND	0.18	

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.
BT = Results indicated possible breakthrough; back section > 10% front section.

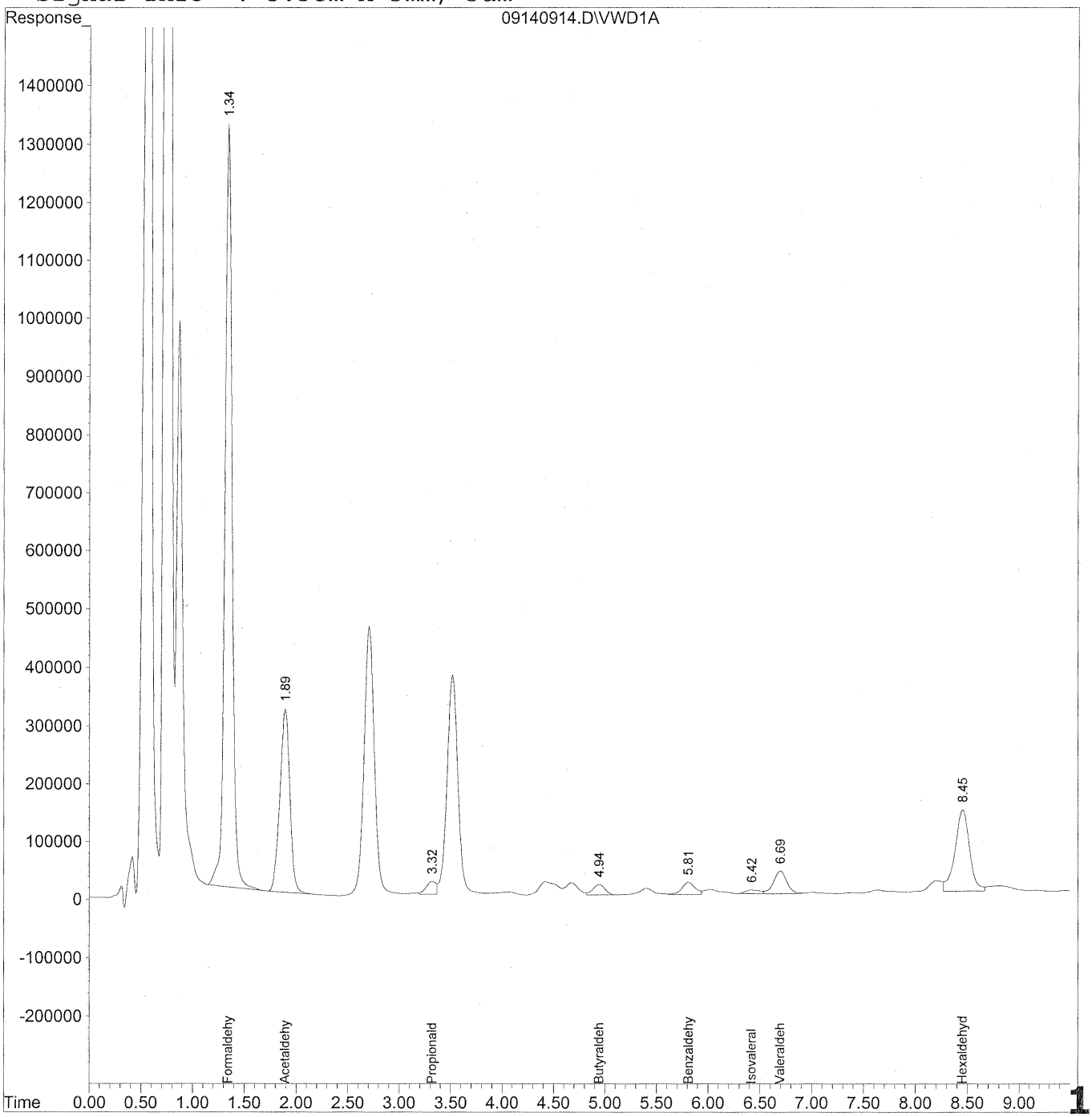
Verified By: _____ Date: 9/16/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:11 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



102

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:11 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

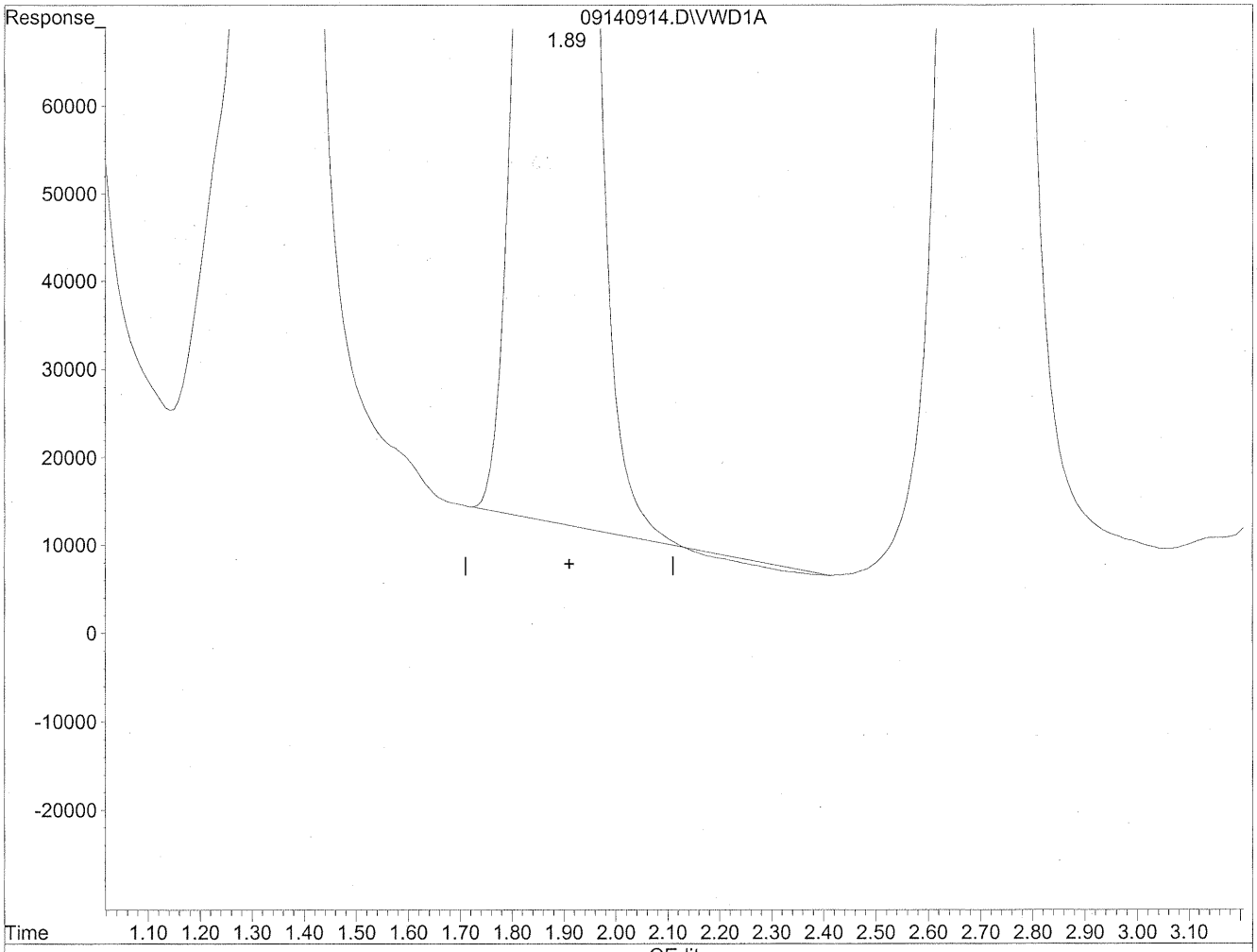
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	63160785	7068.577	ng/ml
2)	Acetaldehyde	1.89	21223176	3264.704	ng/mlm
3)	Propionaldehyde	3.32	1391473	267.703	ng/mlm
4)	Crotonaldehyde	0.00	0	N.D.	ng/mld
5)	Butyraldehyde	4.94	1444758	356.487	ng/ml
6)	Benzaldehyde	5.81	1943001	712.145	ng/mlm
7)	Isovaleraldehyde	6.42	641201	186.299	ng/mlm
8)	Valeraldehyde	6.70	3486433	1025.530	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	8.46	13604372	4594.947	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/mld

(f)=RT Delta > 1/2 Window (m)=manual int.
09140914.D TO110909.M Tue Sep 15 10:30:52 2009 Page 1

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.90min 3243.755ng/ml

response 21086996

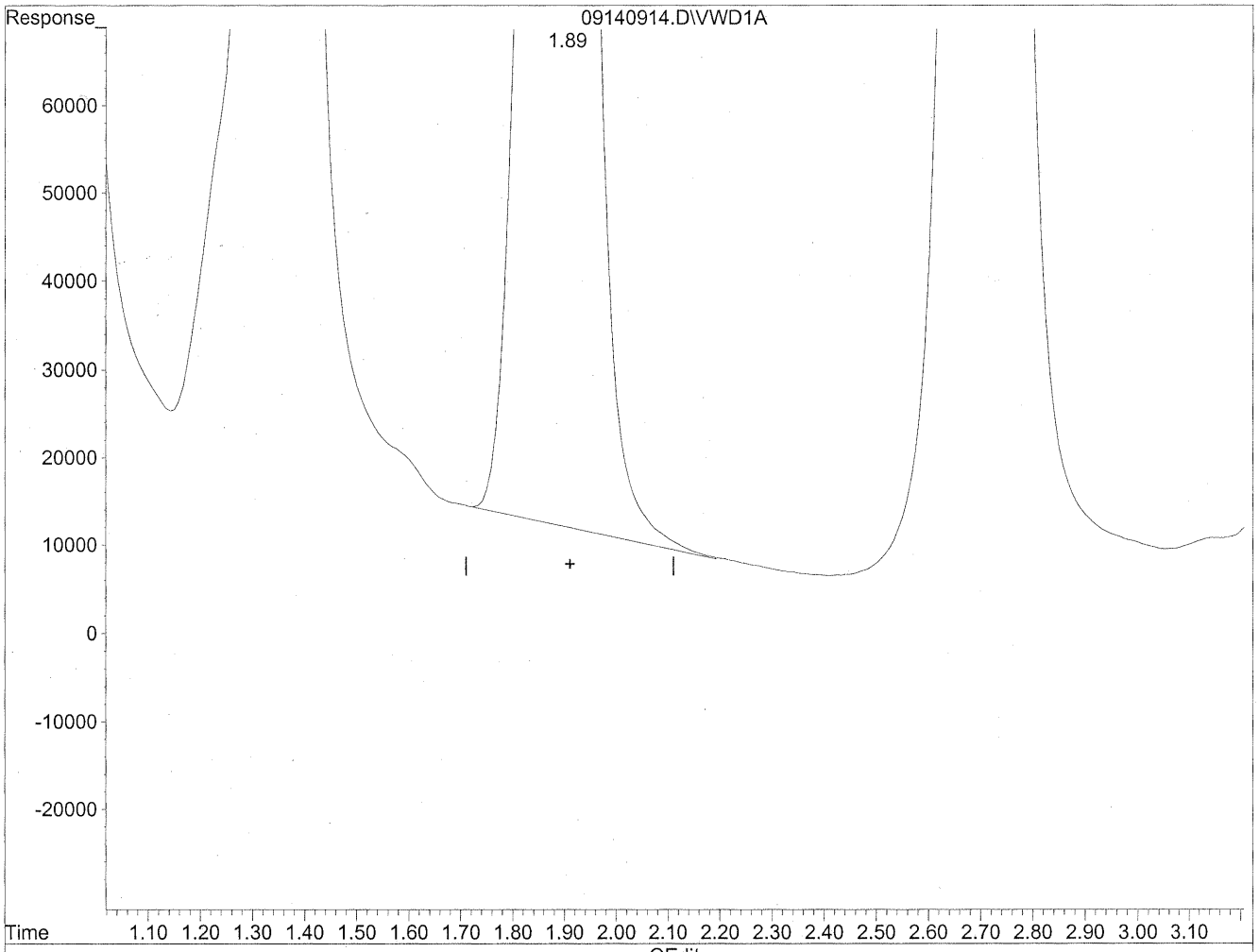
(+) = Expected Retention Time

09140914.D TO110909.M Tue Sep 15 10:09:35 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.89min 3264.704ng/ml m

response 21223176

9/15/09

9/15/09

105

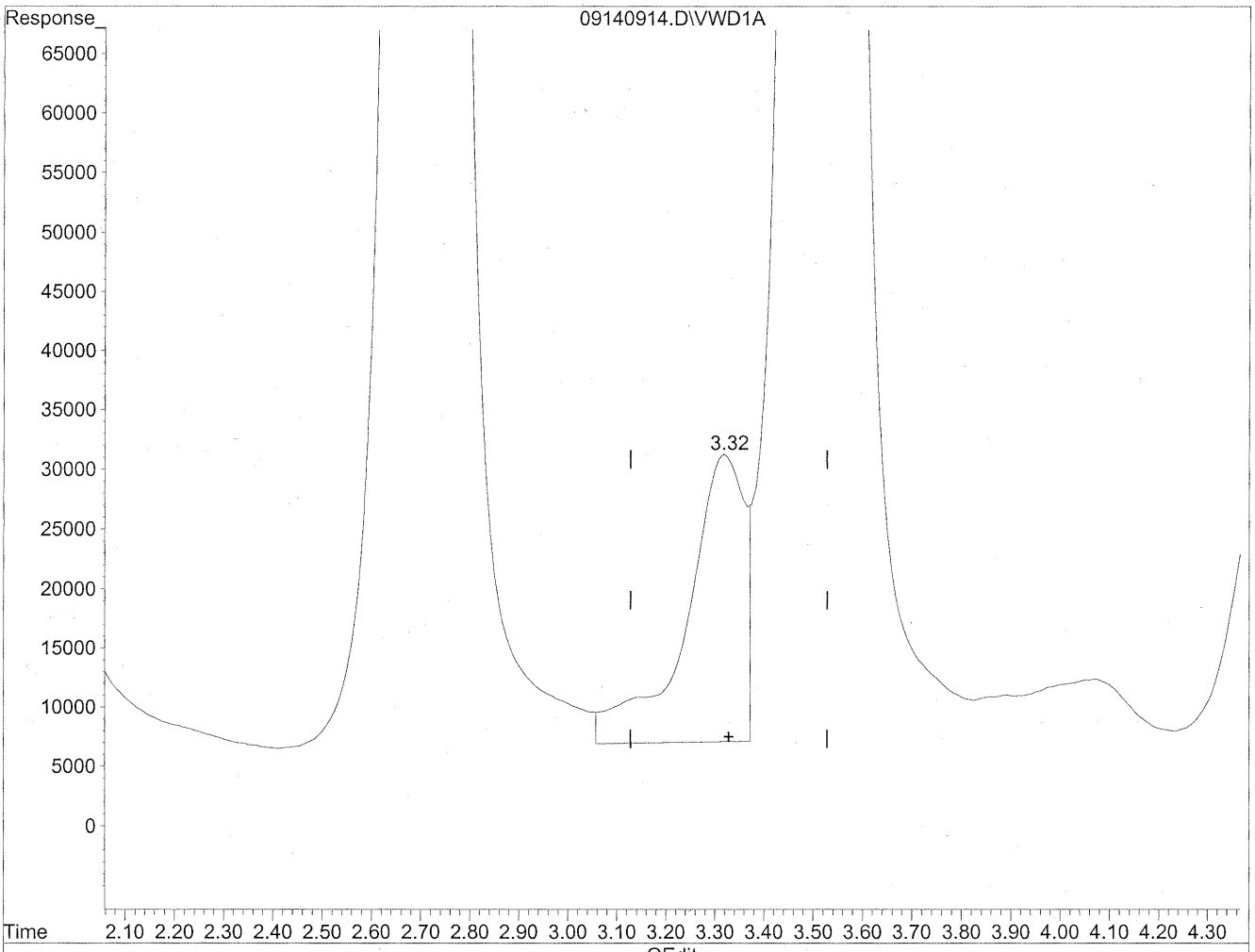
(+) = Expected Retention Time

09140914.D TO110909.M Tue Sep 15 10:09:40 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.32min 379.785ng/ml

response 1974056

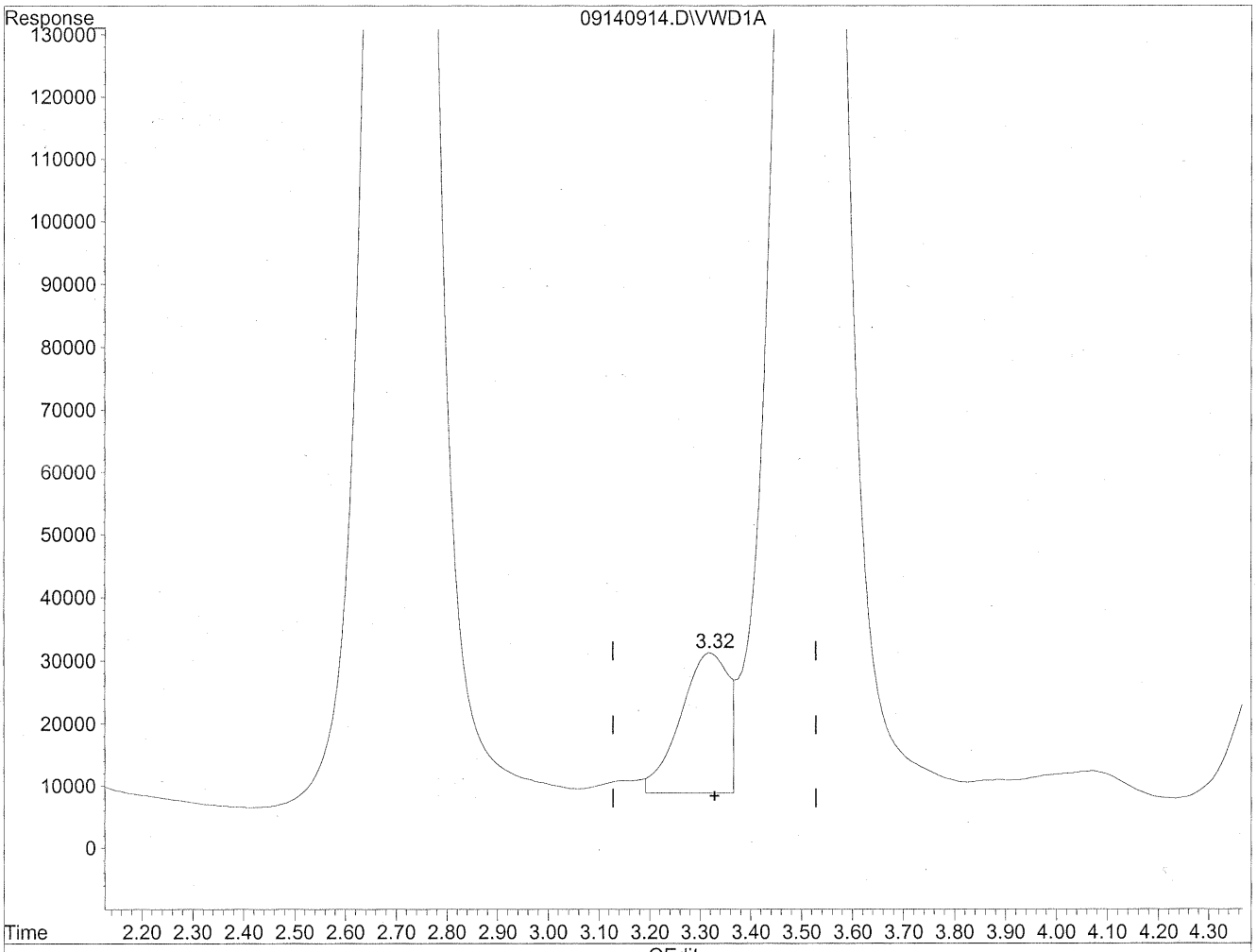
106

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.32min 267.703ng/ml m

response 1391473

tlc 9/15/09

9/15/09 12

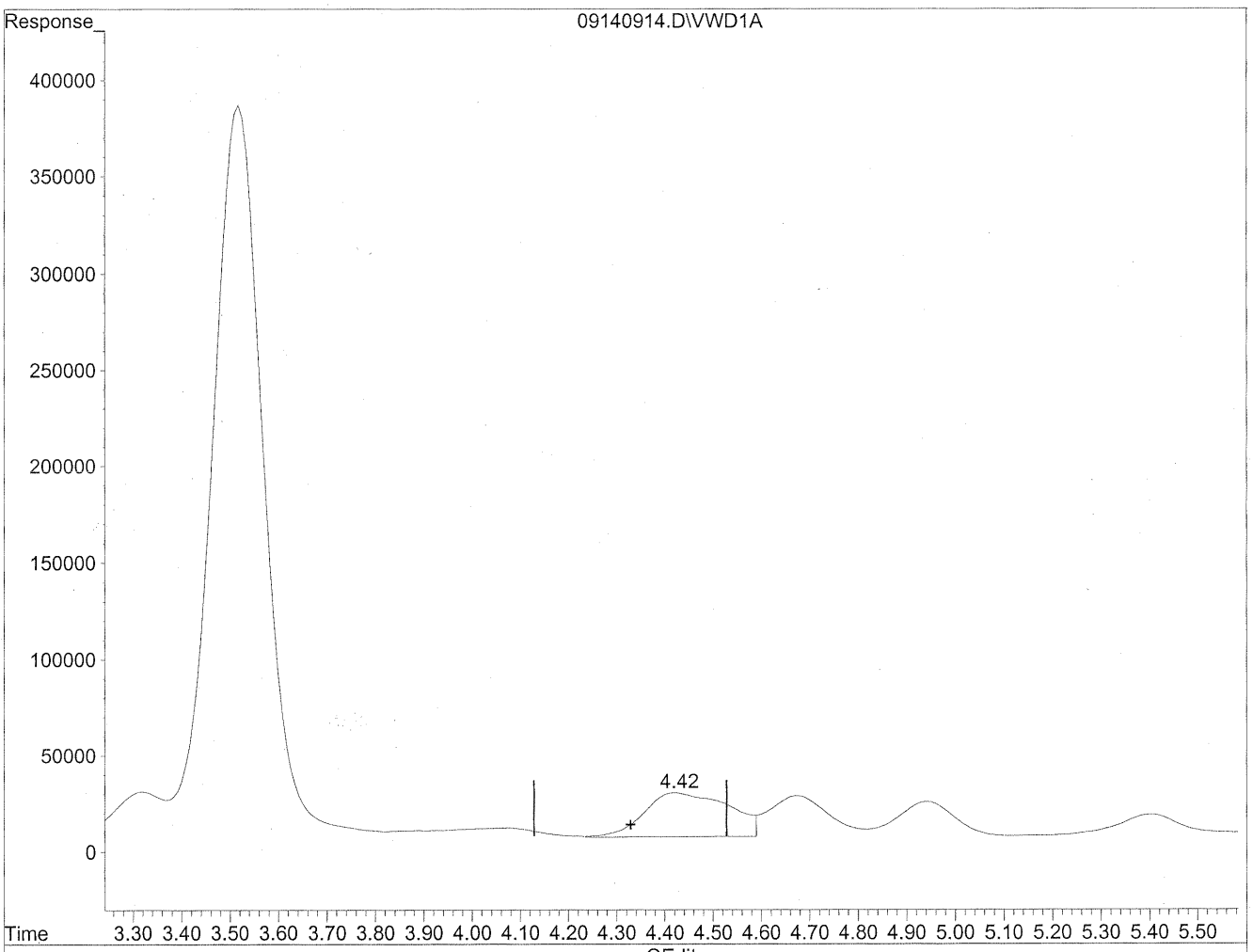
(+) = Expected Retention Time

09140914.D TO110909.M Tue Sep 15 10:09:54 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

4.42min 684.902ng/ml

response 2780406

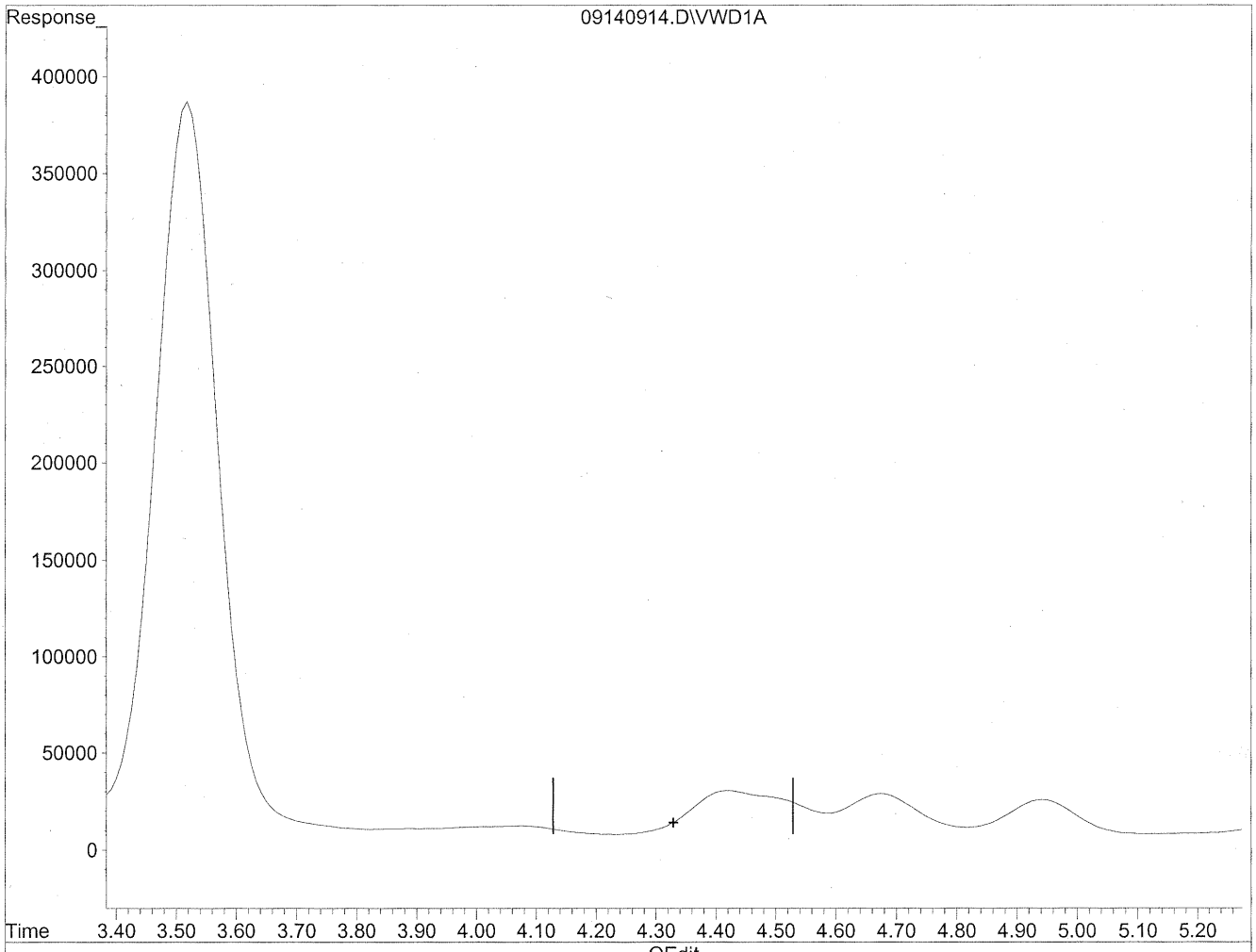
(+) = Expected Retention Time

09140914.D TO110909.M Tue Sep 15 10:09:59 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

0.00min 0.000ng/ml d

response 0

9/15/09 MP

tlc 9/15/09

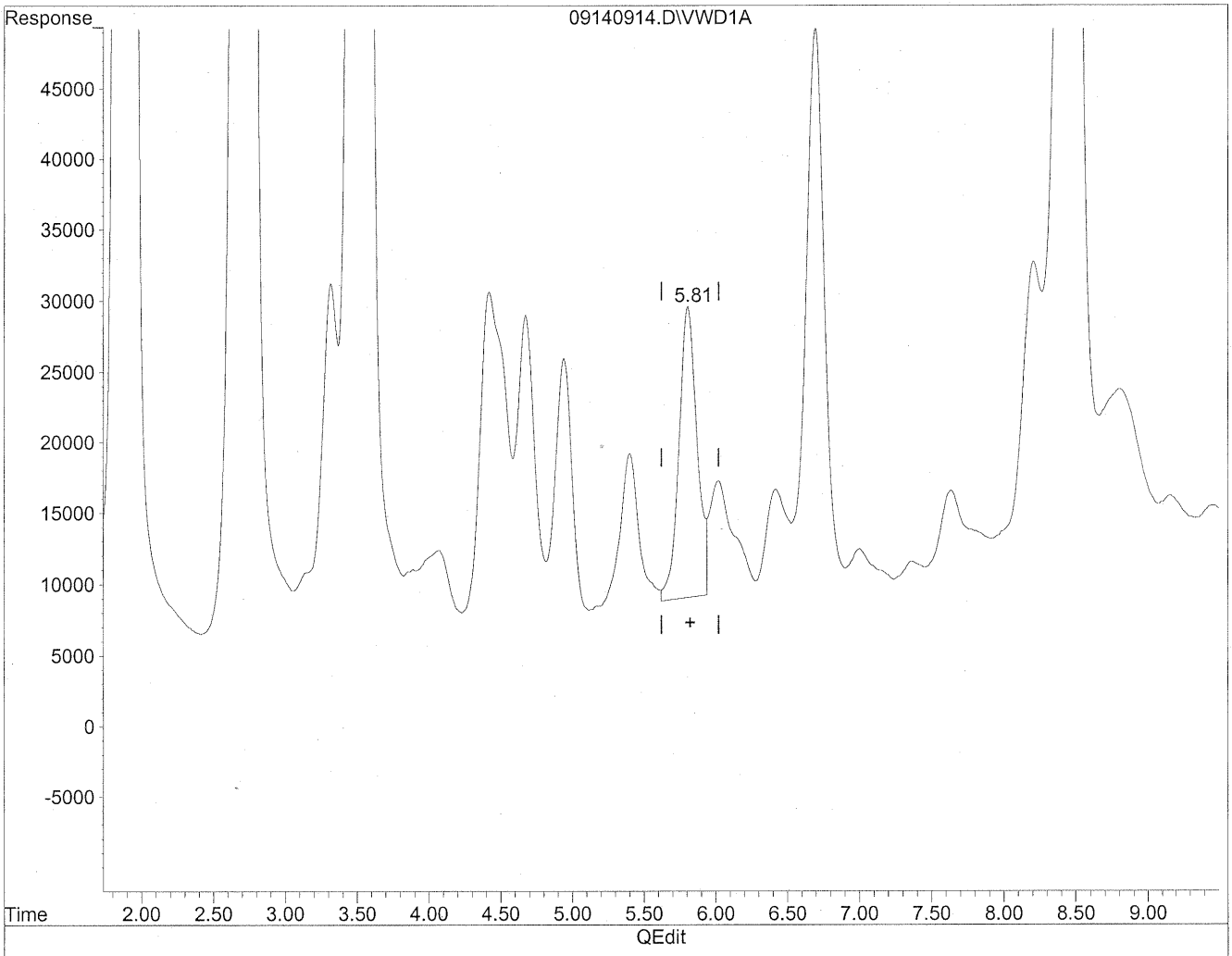
109

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.81min 655.365ng/ml

response 1788082

110

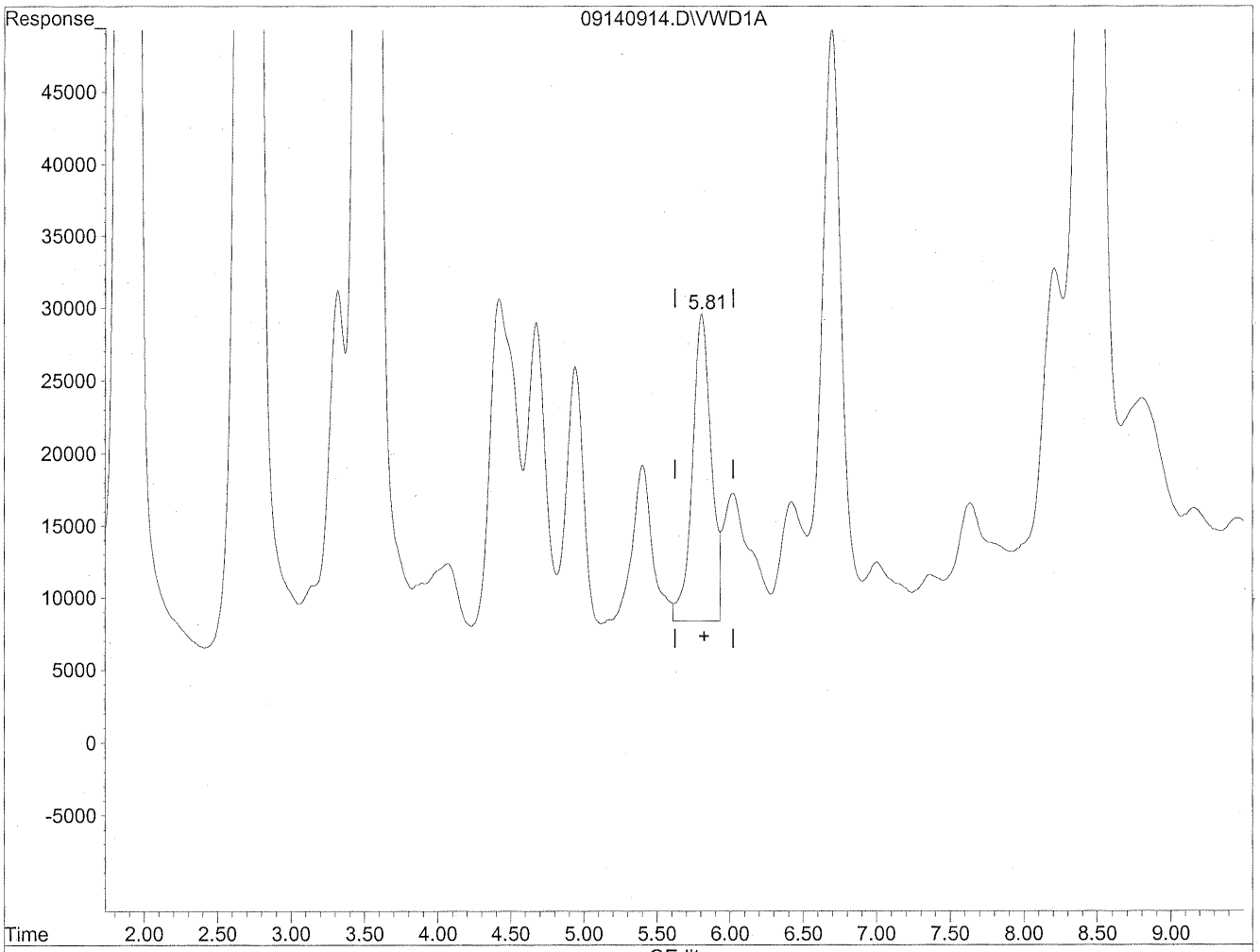
(+) = Expected Retention Time

09140914.D TO110909.M Tue Sep 15 10:10:14 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



QEdit

(6) Benzaldehyde

5.81min 712.145ng/ml m

response 1943001

9/15/09

9/15/09

111

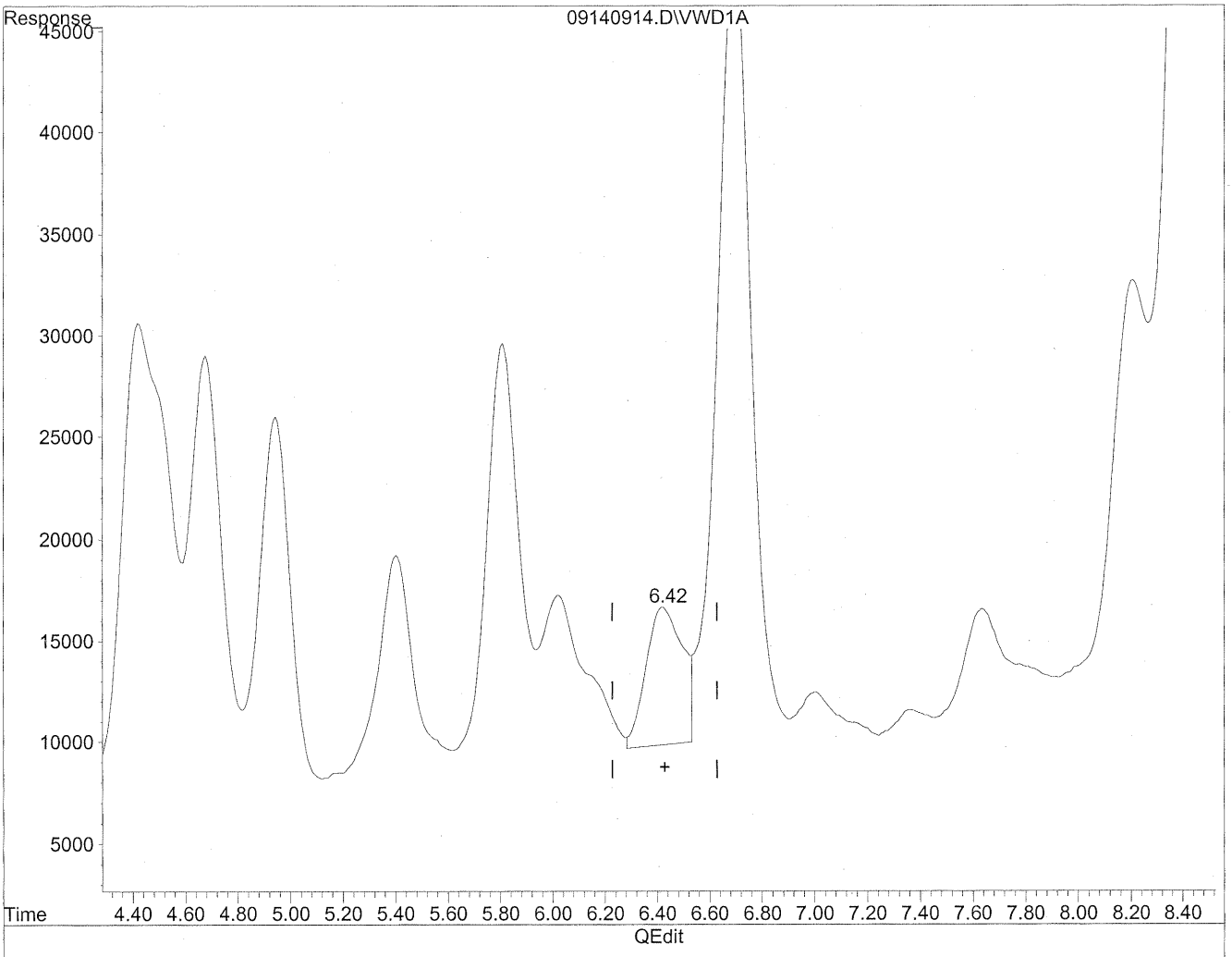
(+) = Expected Retention Time

09140914.D TO110909.M Tue Sep 15 10:10:23 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.42min 191.540ng/ml

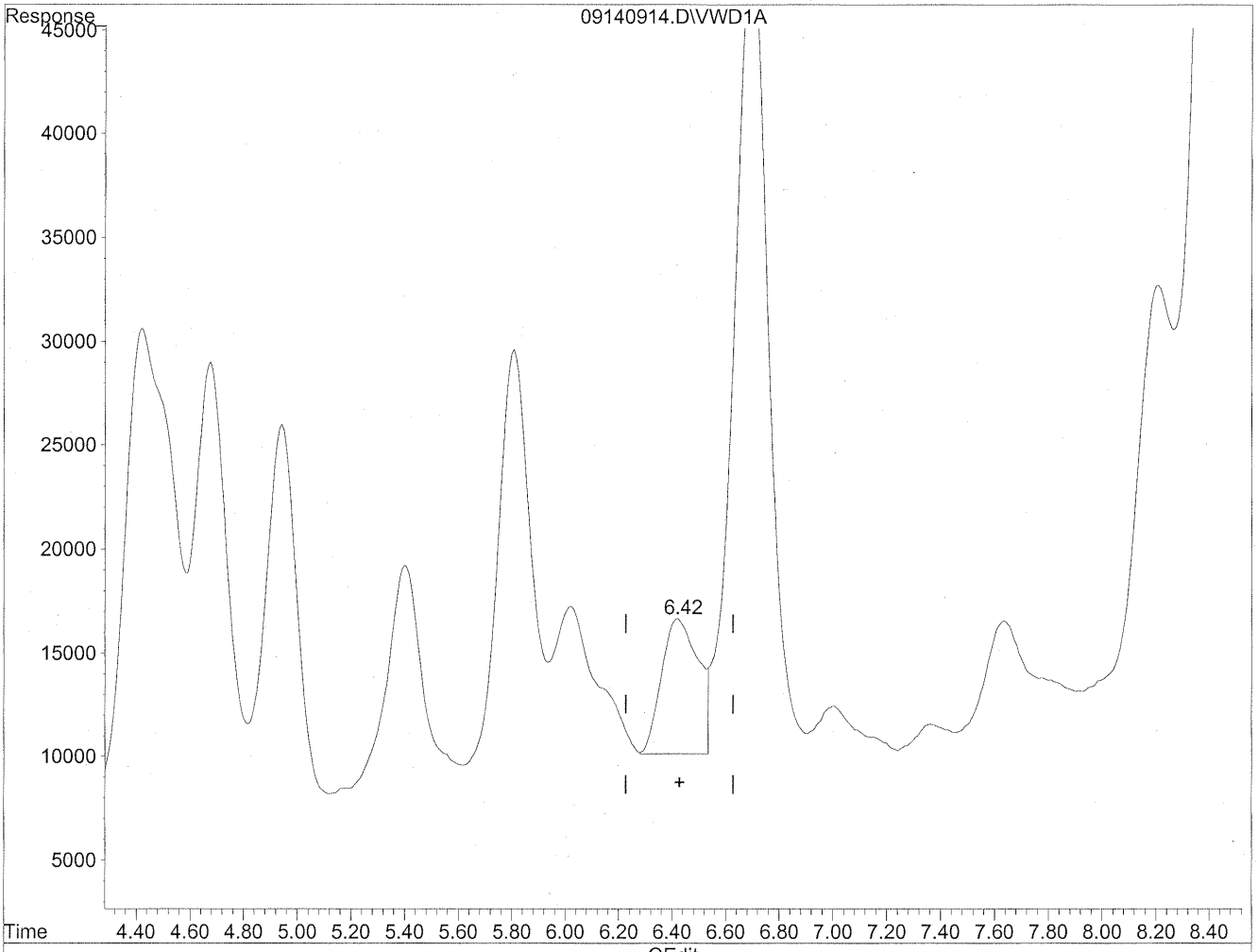
response 659239

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.42min 186.299ng/ml m

response 641201

AC 9/15/09

9/15/09 pc

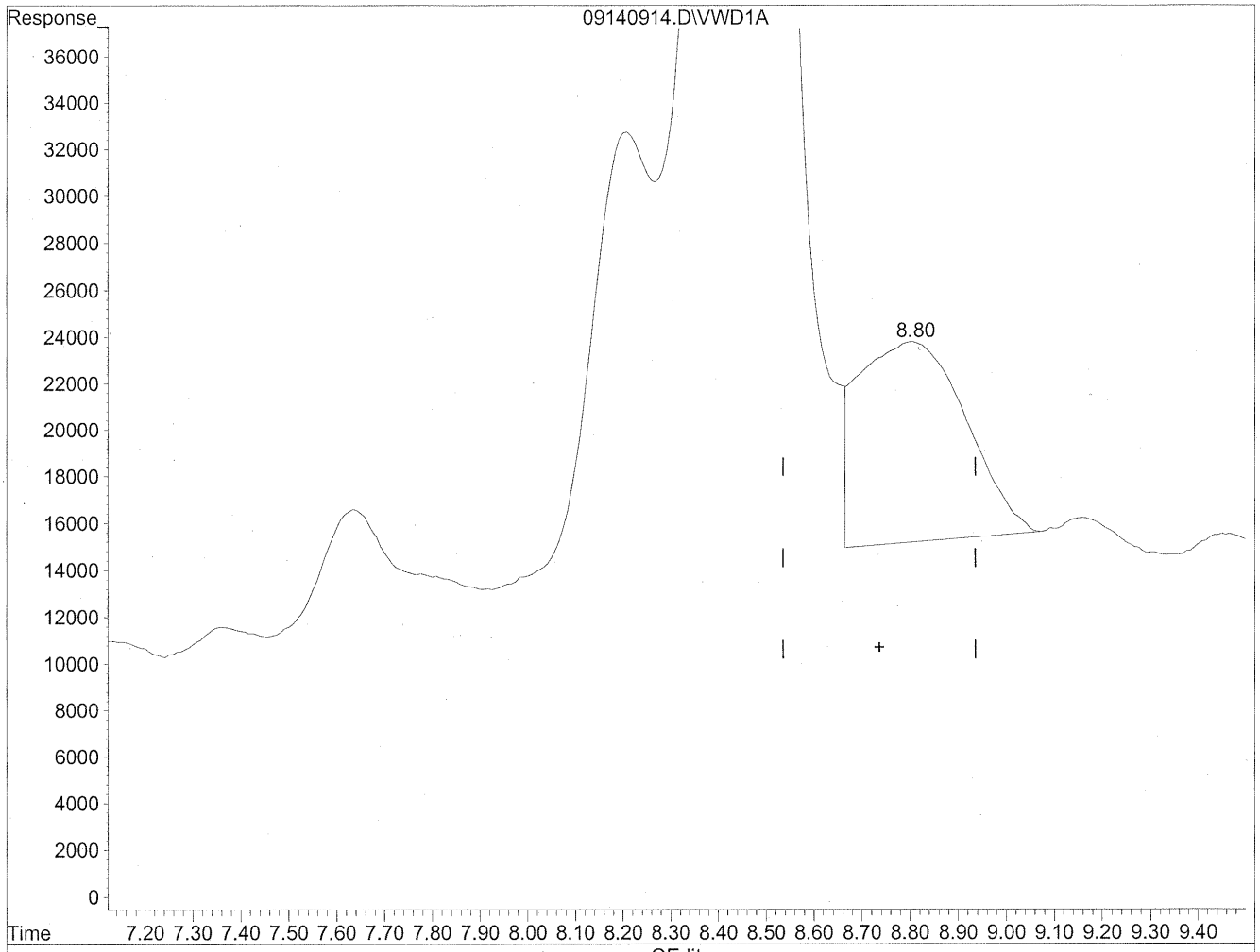
(+) = Expected Retention Time

09140914.D TO110909.M Tue Sep 15 10:10:49 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



QEdit

(12) 2,5-Dimethylbenzaldehyde

8.81min 676.835ng/ml

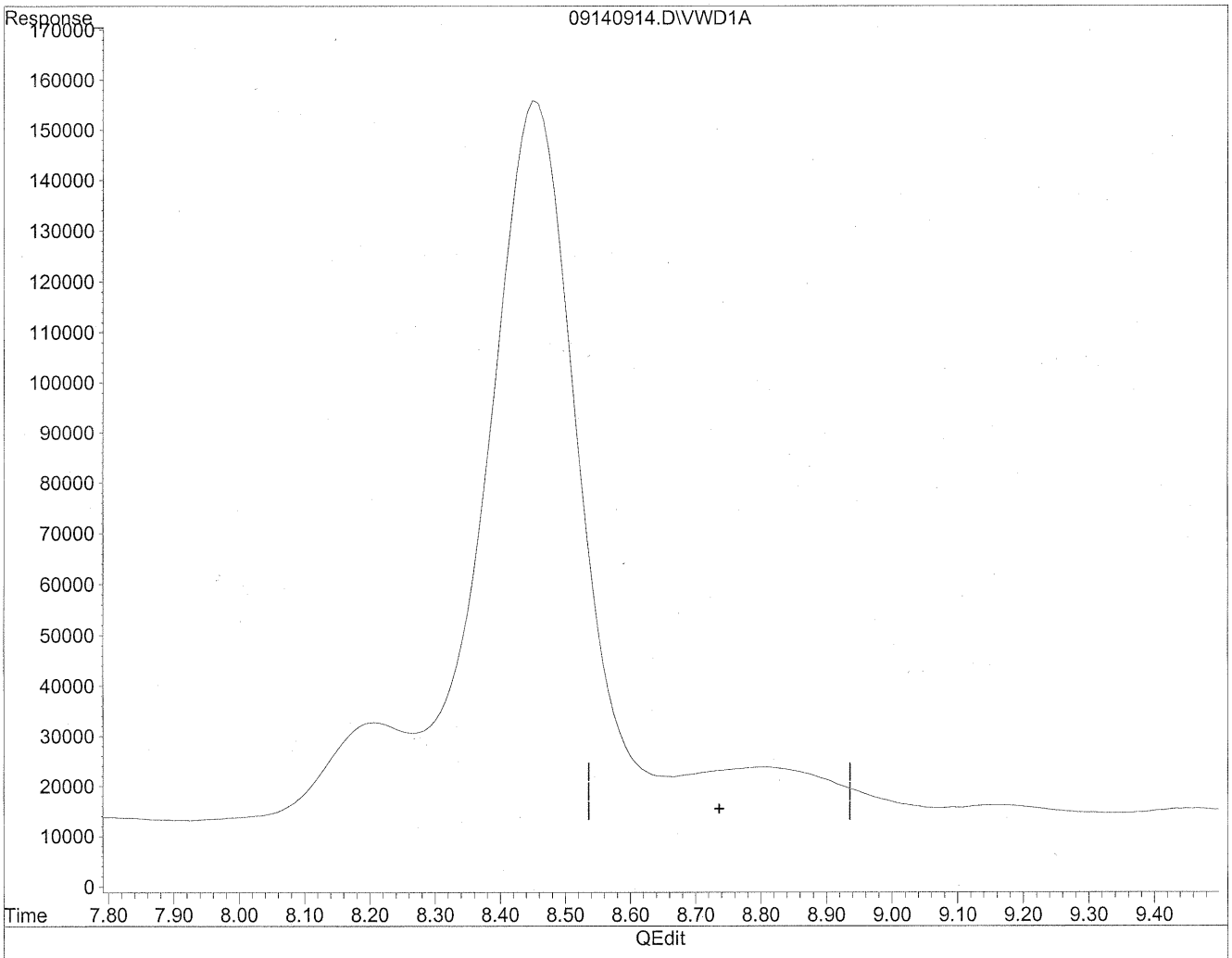
response 1350619

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140914.D Vial: 110
Acq On : 14-Sep-2009, 11:45 Operator: MD
Sample : P0903011-008 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 11:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

9/15/09 mp (RT) +/- 9/15/09

115

(+) = Expected Retention Time

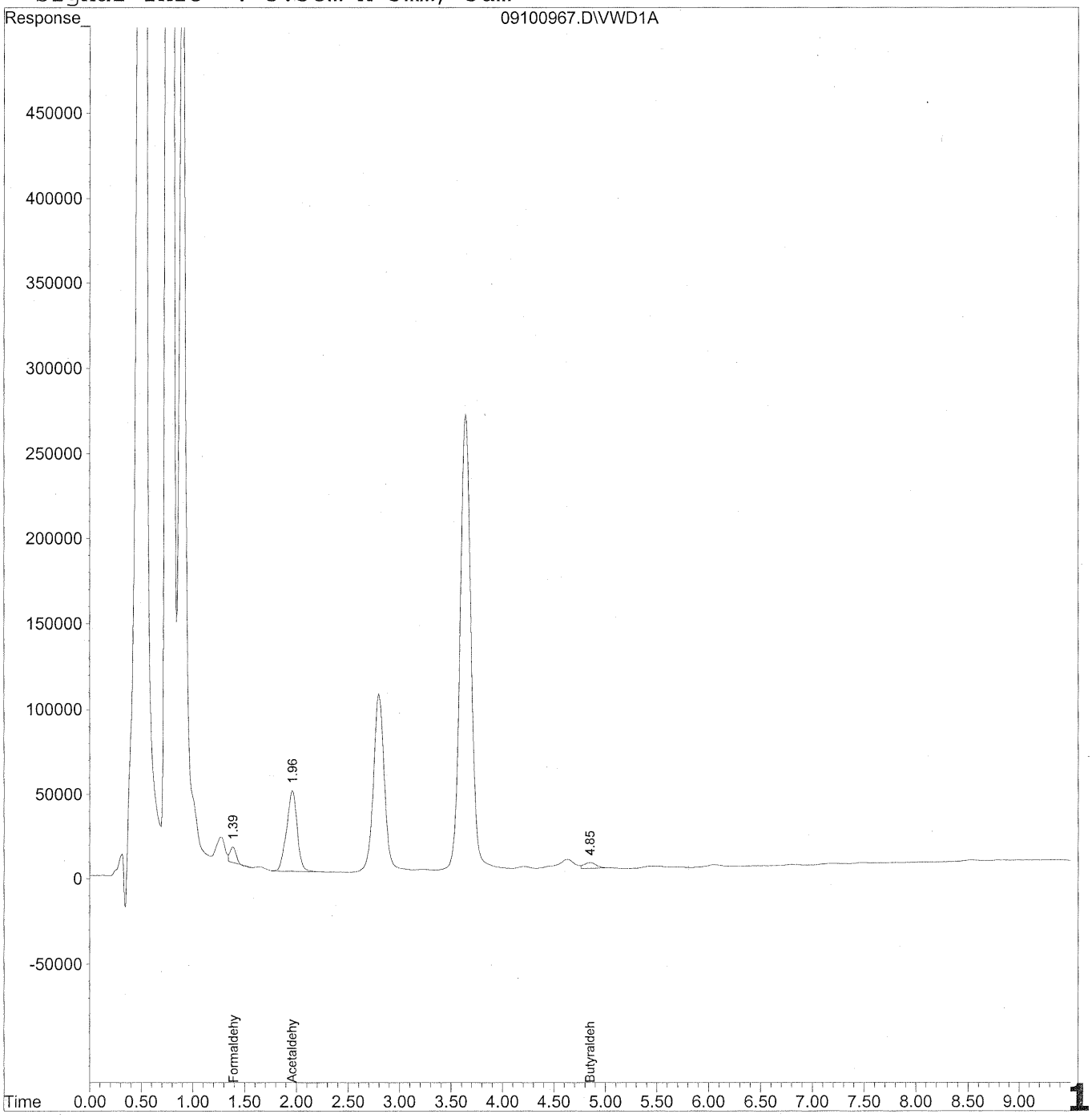
09140914.D TO110909.M Tue Sep 15 10:11:46 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100967.D Vial: 140
Acq On : 11-Sep-2009, 14:53 Operator: MD
Sample : P0903011-008 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:56 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



116

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100967.D Vial: 140
Acq On : 11-Sep-2009, 14:53 Operator: MD
Sample : P0903011-008 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:56 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

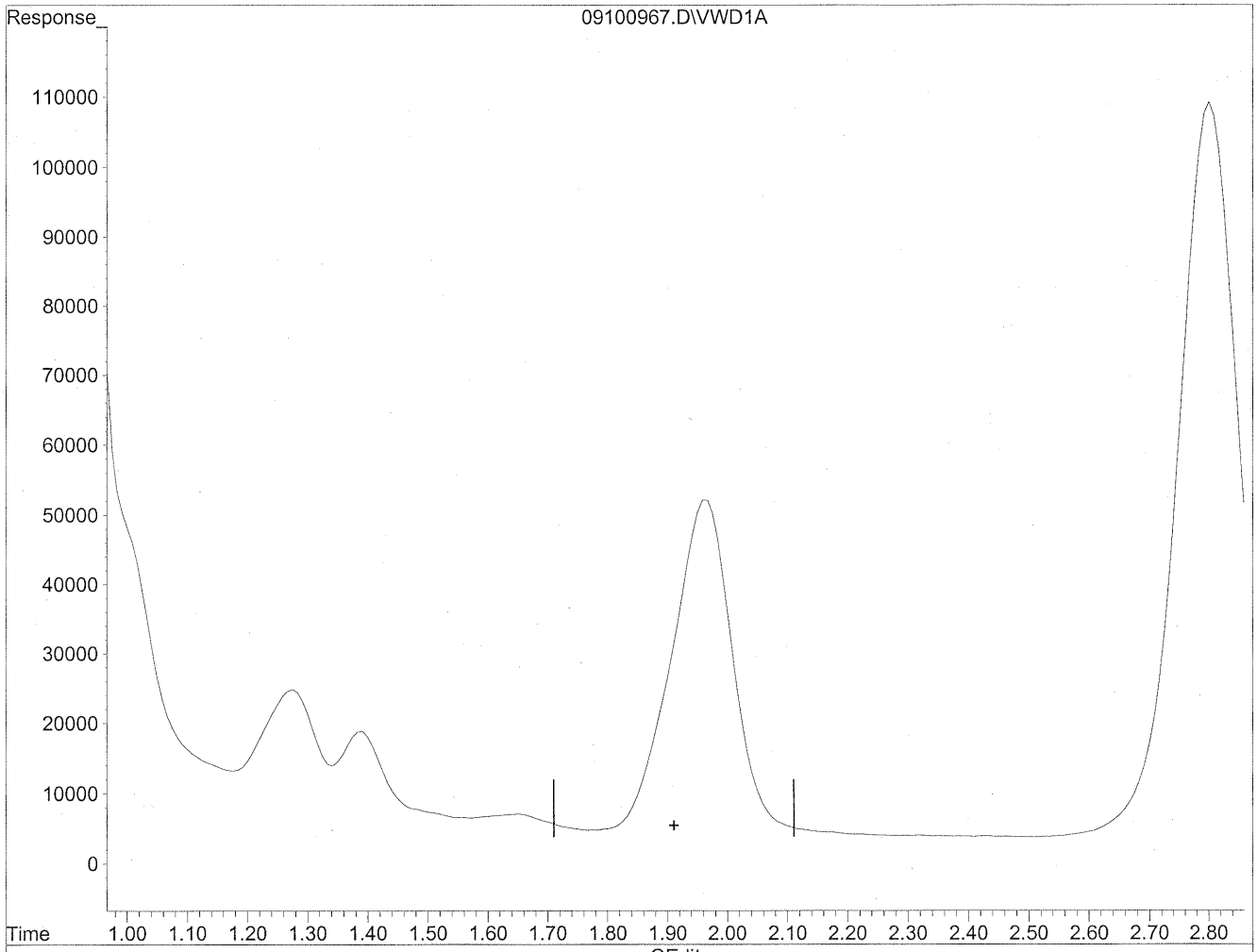
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.39	367686	41.149	ng/ml
2)	Acetaldehyde	1.96	3419078	525.947	ng/mlm
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	4.85	274024	67.614	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	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

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100967.D Vial: 140
Acq On : 11-Sep-2009, 14:53 Operator: MD
Sample : P0903011-008 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 15:34 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.91min 0.000ng/ml

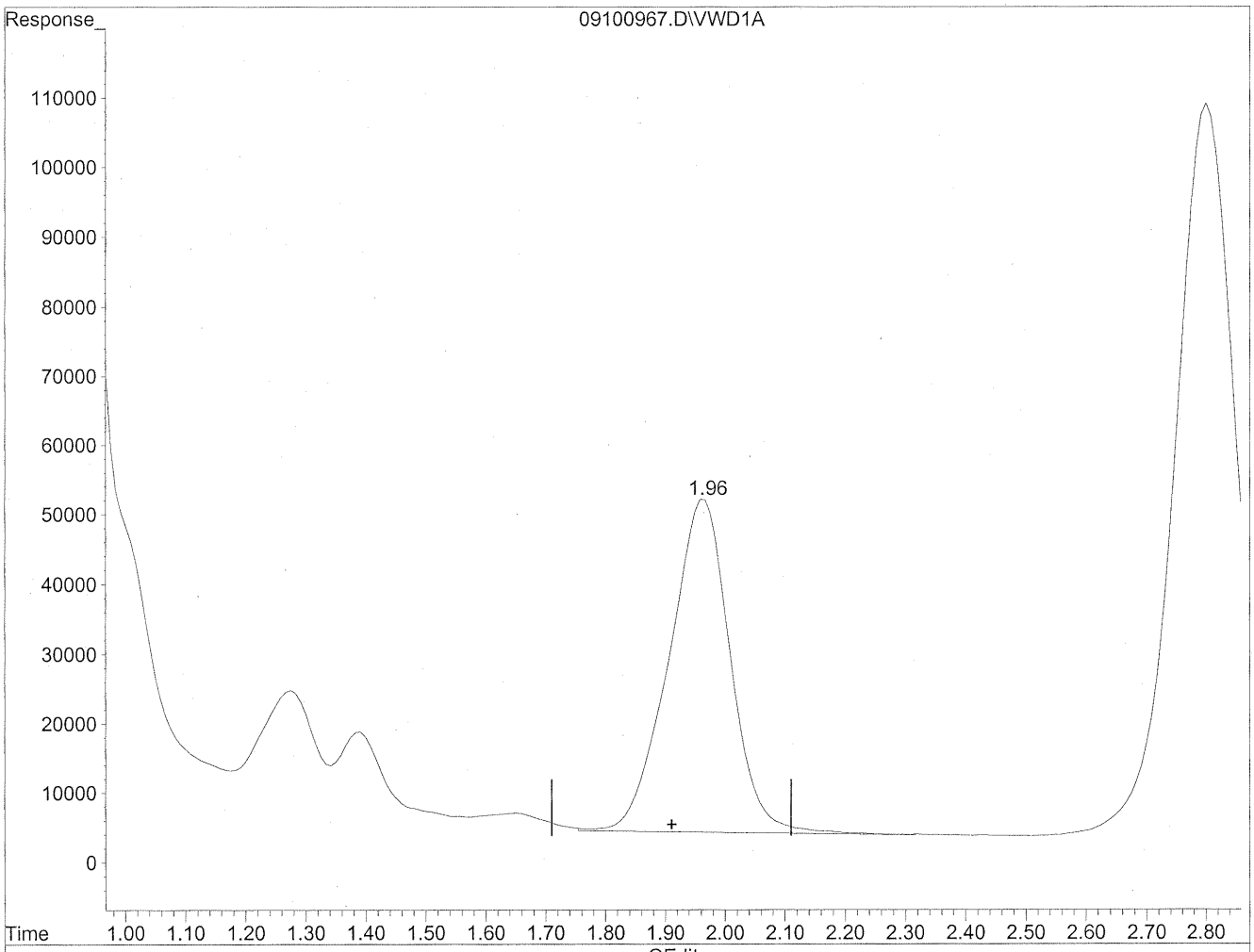
response 0

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100967.D Vial: 140
Acq On : 11-Sep-2009, 14:53 Operator: MD
Sample : P0903011-008 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 15:34 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.96min 525.947ng/ml m

response 3419078

9/15/09 BMI

tlc 9/15/09

119

(+) = Expected Retention Time

09100967.D TO110909.M Tue Sep 15 08:56:37 2009

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103584**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-009

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: 100.5 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 100	ND	1.0	ND	0.81	
75-07-0	Acetaldehyde	< 100	ND	1.0	ND	0.55	
123-38-6	Propionaldehyde	< 100	ND	1.0	ND	0.42	
4170-30-3	Crotonaldehyde, Total	< 100	ND	1.0	ND	0.35	
123-72-8	Butyraldehyde	< 100	ND	1.0	ND	0.34	
100-52-7	Benzaldehyde	< 100	ND	1.0	ND	0.23	
590-86-3	Isovaleraldehyde	< 100	ND	1.0	ND	0.28	
110-62-3	Valeraldehyde	< 100	ND	1.0	ND	0.28	
529-20-4	o-Tolualdehyde	< 100	ND	1.0	ND	0.20	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	2.0	ND	0.41	
66-25-1	n-Hexaldehyde	< 100	ND	1.0	ND	0.24	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	1.0	ND	0.18	

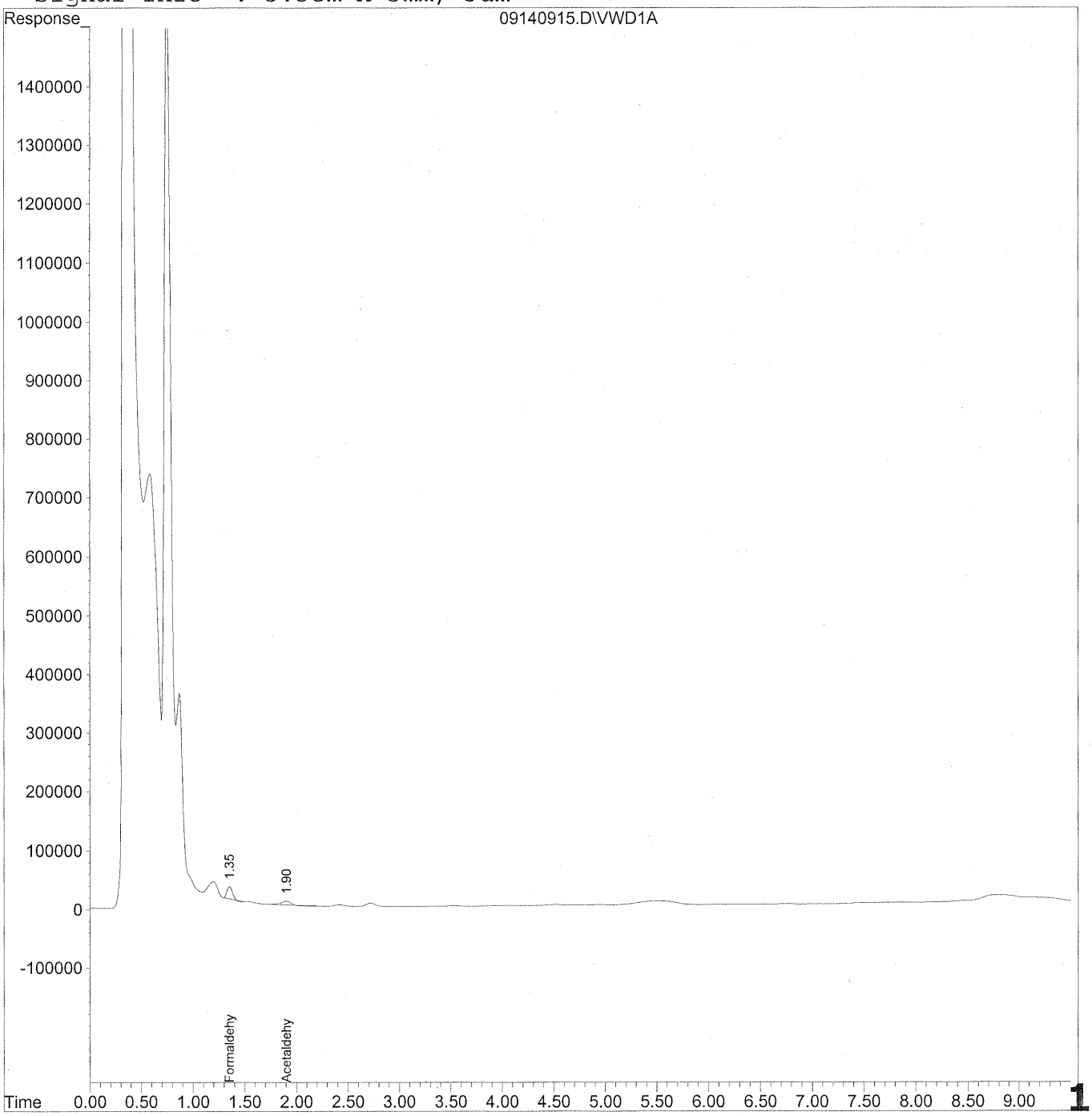
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
BC = Results reported are not blank corrected.

Verified By: _____ Date: 9/16/09

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140915.D Vial: 111
Acq On : 14-Sep-2009, 11:57 Operator: MD
Sample : P0903011-009 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:12 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



121

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140915.D Vial: 111
Acq On : 14-Sep-2009, 11:57 Operator: MD
Sample : P0903011-009 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:12 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

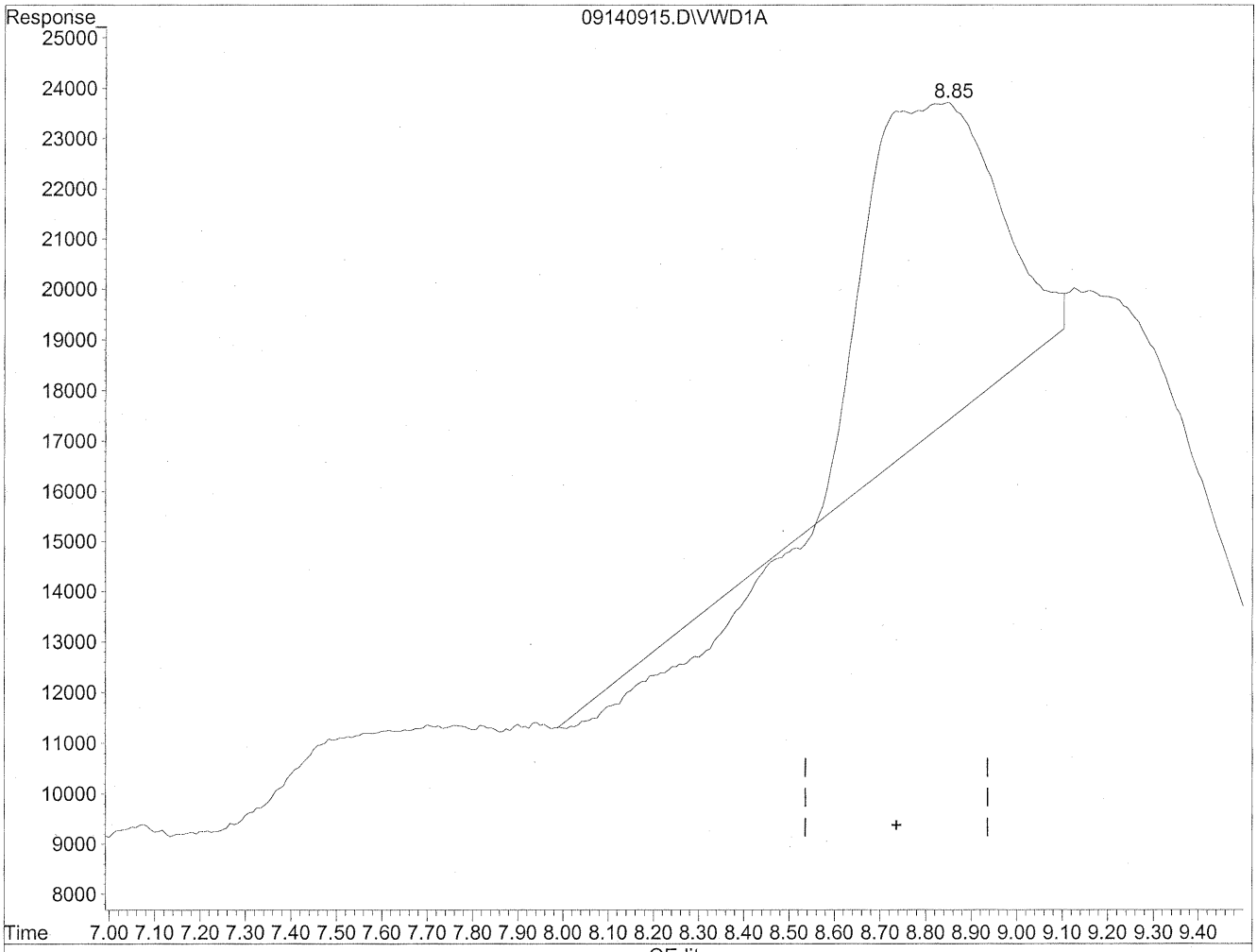
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	784823	87.833	ng/ml
2)	Acetaldehyde	1.91	331356	50.972	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/mld

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140915.D Vial: 111
Acq On : 14-Sep-2009, 11:57 Operator: MD
Sample : P0903011-009 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 12:19 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.85min 587.964ng/ml

response 1173278

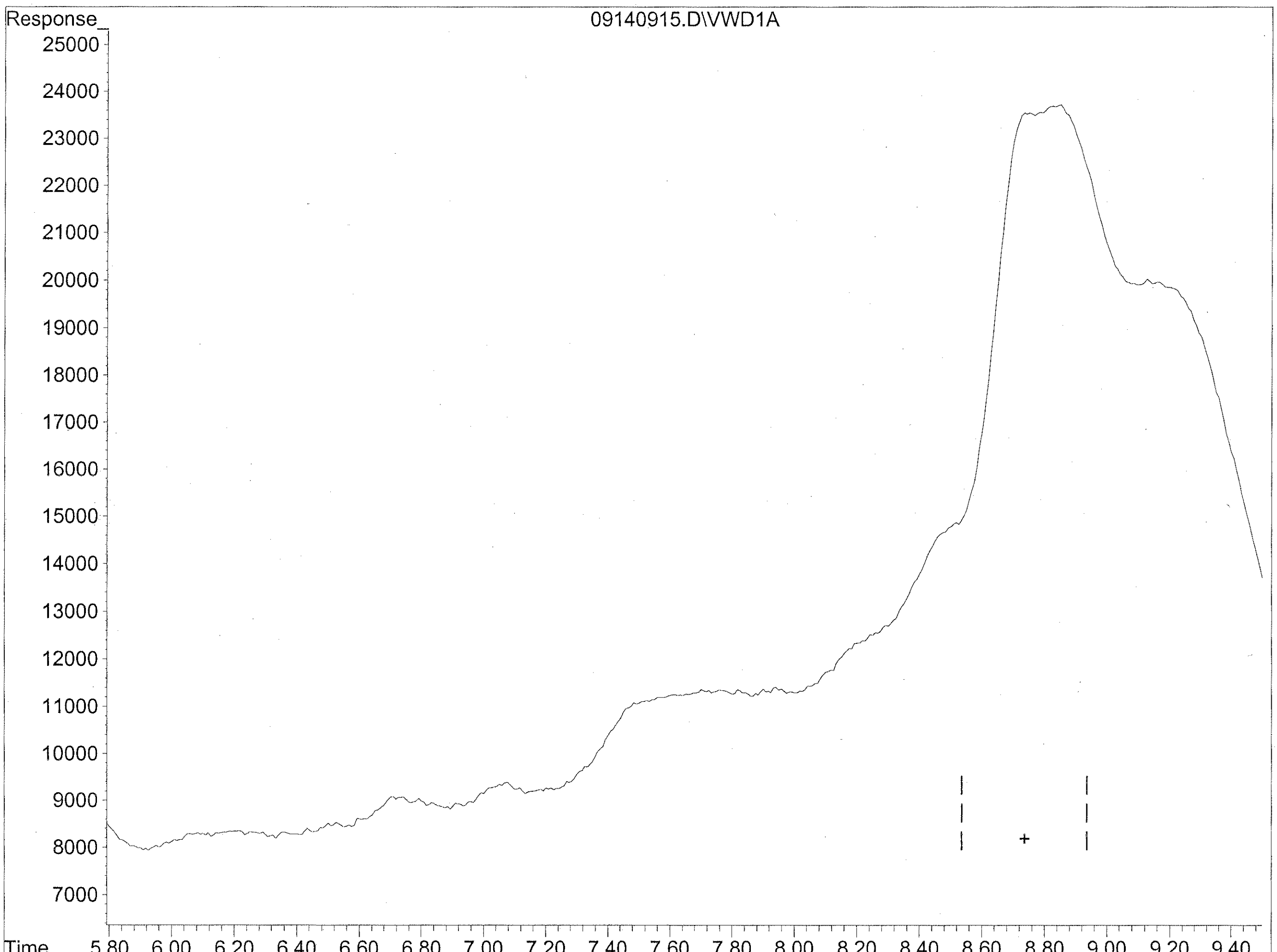
123

(+) = Expected Retention Time

Quantitation Report

```
Data File : J:\LC02\DATA\TO11A\2009_09\14\09140915.D      Vial: 111
Acq On    : 14-Sep-2009, 11:57                          Operator: MD
Sample    : P0903011-009 front 1.0ml                    Inst    : VWD
Misc      :                                             Multiplr: 1.00
IntFile   : events.e
Quant Time: Sep 14 12:19 19109  Quant Results File: TO110909.RES

Method          : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title           : LC-1050 TO-11A ICAL
Last Update     : Tue Sep 15 09:56:03 2009
Response via    : Multiple Level Calibration
```



QEdit

(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

MD 9/15/09 mp, (not real) TL 9/15/09

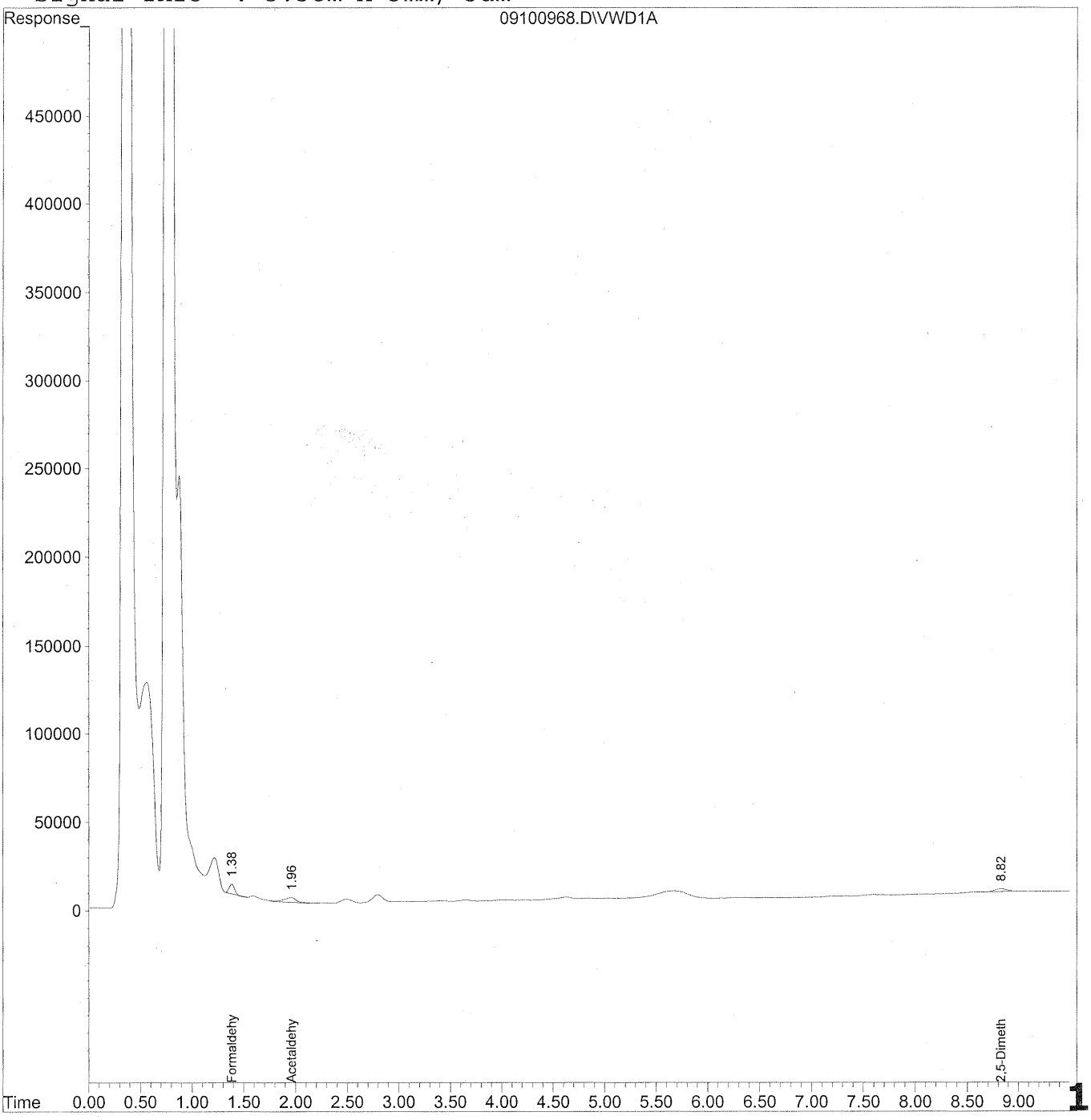
(+) = Expected Retention Time

09140915.D TO110909.M Tue Sep 15 10:12:12 2009

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100968.D Vial: 141
Acq On : 11-Sep-2009, 15:05 Operator: MD
Sample : P0903011-009 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:57 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



125

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100968.D Vial: 141
Acq On : 11-Sep-2009, 15:05 Operator: MD
Sample : P0903011-009 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:57 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

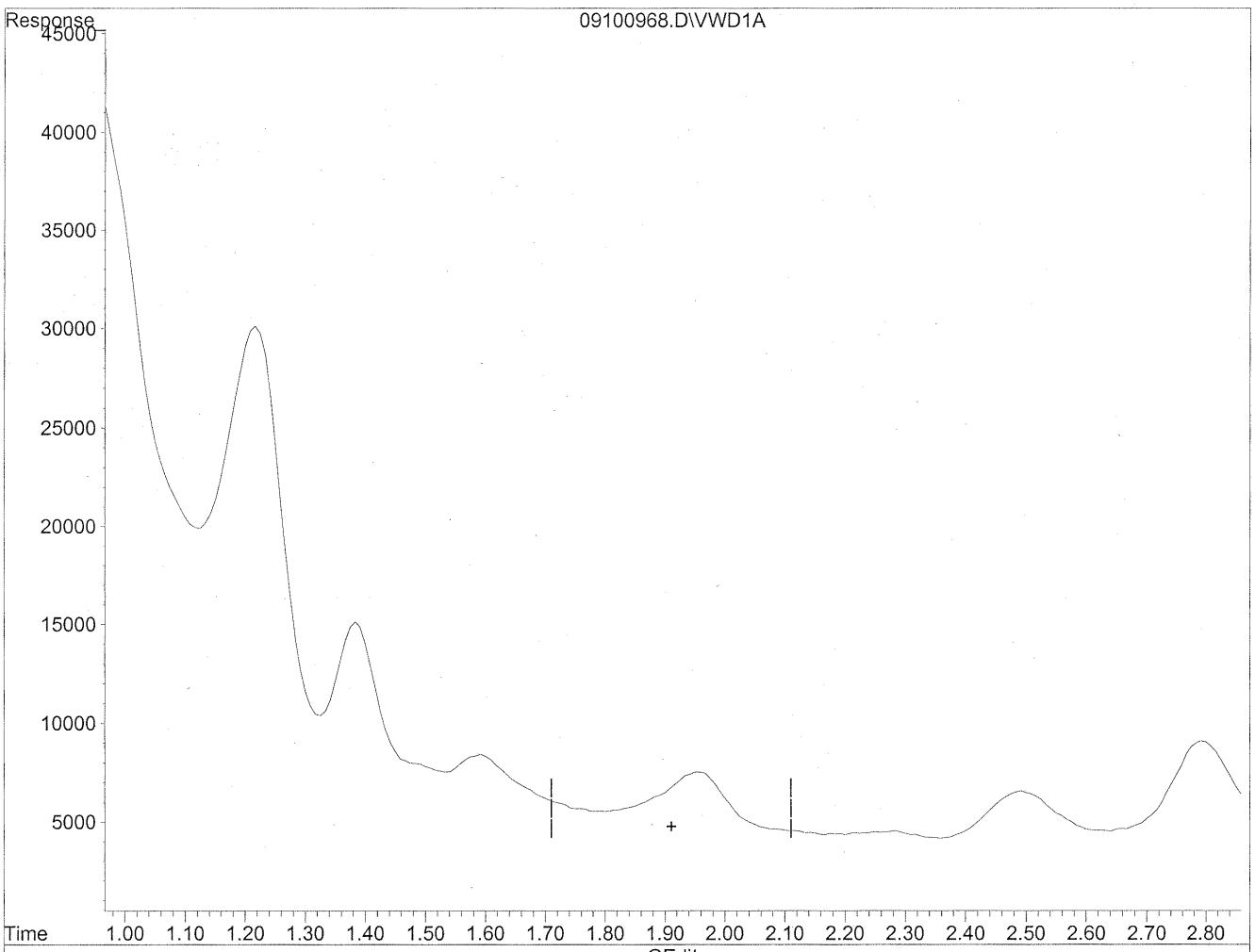
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.39	190831	21.357	ng/ml
2)	Acetaldehyde	1.96	228147	35.095	ng/mlm
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	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	8.83	137910	69.111	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100968.D Vial: 141
Acq On : 11-Sep-2009, 15:05 Operator: MD
Sample : P0903011-009 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 15:34 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.91min 0.000ng/ml

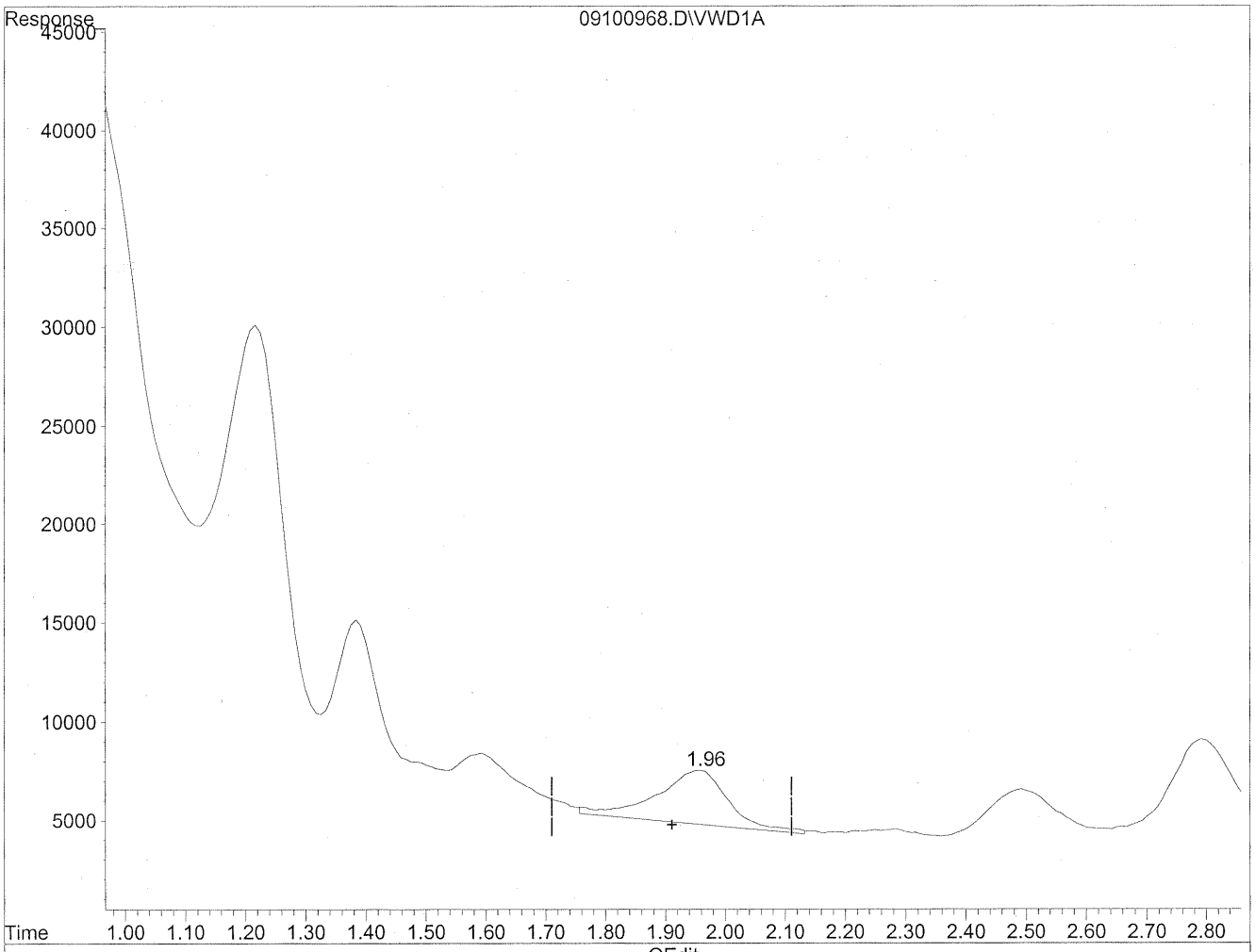
response 0

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100968.D Vial: 141
Acq On : 11-Sep-2009, 15:05 Operator: MD
Sample : P0903011-009 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 15:34 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.96min 35.095ng/ml m

response 228147

9/15/09

128

(+) = Expected Retention Time

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103585**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-010

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: 99.9 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**6,500**	**65**	1.0	**53**	0.82	
75-07-0	**Acetaldehyde**	**3,800**	**38**	1.0	**21**	0.56	**BT**
123-38-6	**Propionaldehyde**	**290**	**2.9**	1.0	**1.2**	0.42	
4170-30-3	Crotonaldehyde, Total	< 100	ND	1.0	ND	0.35	
123-72-8	**Butyraldehyde**	**350**	**3.5**	1.0	**1.2**	0.34	
100-52-7	**Benzaldehyde**	**660**	**6.6**	1.0	**1.5**	0.23	
590-86-3	**Isovaleraldehyde**	**160**	**1.6**	1.0	**0.47**	0.28	
110-62-3	**Valeraldehyde**	**1,000**	**10**	1.0	**2.9**	0.28	
529-20-4	o-Tolualdehyde	< 100	ND	1.0	ND	0.20	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	2.0	ND	0.41	
66-25-1	**n-Hexaldehyde**	**4,400**	**44**	1.0	**11**	0.24	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	1.0	ND	0.18	

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.
BT = Results indicated possible breakthrough; back section > 10% front section.

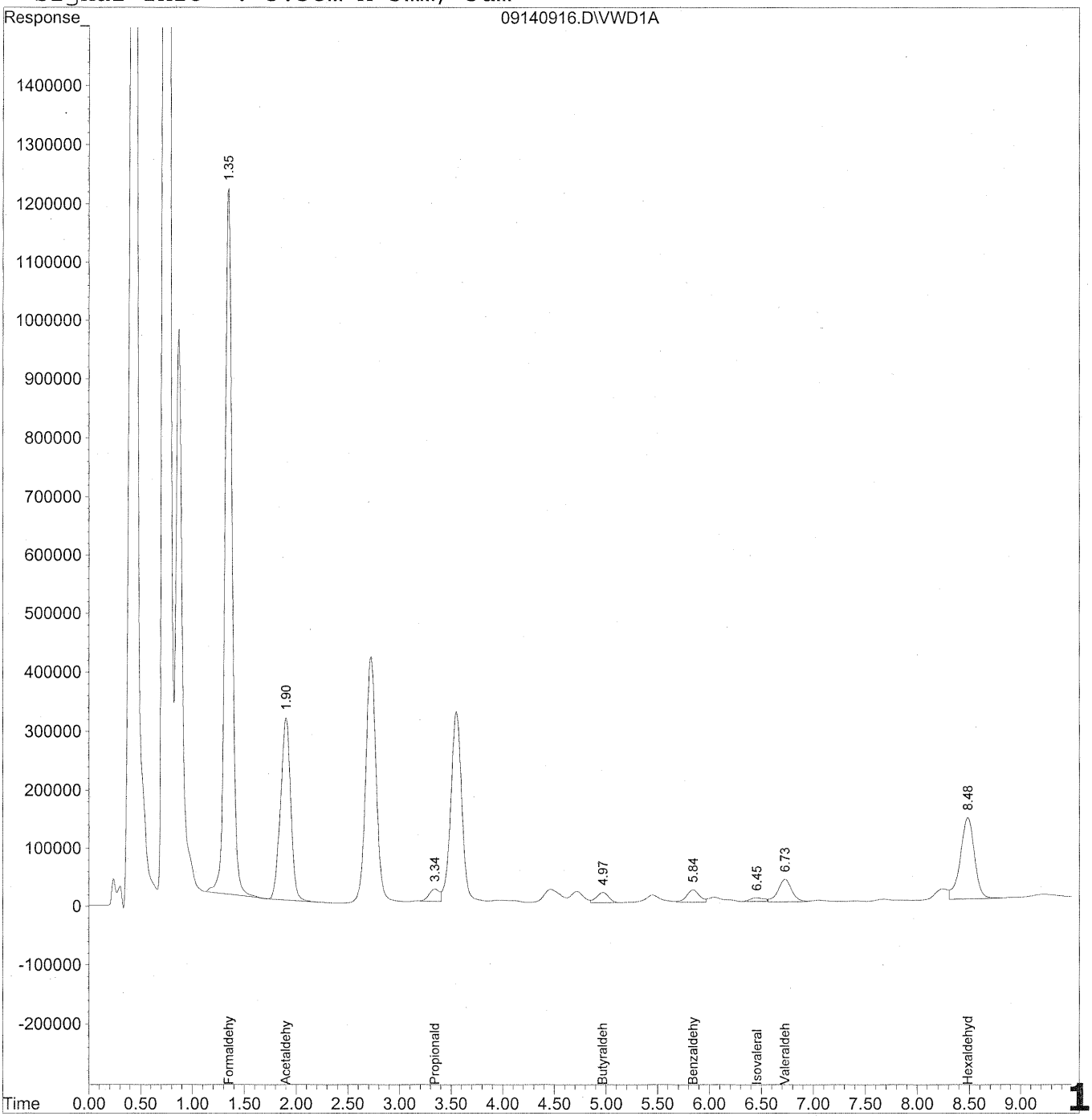
Verified By: _____ Date: 9/16/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140916.D Vial: 112
Acq On : 14-Sep-2009, 12:09 Operator: MD
Sample : P0903011-010 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:13 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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



130

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140916.D Vial: 112
Acq On : 14-Sep-2009, 12:09 Operator: MD
Sample : P0903011-010 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:13 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

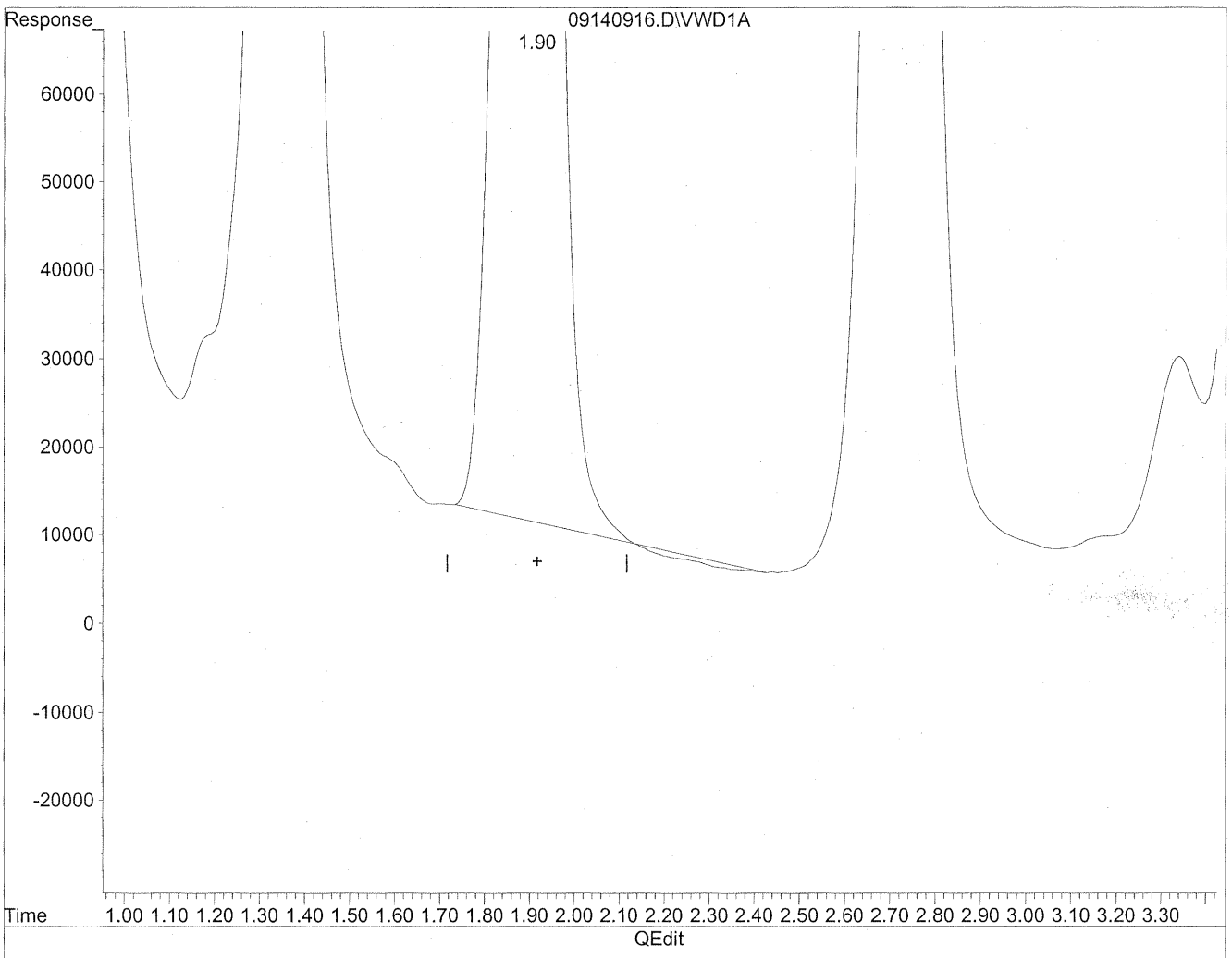
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	58262105	6520.346	ng/ml
2)	Acetaldehyde	1.90	21169776	3256.489	ng/mlm
3)	Propionaldehyde	3.34	1525636	293.514	ng/mlm
4)	Crotonaldehyde	0.00	0	N.D.	ng/mld
5)	Butyraldehyde	4.97	1405882	346.894	ng/ml
6)	Benzaldehyde	5.84	1795526	658.093	ng/ml
7)	Isovaleraldehyde	6.45	565956	164.437	ng/mlm
8)	Valeraldehyde	6.73	3523687	1036.488	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	8.49	13112835	4428.928	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.
09140916.D TO110909.M Tue Sep 15 10:31:02 2009 Page 1

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140916.D Vial: 112
Acq On : 14-Sep-2009, 12:09 Operator: MD
Sample : P0903011-010 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:12 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



QEdit

(2) Acetaldehyde

1.91min 3221.127ng/ml

response 20939892

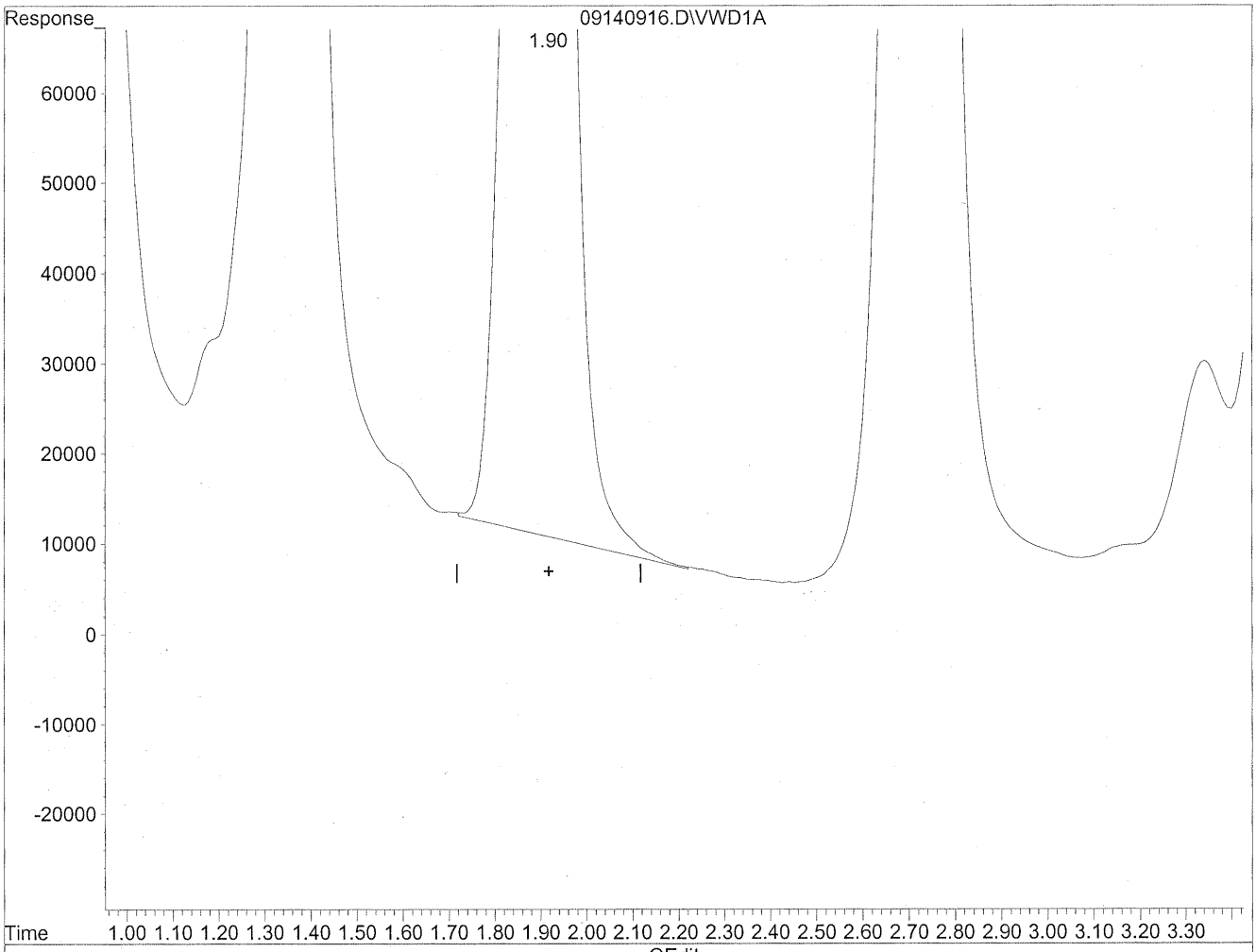
132

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140916.D Vial: 112
Acq On : 14-Sep-2009, 12:09 Operator: MD
Sample : P0903011-010 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:12 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



QEdit

(2) Acetaldehyde

1.90min 3256.489ng/ml m

response 21169776

9/15/09 TC

TIC 9/15/09

133

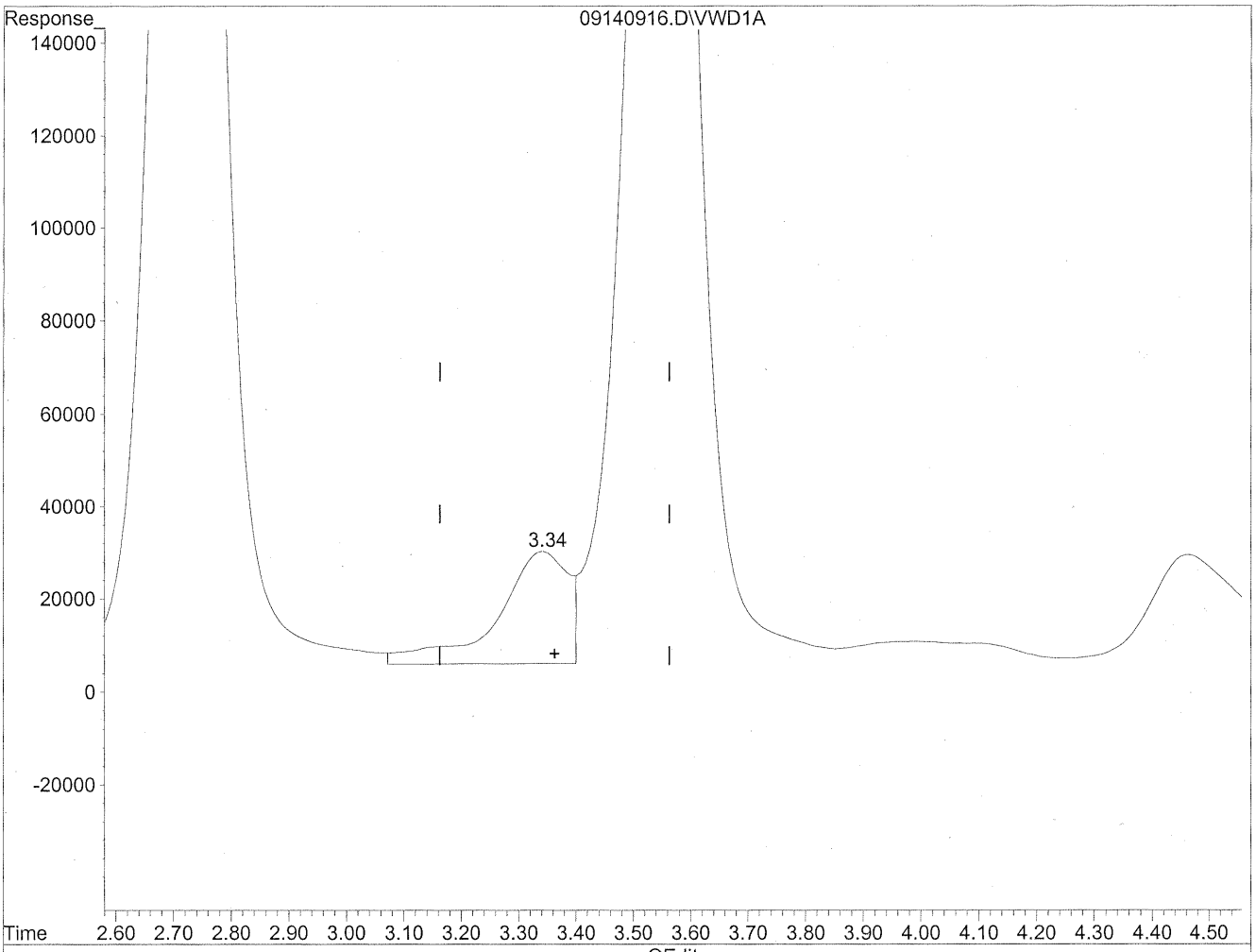
(+) = Expected Retention Time

09140916.D TO110909.M Tue Sep 15 10:12:39 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140916.D Vial: 112
Acq On : 14-Sep-2009, 12:09 Operator: MD
Sample : P0903011-010 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:12 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.34min 392.005ng/ml

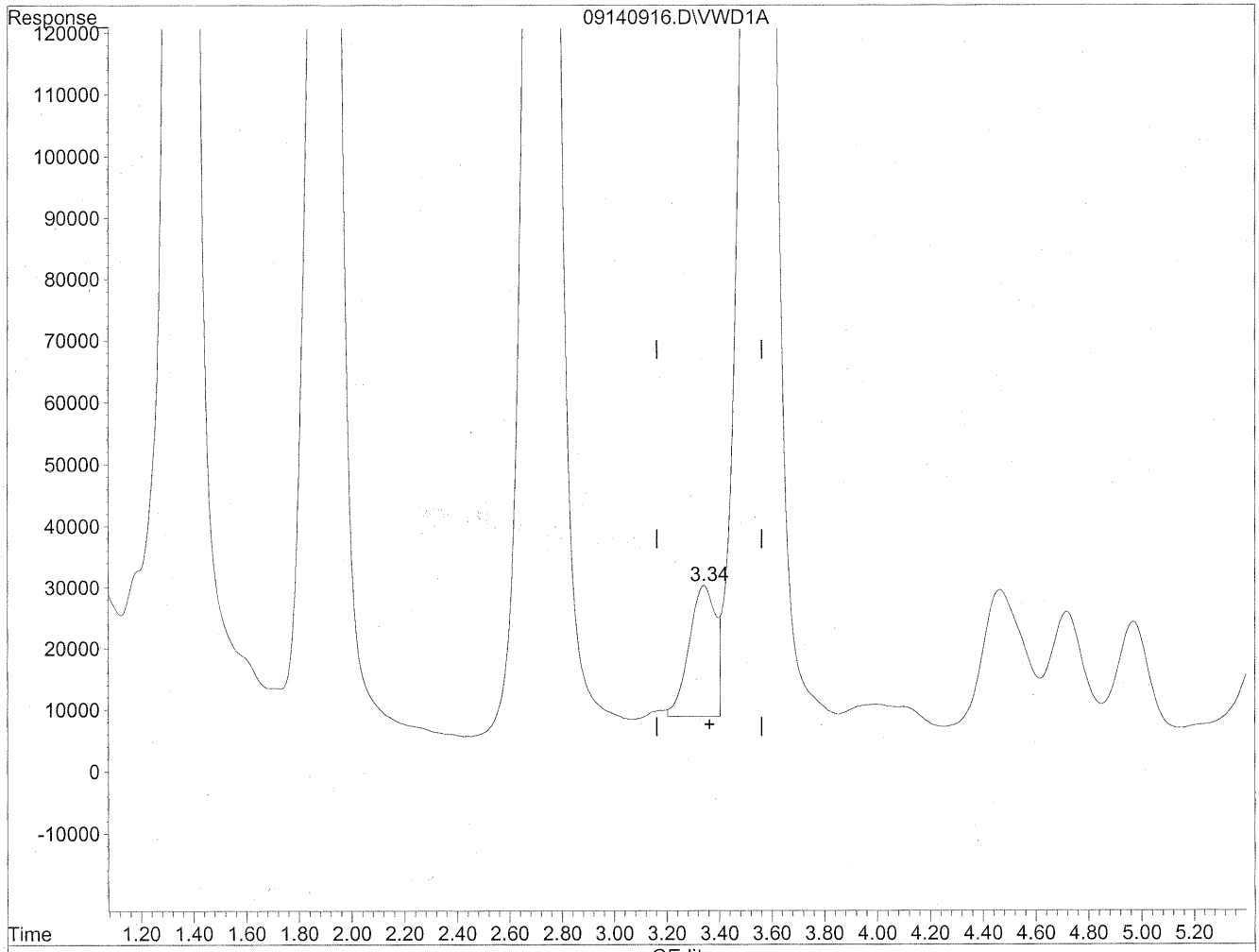
response 2037573

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140916.D Vial: 112
Acq On : 14-Sep-2009, 12:09 Operator: MD
Sample : P0903011-010 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:12 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.34min 293.514ng/ml m

response 1525636

9/15/09 HC 9/15/09

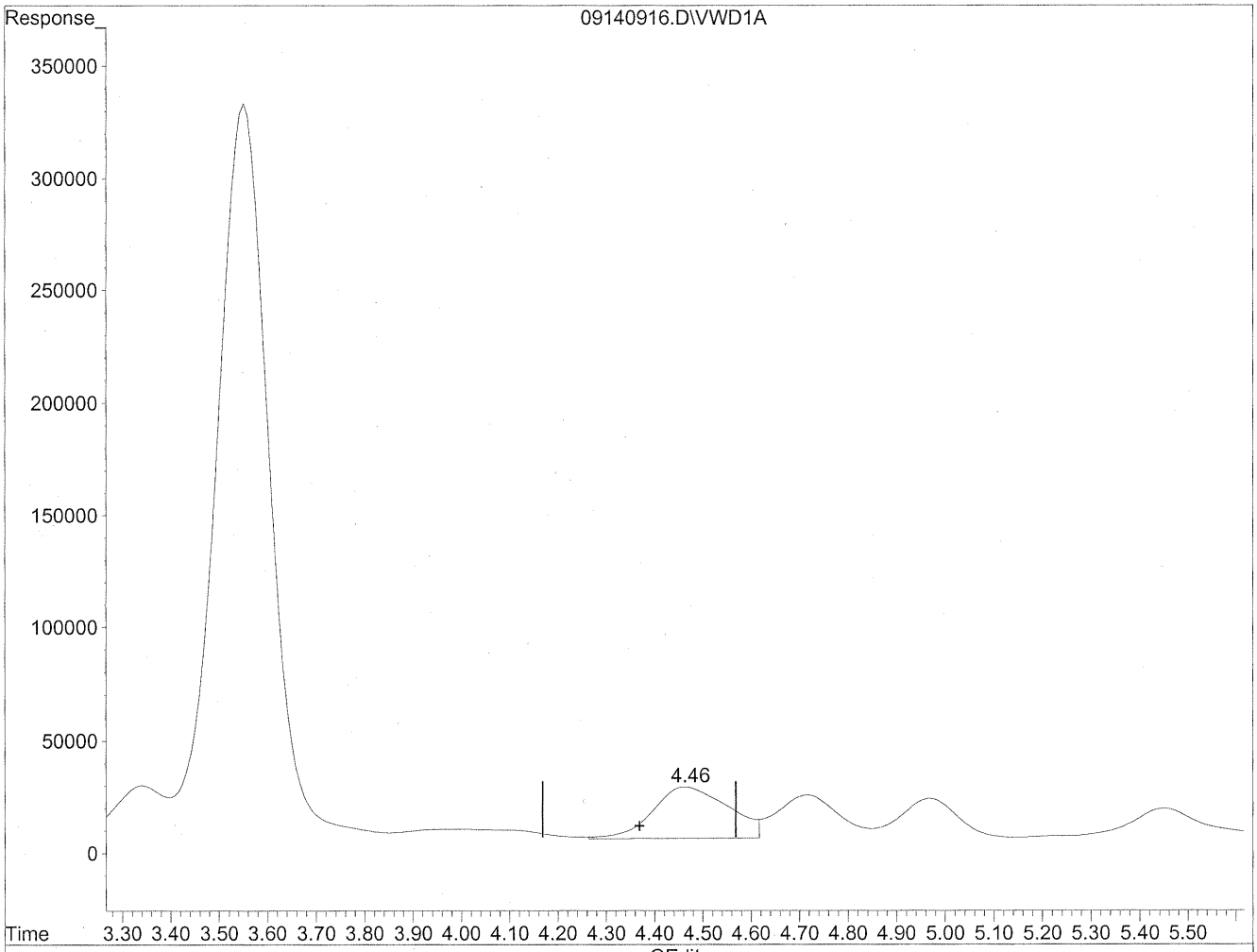
135

(+) = Expected Retention Time
09140916.D TO110909.M Tue Sep 15 10:13:04 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140916.D Vial: 112
Acq On : 14-Sep-2009, 12:09 Operator: MD
Sample : P0903011-010 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:12 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

4.47min 611.073ng/ml

response 2480695

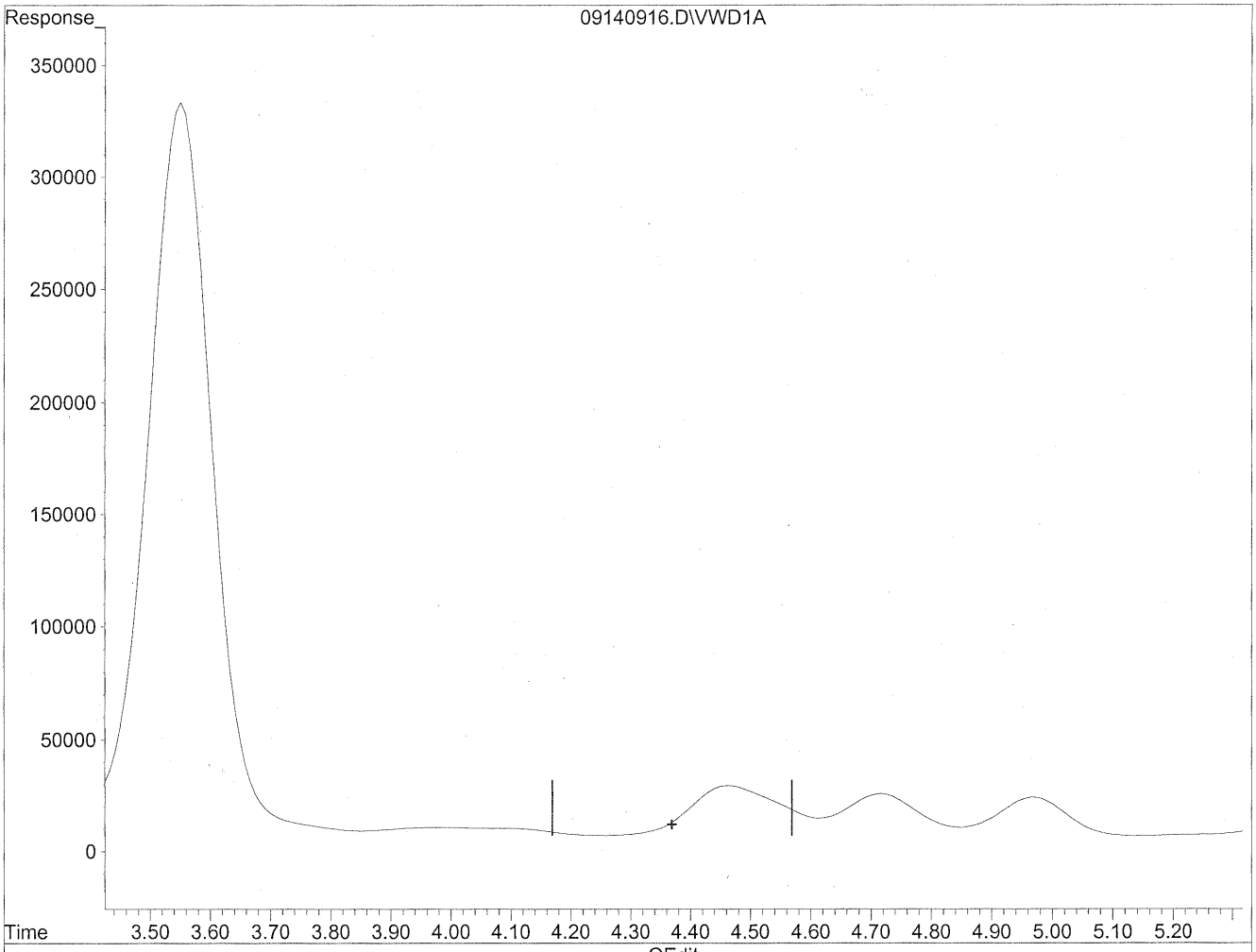
(+) = Expected Retention Time

09140916.D TO110909.M Tue Sep 15 10:13:07 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140916.D Vial: 112
Acq On : 14-Sep-2009, 12:09 Operator: MD
Sample : P0903011-010 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:12 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

0.00min 0.000ng/ml d

response 0

9/15/09 MP

MC 9/15/09

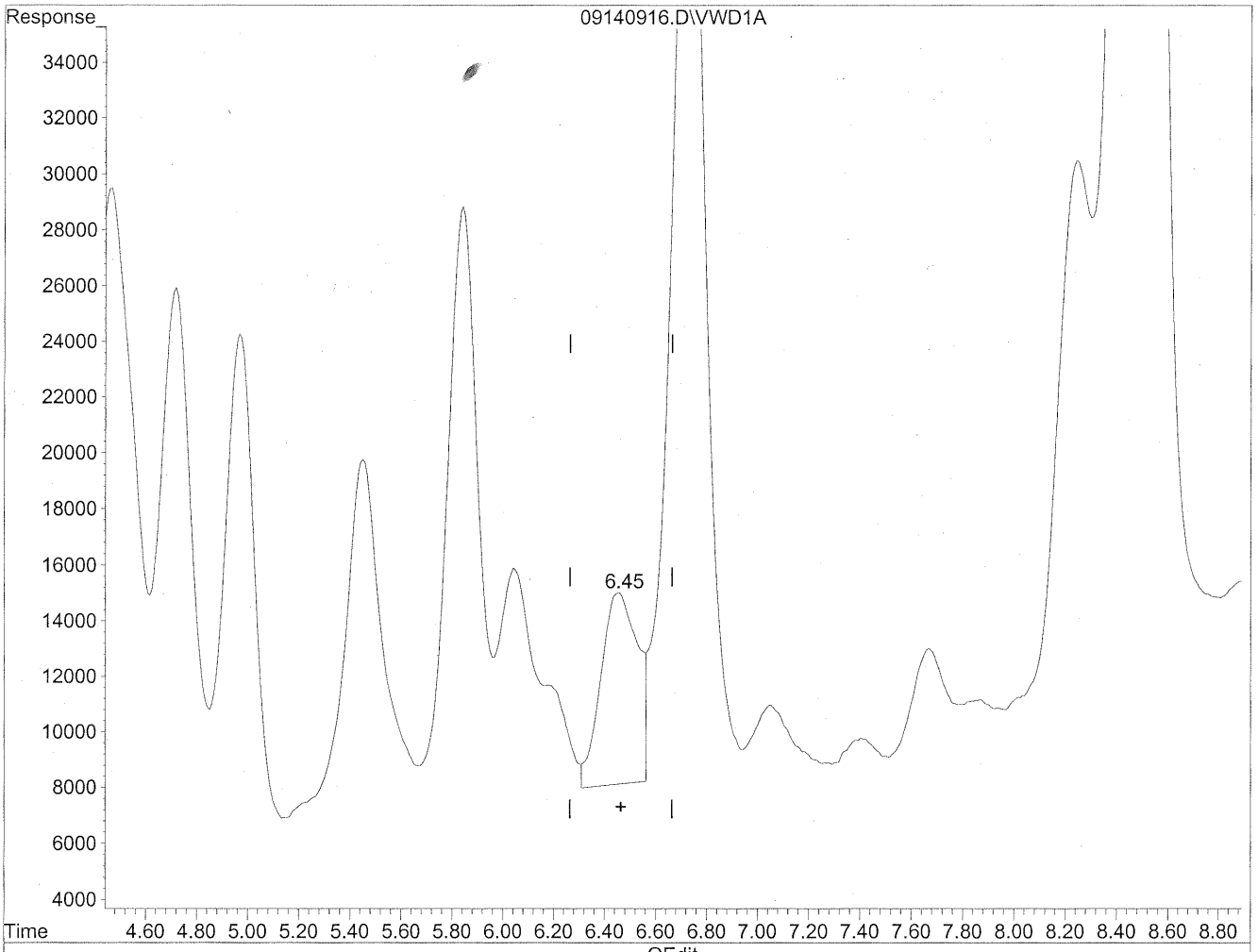
137

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140916.D Vial: 112
Acq On : 14-Sep-2009, 12:09 Operator: MD
Sample : P0903011-010 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:12 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



QEdit

(7) Isovaleraldehyde

6.46min 199.754ng/ml

response 687510

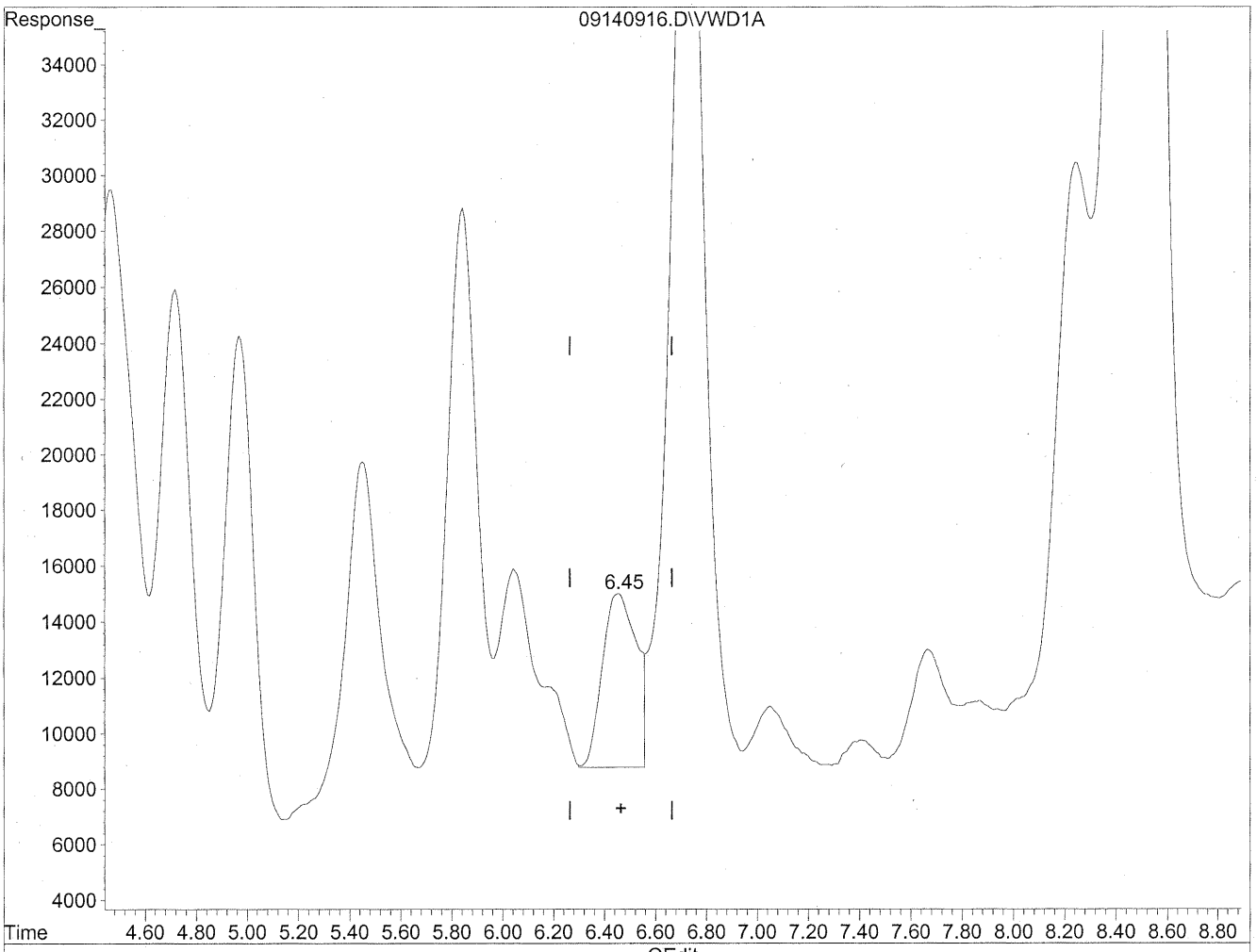
138

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140916.D Vial: 112
Acq On : 14-Sep-2009, 12:09 Operator: MD
Sample : P0903011-010 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:12 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.45min 164.437ng/ml m

response 565956

9/15/09 pc

HC 9/15/09

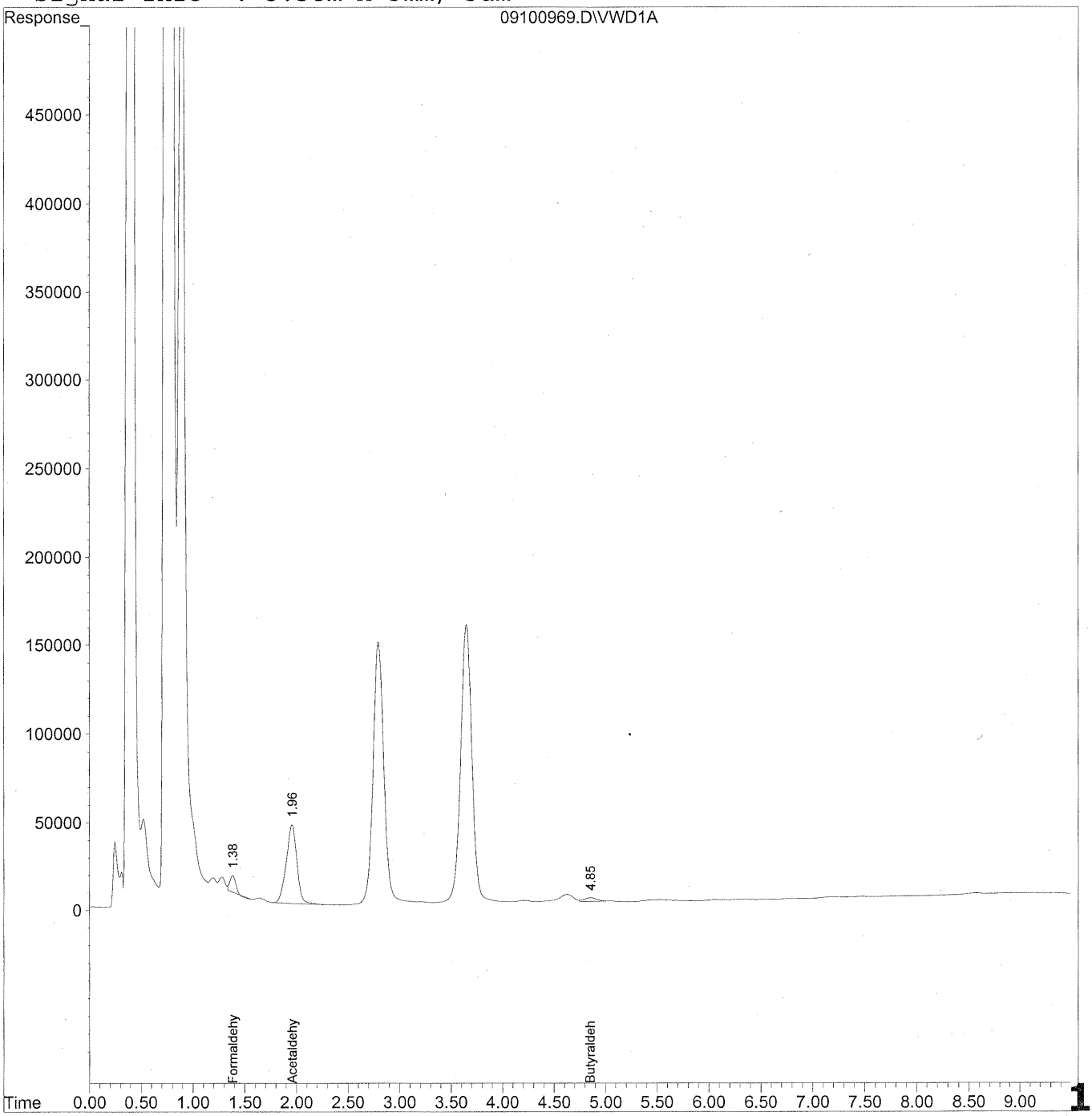
139

(+) = Expected Retention Time

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100969.D Vial: 142
Acq On : 11-Sep-2009, 15:17 Operator: MD
Sample : P0903011-010 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:57 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



140

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100969.D Vial: 142
Acq On : 11-Sep-2009, 15:17 Operator: MD
Sample : P0903011-010 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:57 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

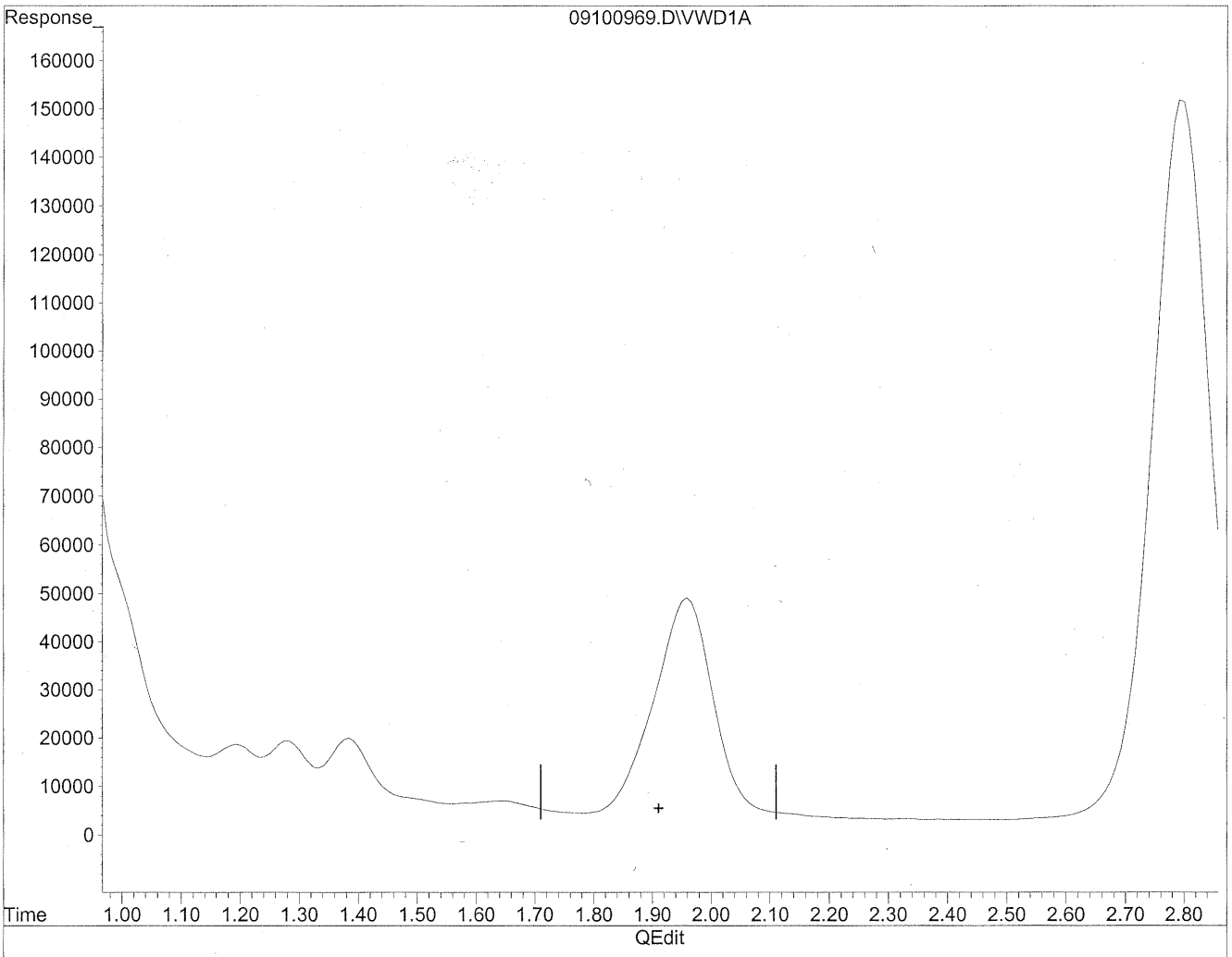
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.39	358937	40.170	ng/ml
2)	Acetaldehyde	1.96	3225169	496.119	ng/mlm
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	4.86	165987	40.956	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	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

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100969.D Vial: 142
Acq On : 11-Sep-2009, 15:17 Operator: MD
Sample : P0903011-010 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 15:34 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.91min 0.000ng/ml

response 0

142

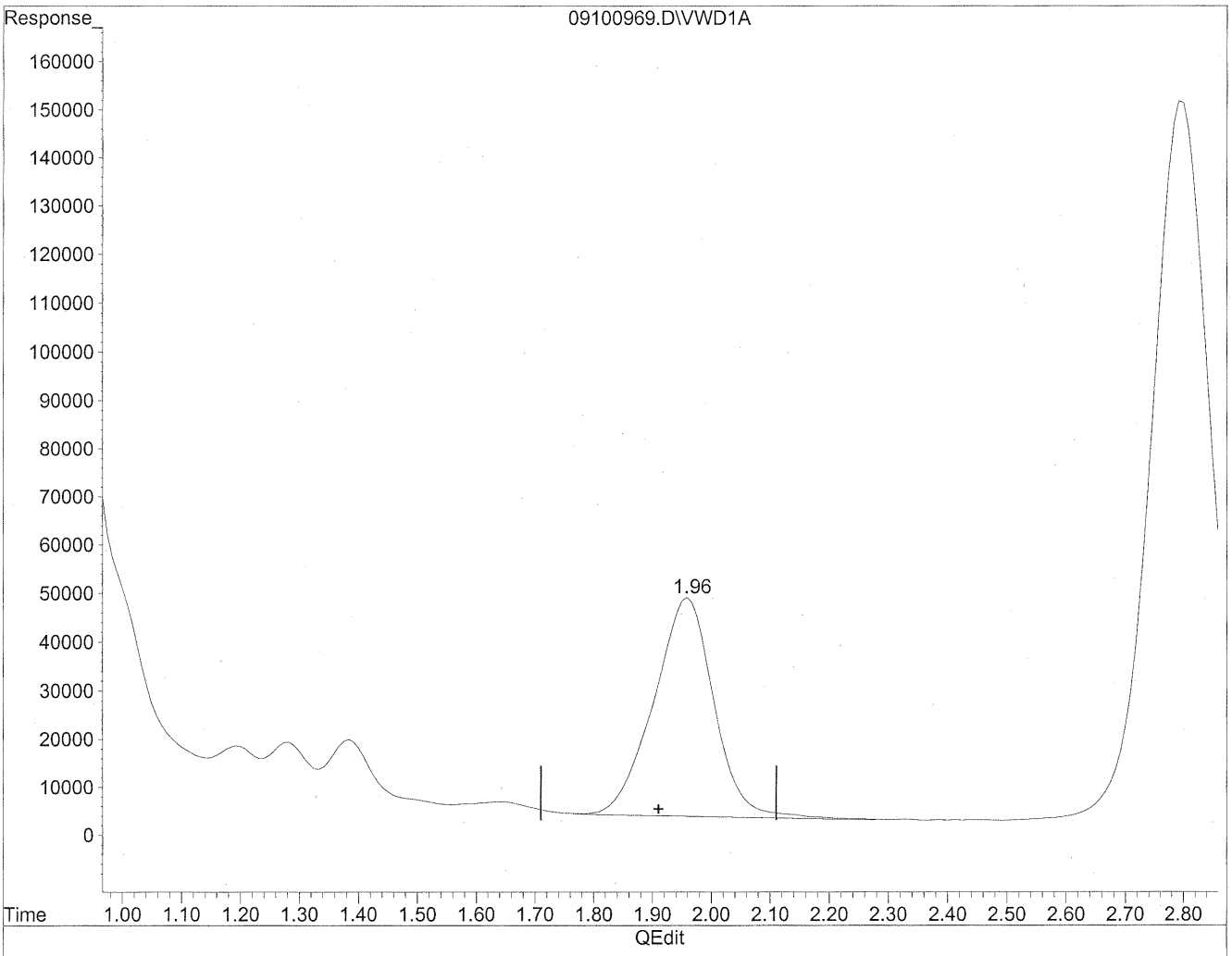
(+) = Expected Retention Time

09100969.D TO110909.M Tue Sep 15 08:57:19 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100969.D Vial: 142
Acq On : 11-Sep-2009, 15:17 Operator: MD
Sample : P0903011-010 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 15:34 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.96min 496.119ng/ml m

response 3225169

9/15/09

9/15/09

143

(+) = Expected Retention Time

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103586**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-011

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: 94.6 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**4,900**	**51**	1.1	**42**	0.86	
75-07-0	**Acetaldehyde**	**2,900**	**30**	1.1	**17**	0.59	**BT**
123-38-6	**Propionaldehyde**	**280**	**2.9**	1.1	**1.2**	0.45	
4170-30-3	Crotonaldehyde, Total	< 100	ND	1.1	ND	0.37	
123-72-8	**Butyraldehyde**	**290**	**3.1**	1.1	**1.0**	0.36	
100-52-7	**Benzaldehyde**	**570**	**6.1**	1.1	**1.4**	0.24	
590-86-3	**Isovaleraldehyde**	**110**	**1.2**	1.1	**0.33**	0.30	
110-62-3	**Valeraldehyde**	**870**	**9.2**	1.1	**2.6**	0.30	
529-20-4	o-Tolualdehyde	< 100	ND	1.1	ND	0.22	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	2.1	ND	0.43	
66-25-1	**n-Hexaldehyde**	**3,800**	**40**	1.1	**9.8**	0.26	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	1.1	ND	0.19	

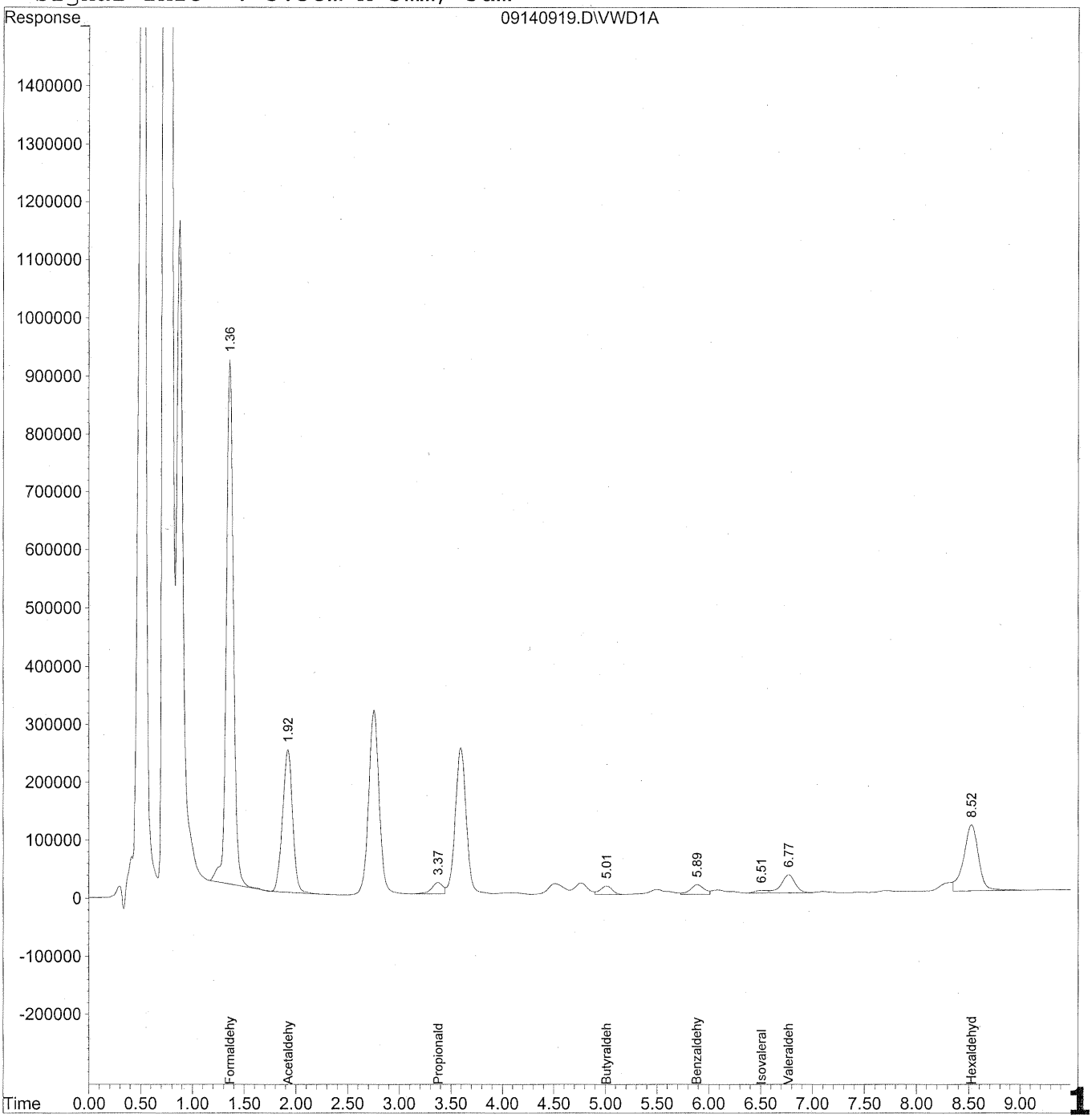
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
BC = Results reported are not blank corrected.
BT = Results indicated possible breakthrough; back section > 10% front section.

Verified By: _____ Date: 9/16/09

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:16 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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



145

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:16 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

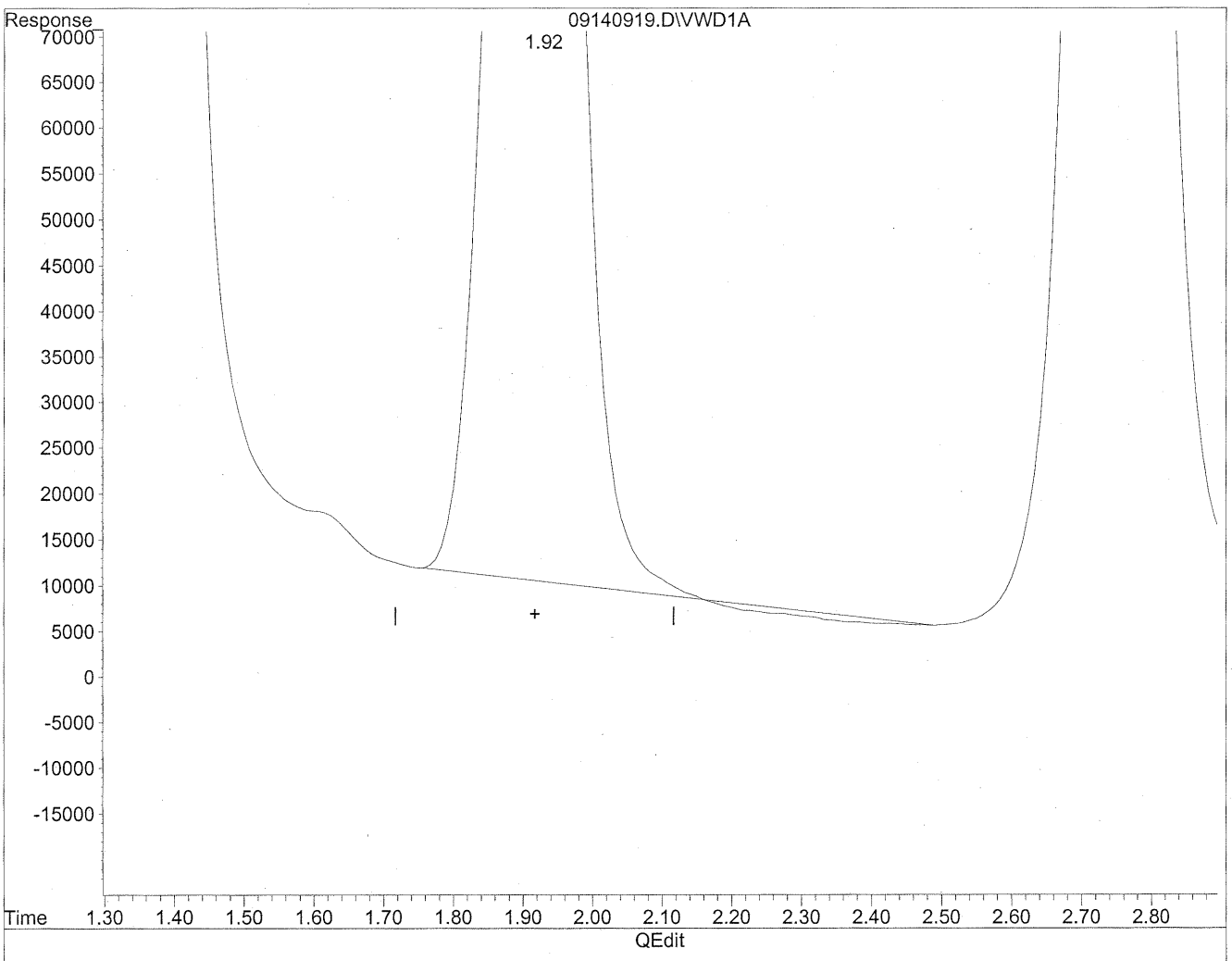
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.36	43355481	4852.086	ng/ml
2)	Acetaldehyde	1.92	16569545	2548.848	ng/mlm
3)	Propionaldehyde	3.37	1437518	276.562	ng/mlm
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	5.01	1169748	288.629	ng/ml
6)	Benzaldehyde	5.89	1561801	572.429	ng/mlm
7)	Isovaleraldehyde	6.51	381537	110.854	ng/mlm
8)	Valeraldehyde	6.77	2943663	865.875	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	8.52	11241620	3796.915	ng/mlm
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.92min 2523.517ng/ml

response 16404869

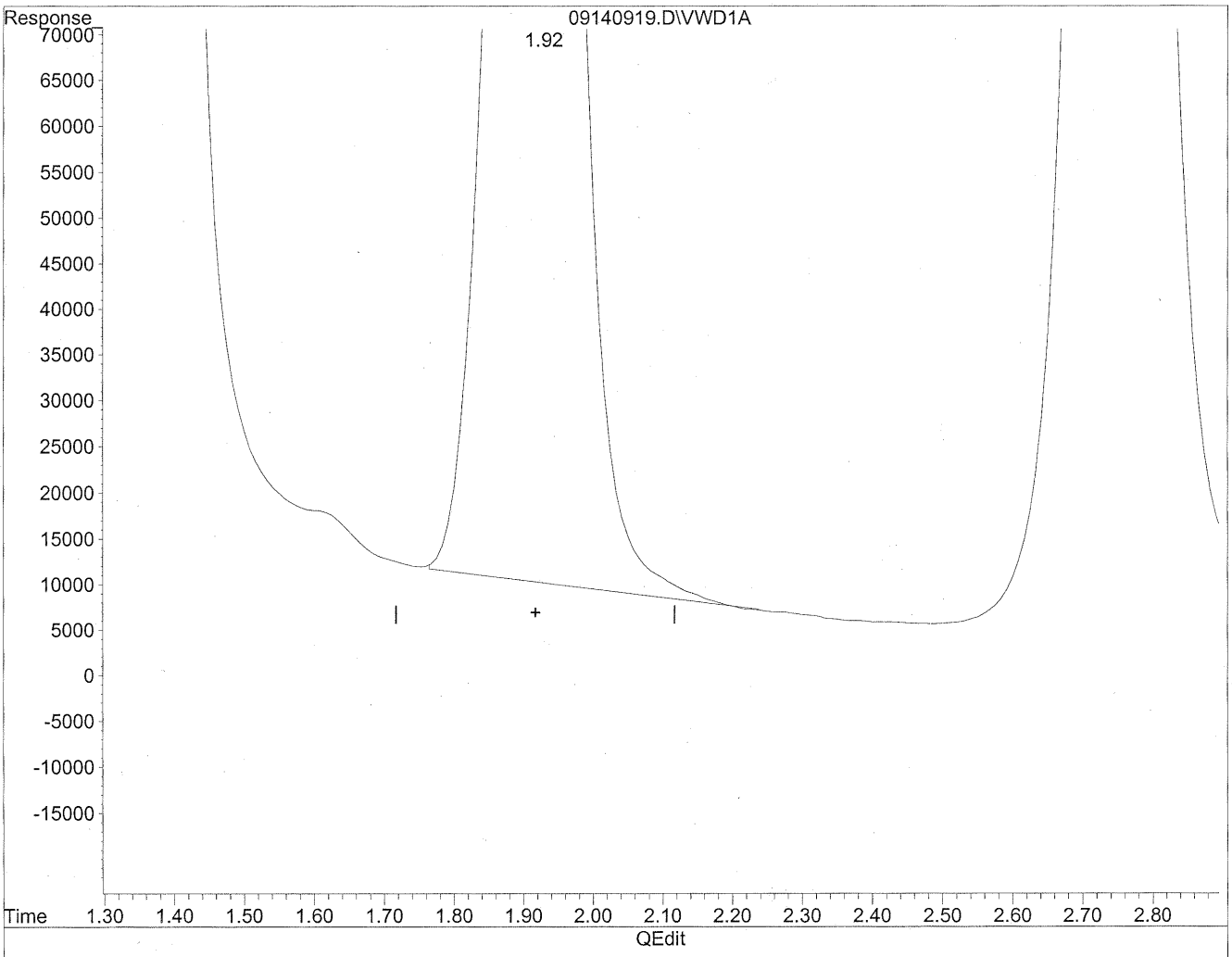
147

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.92min 2548.848ng/ml m

response 16569545

HC 9/15/09

9/15/09 JZ

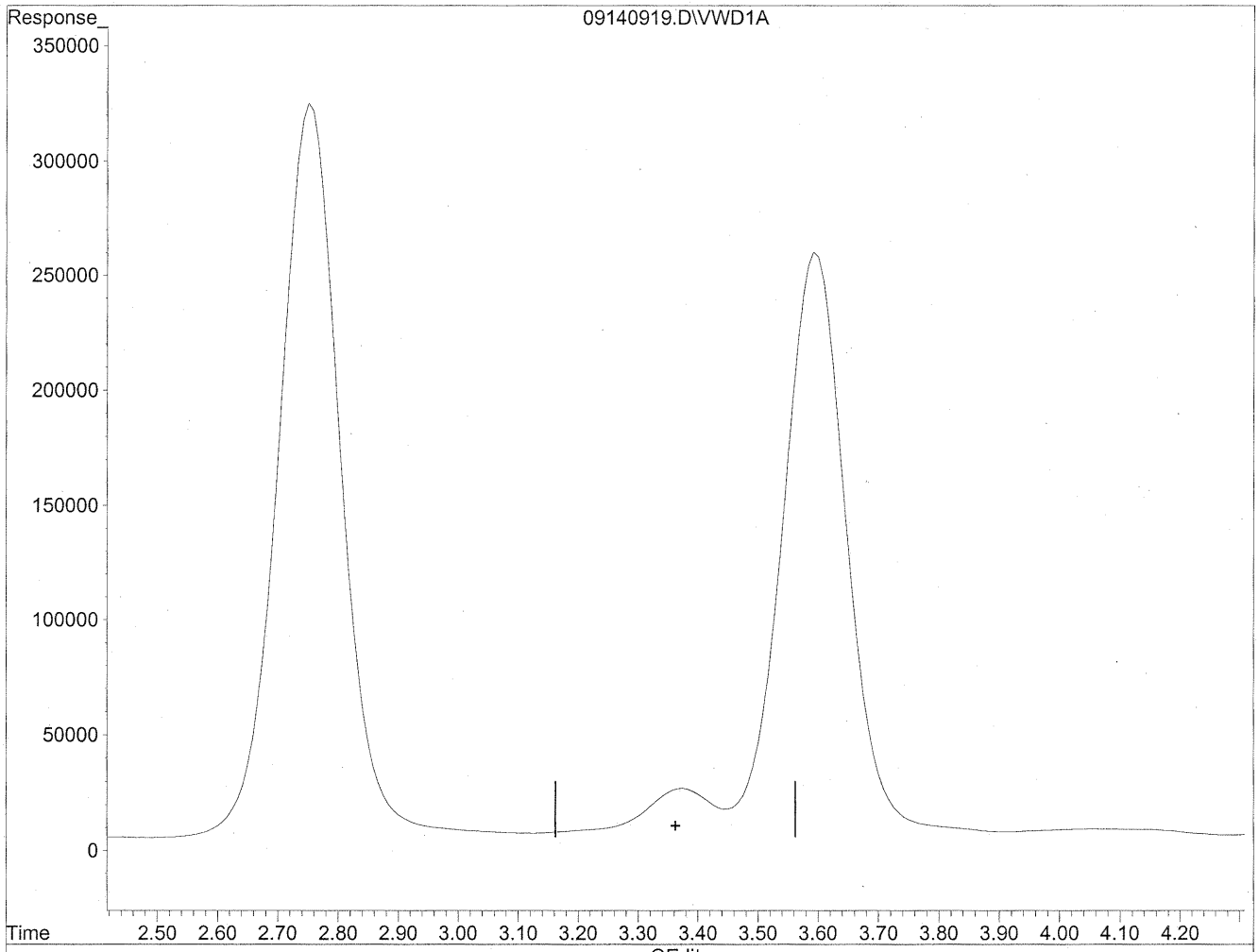
148

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.36min 0.000ng/ml

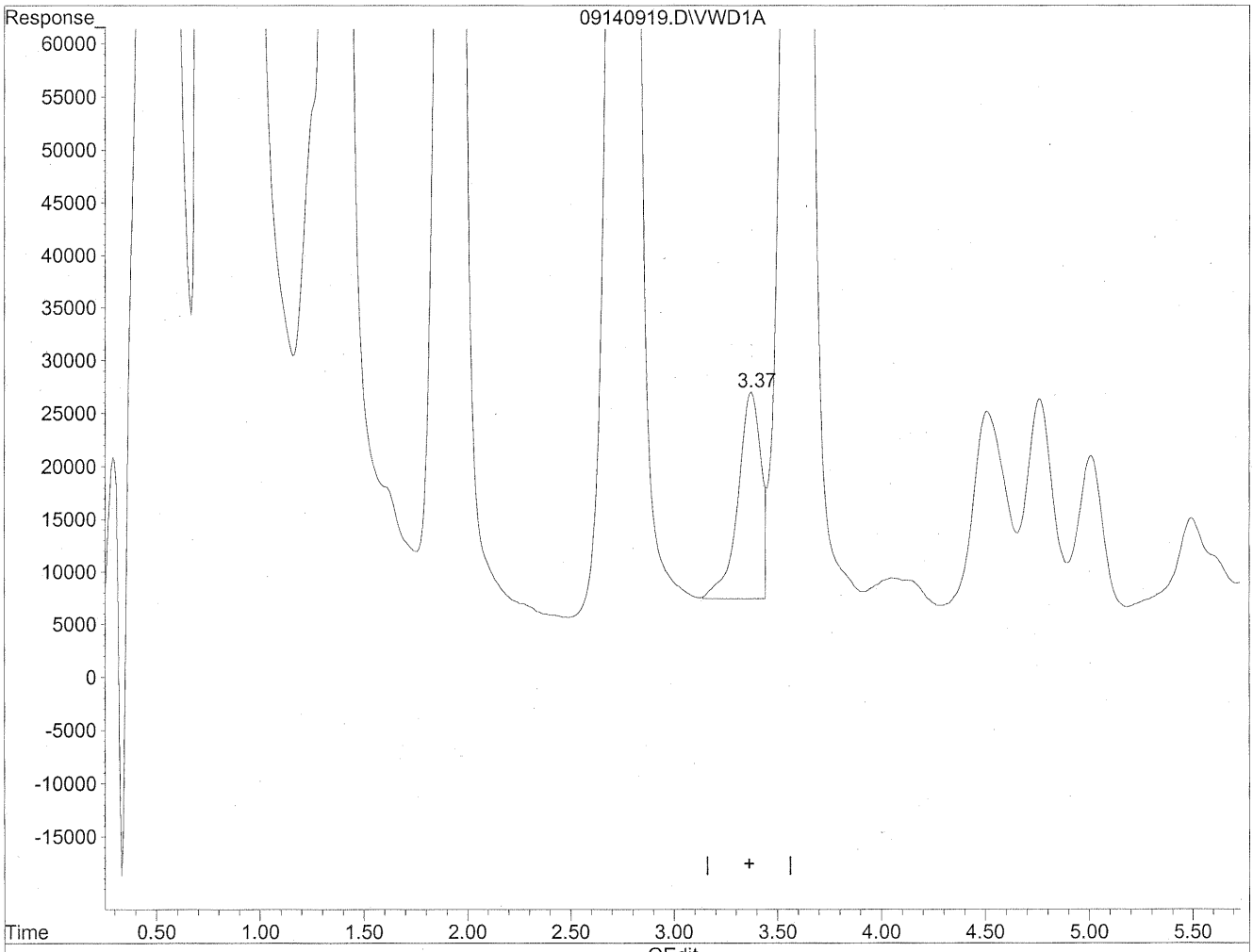
response 0

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:16 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.37min 276.562ng/ml m

response 1437518

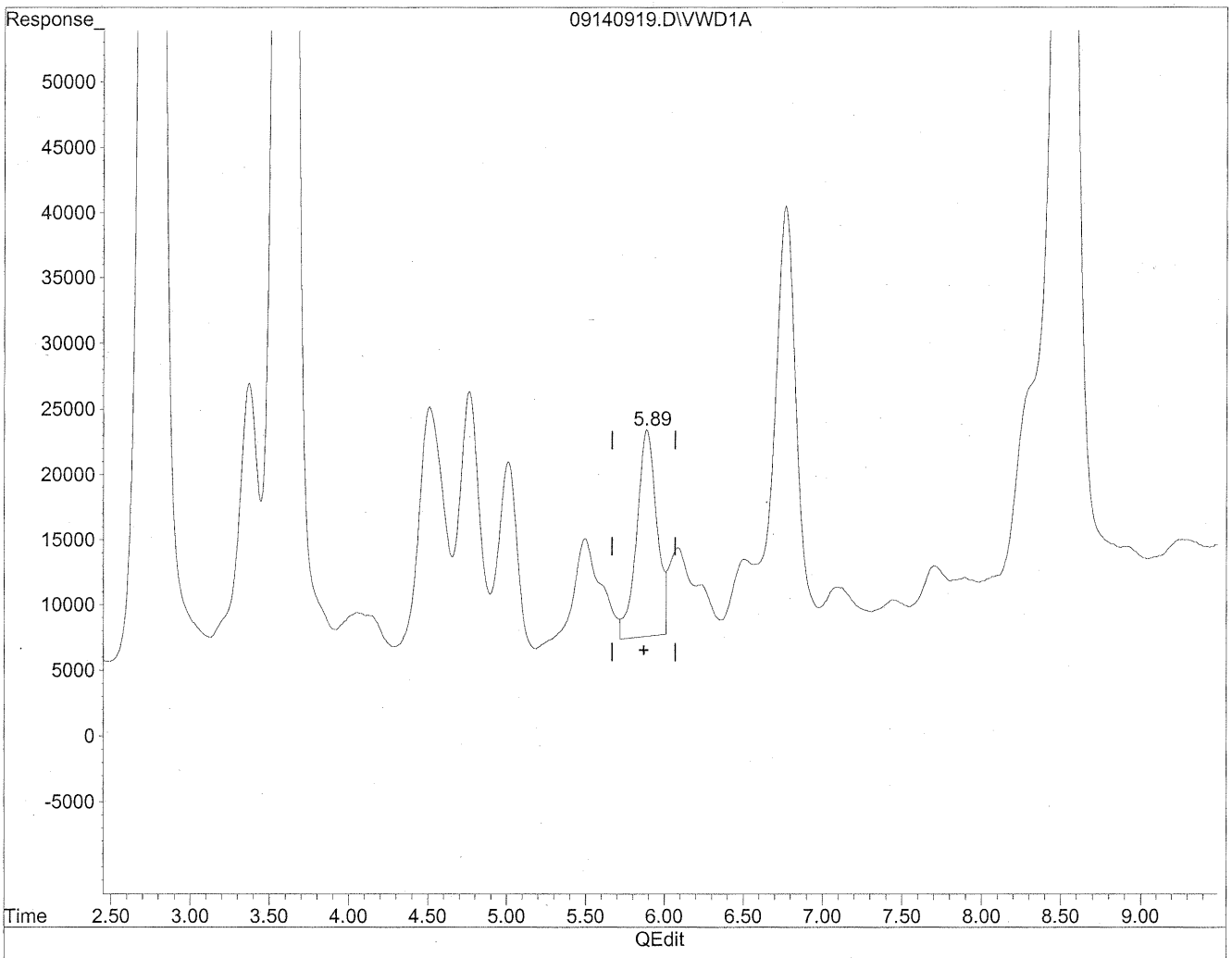
9/15/09
BMI

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.89min 514.012ng/ml

response 1402419

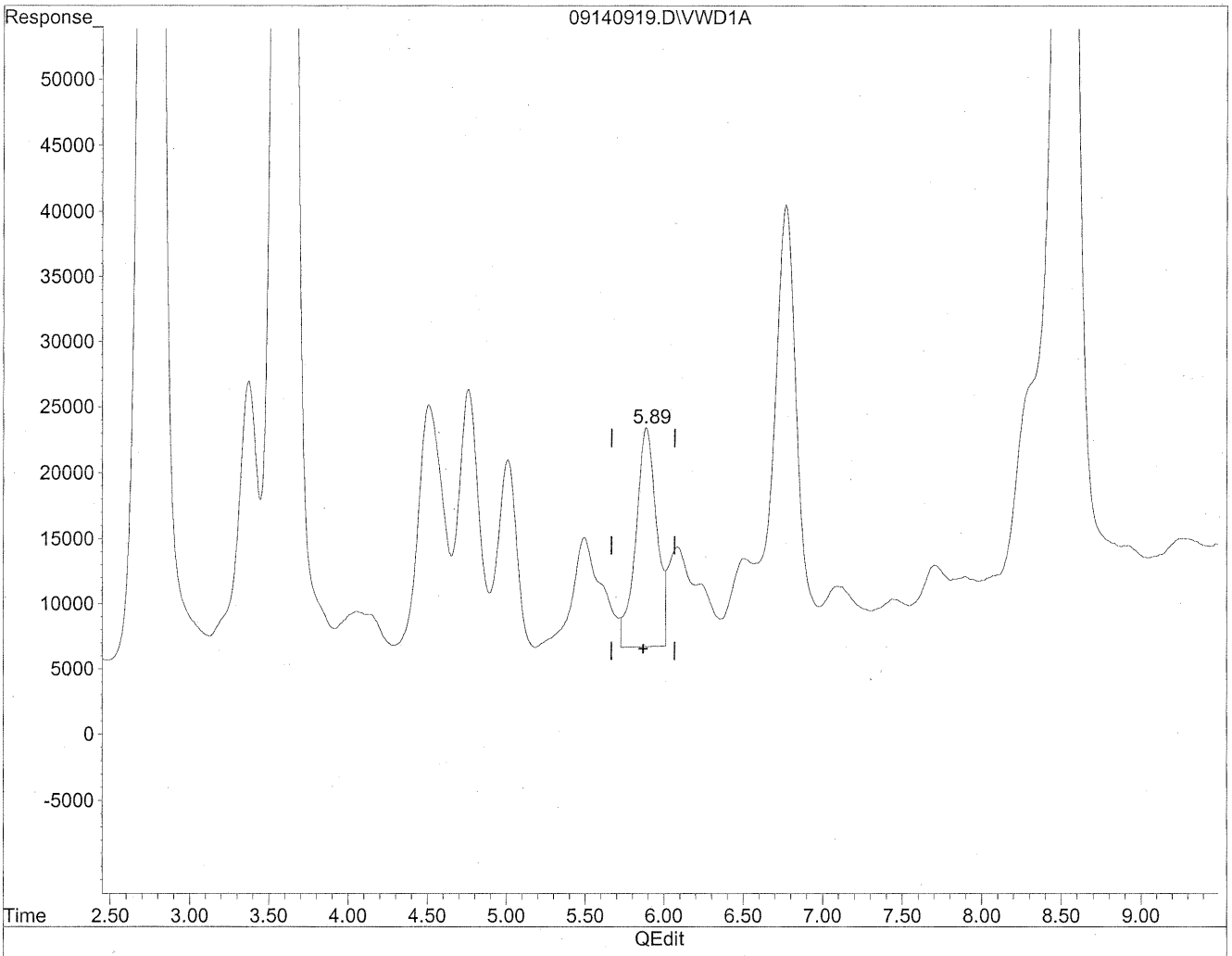
(+) = Expected Retention Time

09140919.D TO110909.M Tue Sep 15 10:15:27 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.89min 572.429ng/ml m

response 1561801

9/15/09 PBC

HC 09/15/09

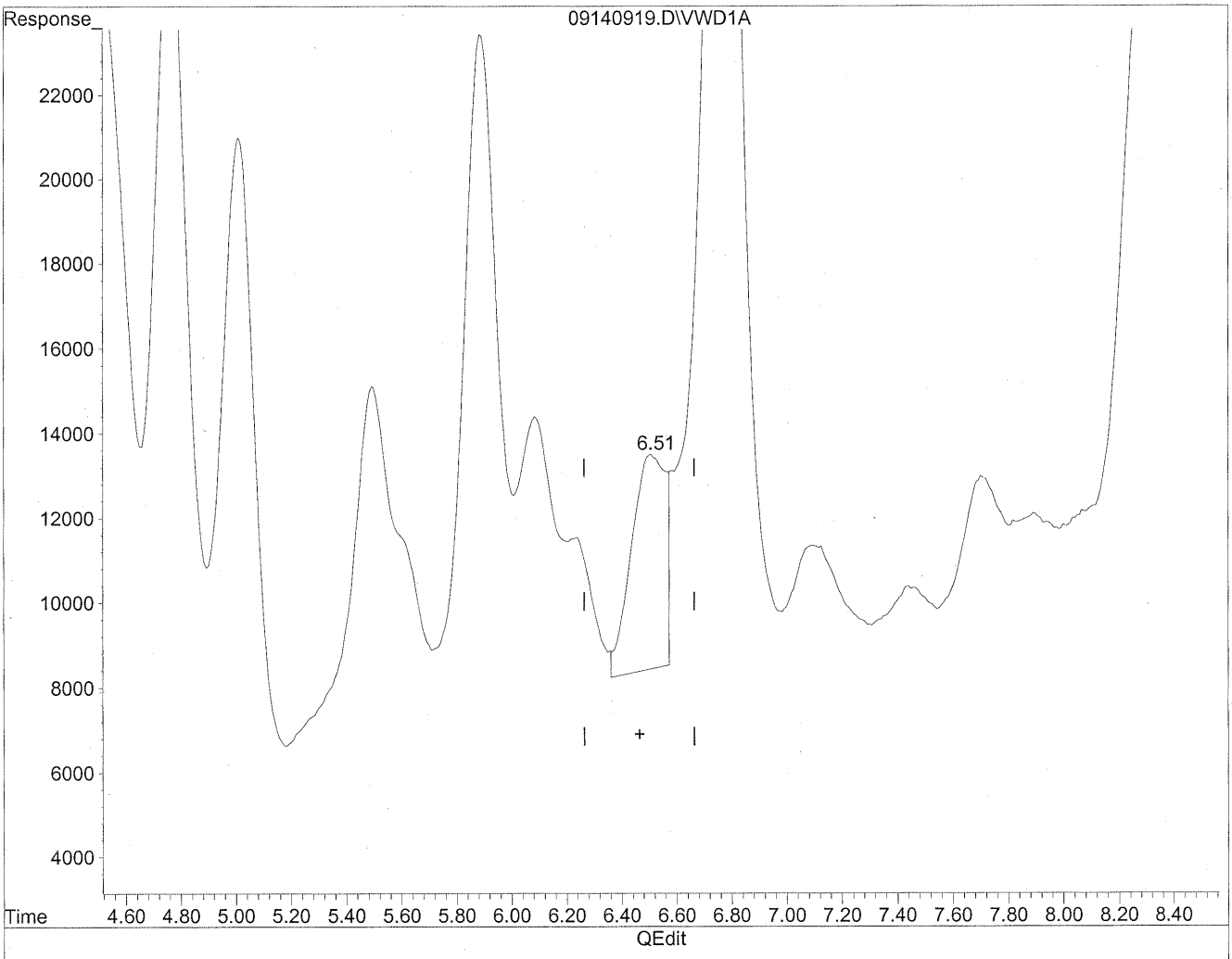
(+) = Expected Retention Time

09140919.D TO110909.M Tue Sep 15 10:15:42 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.51min 124.932ng/ml

response 429990

153

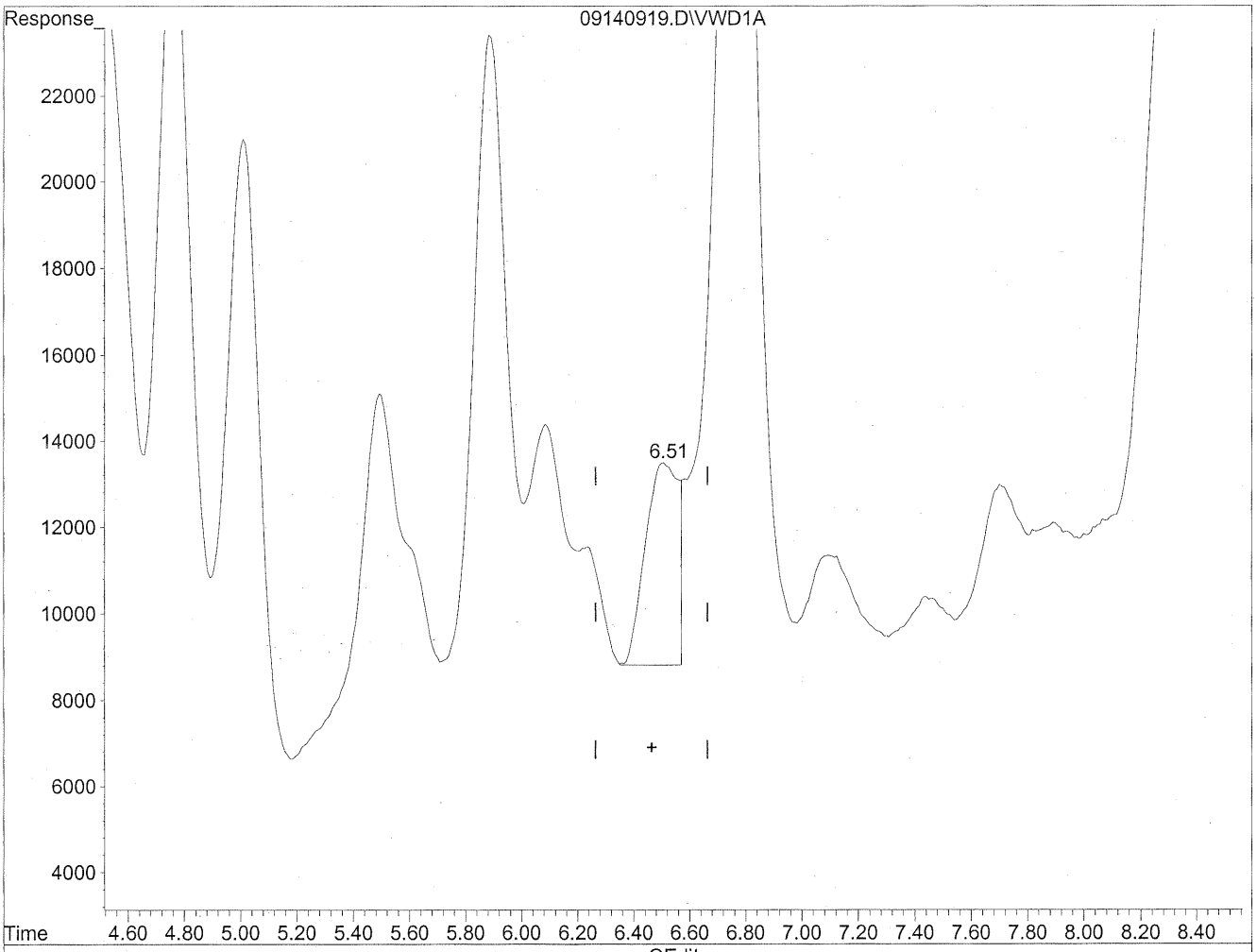
(+) = Expected Retention Time

09140919.D TO110909.M Tue Sep 15 10:15:50 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.51min 110.854ng/ml m

response 381537

9/15/09 PC

HC 9/15/09

154

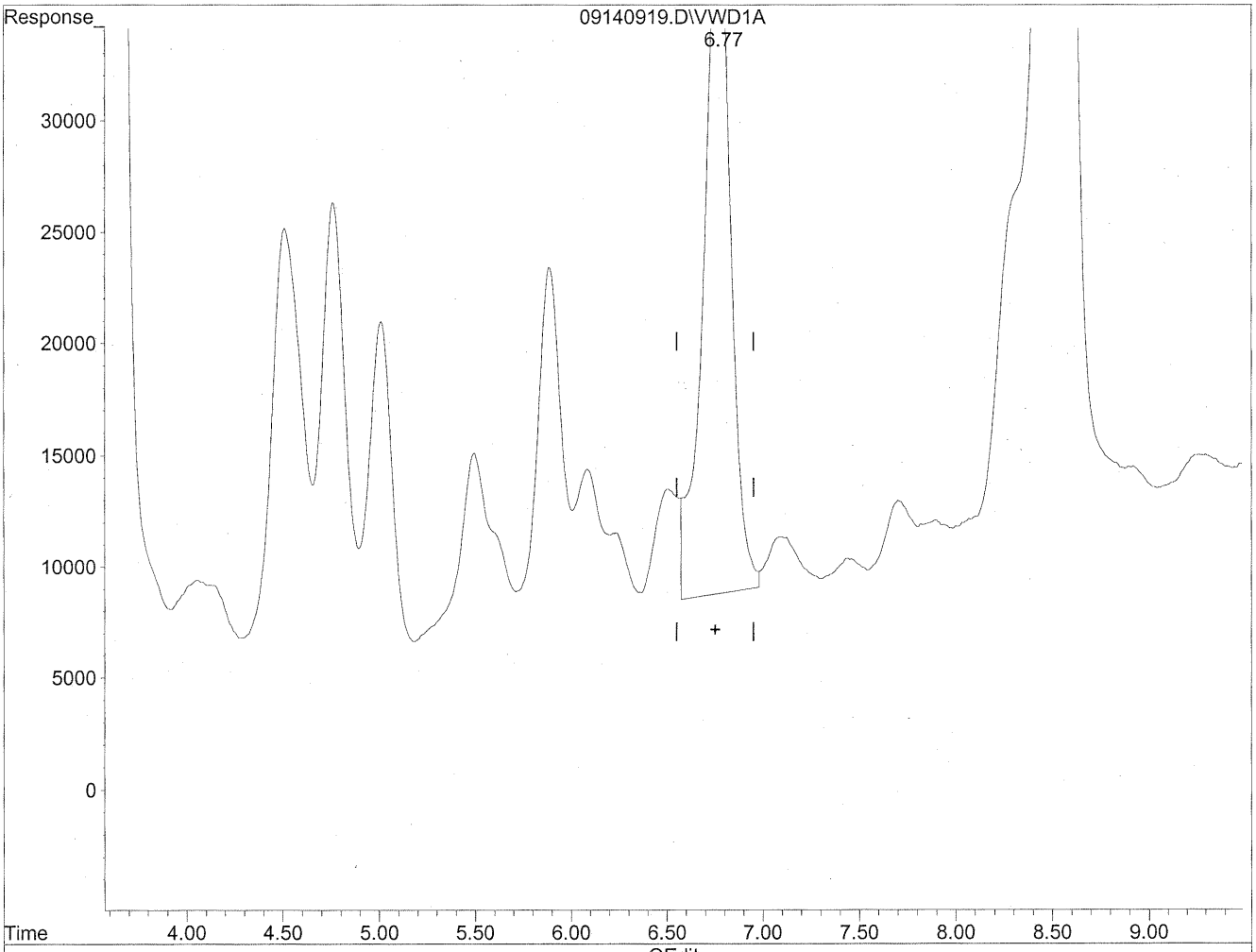
(+) = Expected Retention Time

09140919.D TO110909.M Tue Sep 15 10:15:58 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



QEdit

(8) Valeraldehyde

6.77min 890.519ng/ml

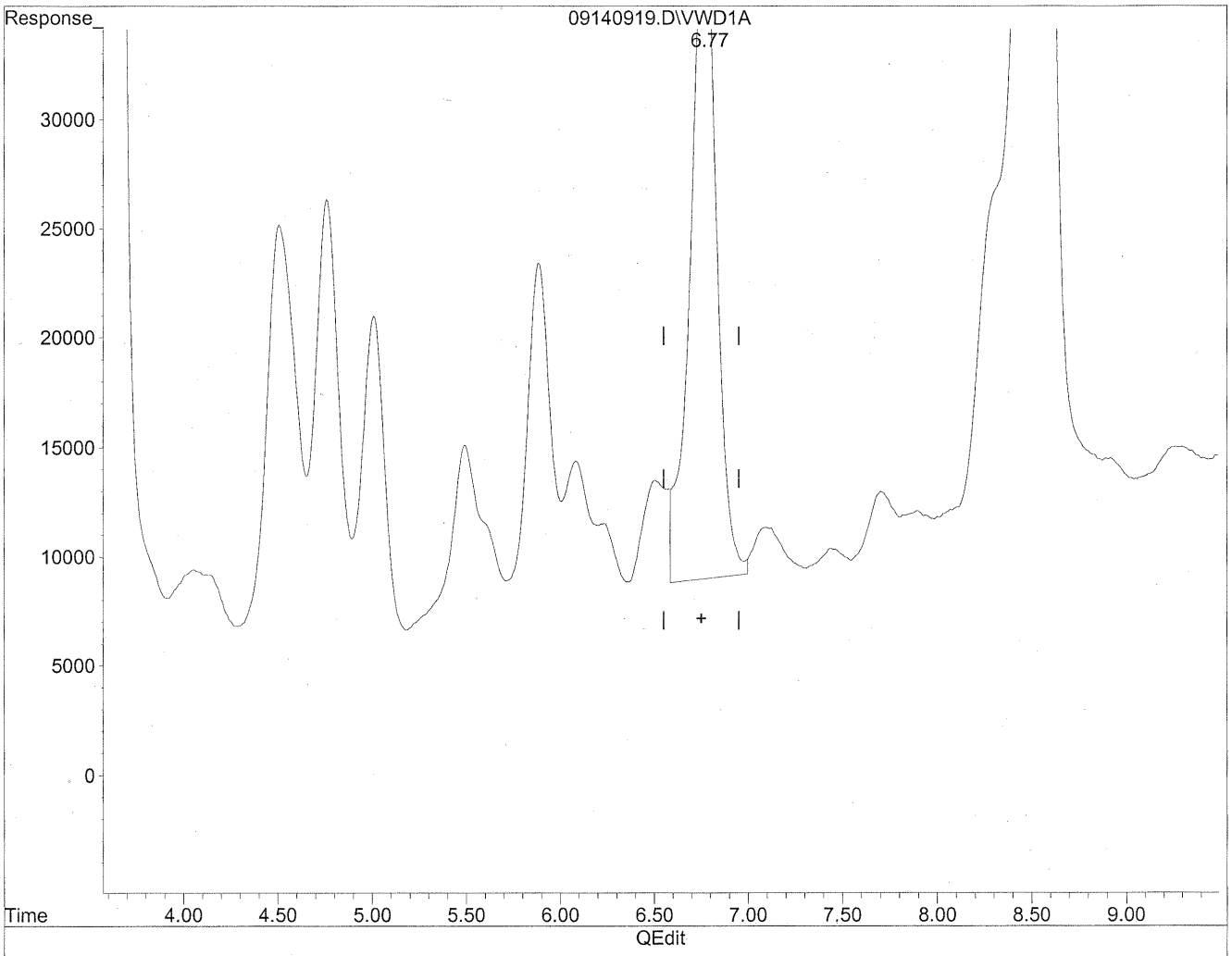
response 3027445

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(8) Valeraldehyde

6.77min 865.875ng/ml m

response 2943663

9/15/09 BL

TC 9/15/09

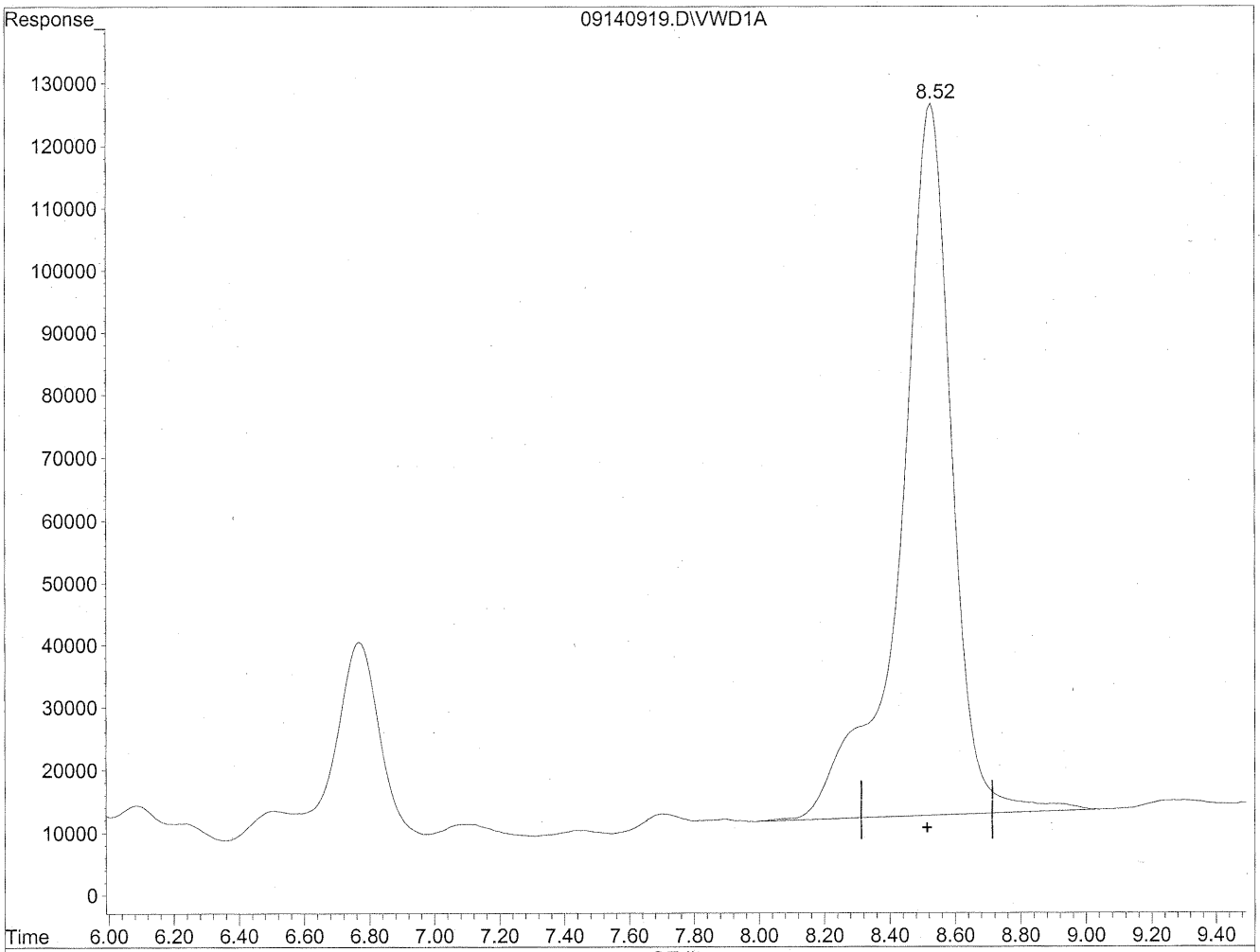
156

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.53min 4207.349ng/ml

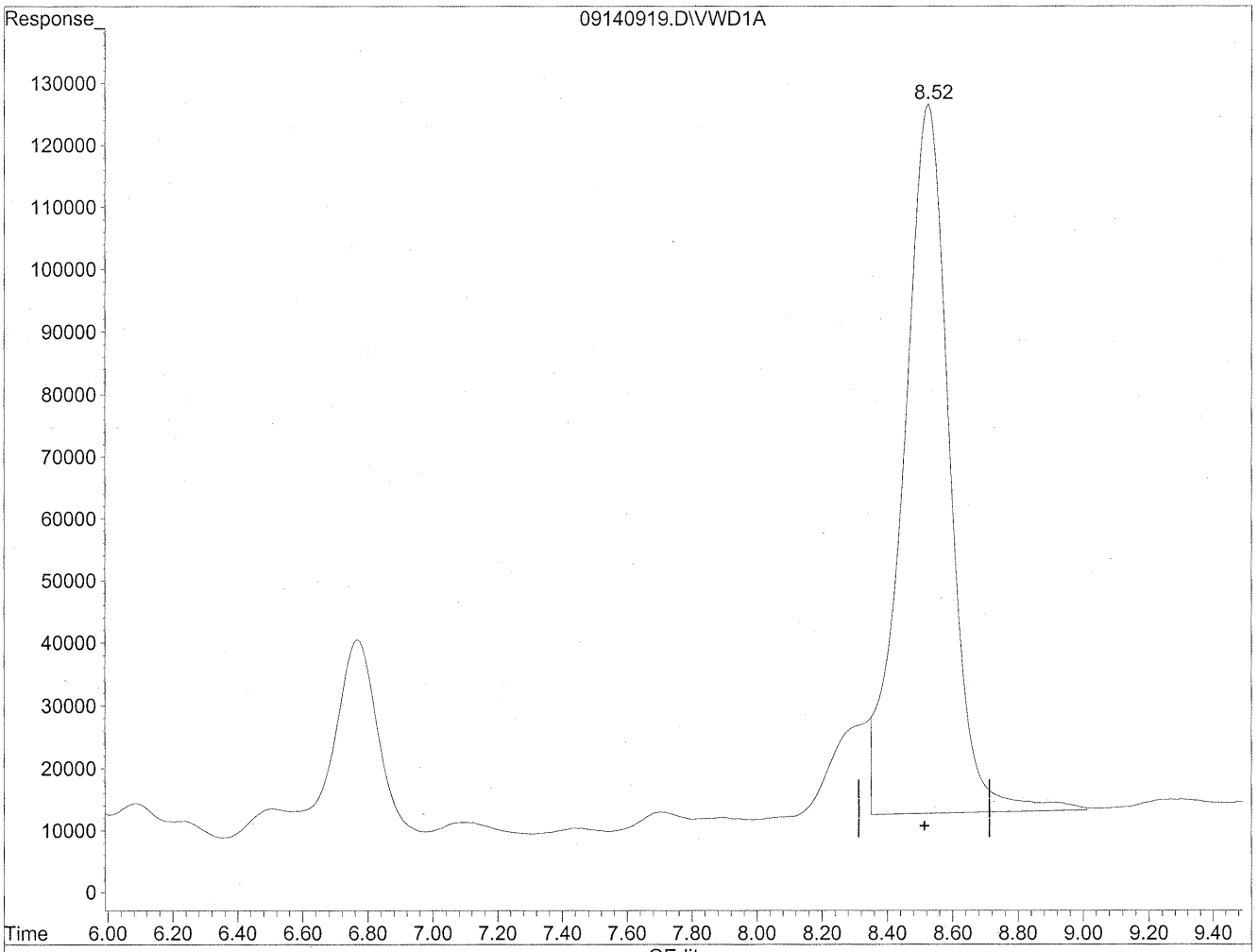
response 12456803

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140919.D Vial: 113
Acq On : 14-Sep-2009, 12:44 Operator: MD
Sample : P0903011-011 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:14 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.52min 3796.915ng/ml m

response 11241620

9/15/09

+IC 9/15/09

158

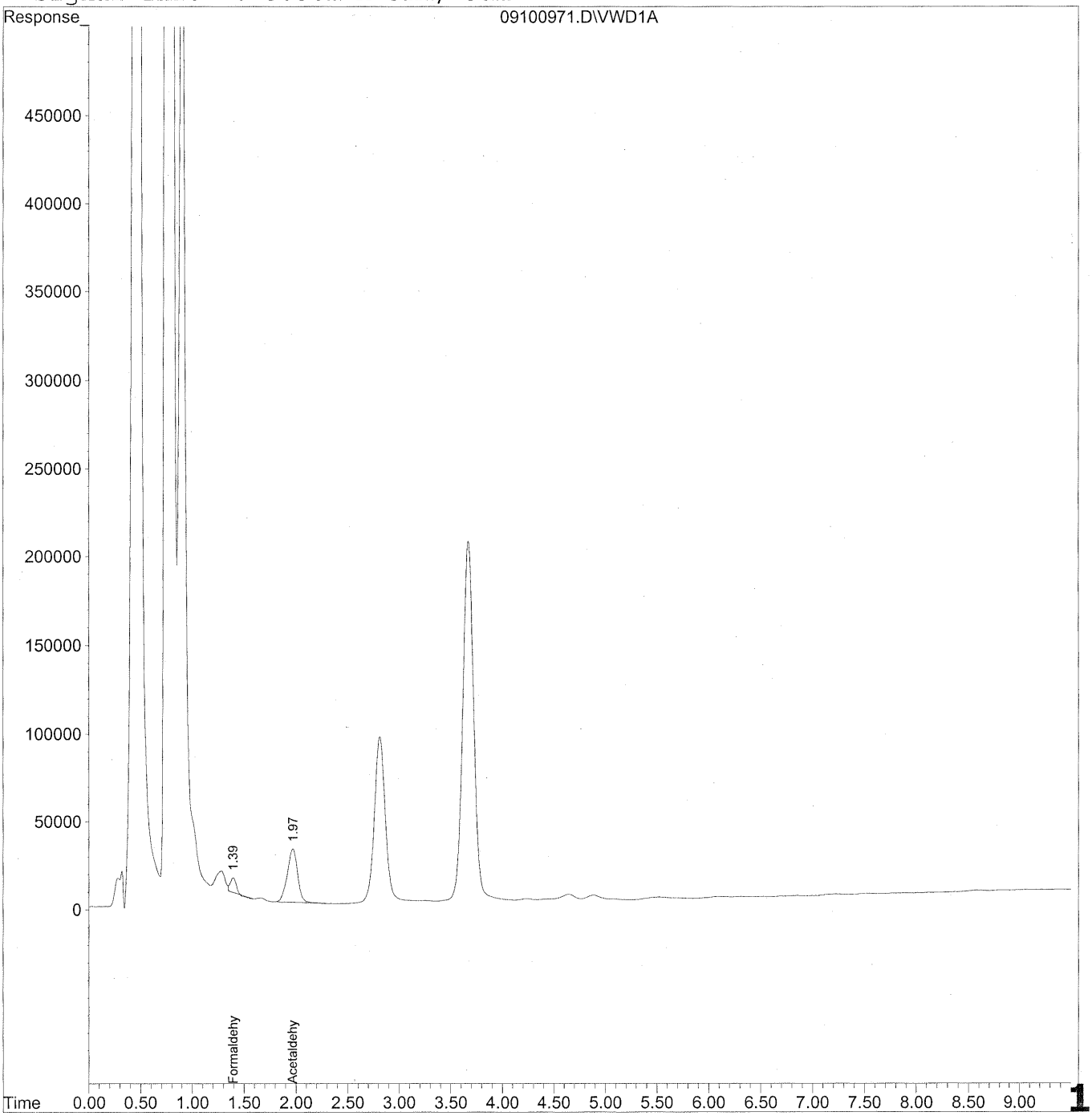
(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100971.D Vial: 143
Acq On : 11-Sep-2009, 15:41 Operator: MD
Sample : P0903011-011 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:59 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100971.D Vial: 143
Acq On : 11-Sep-2009, 15:41 Operator: MD
Sample : P0903011-011 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:59 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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	1.40	321758	36.009	ng/ml
2)	Acetaldehyde	1.97	2122543	326.505	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

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **103610**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P0903011-012

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: 8/27/09
Date Received: 8/28/09
Date Analyzed: 9/14/09
Desorption Volume: 1.0 ml
Volume Sampled: NA Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 100	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 100	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 100	NA	NA	NA	NA	
4170-30-3	Crotonaldehyde, Total	< 100	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 100	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 100	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 100	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 100	NA	NA	NA	NA	
529-20-4	o-Tolualdehyde	< 100	NA	NA	NA	NA	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 100	NA	NA	NA	NA	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	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.

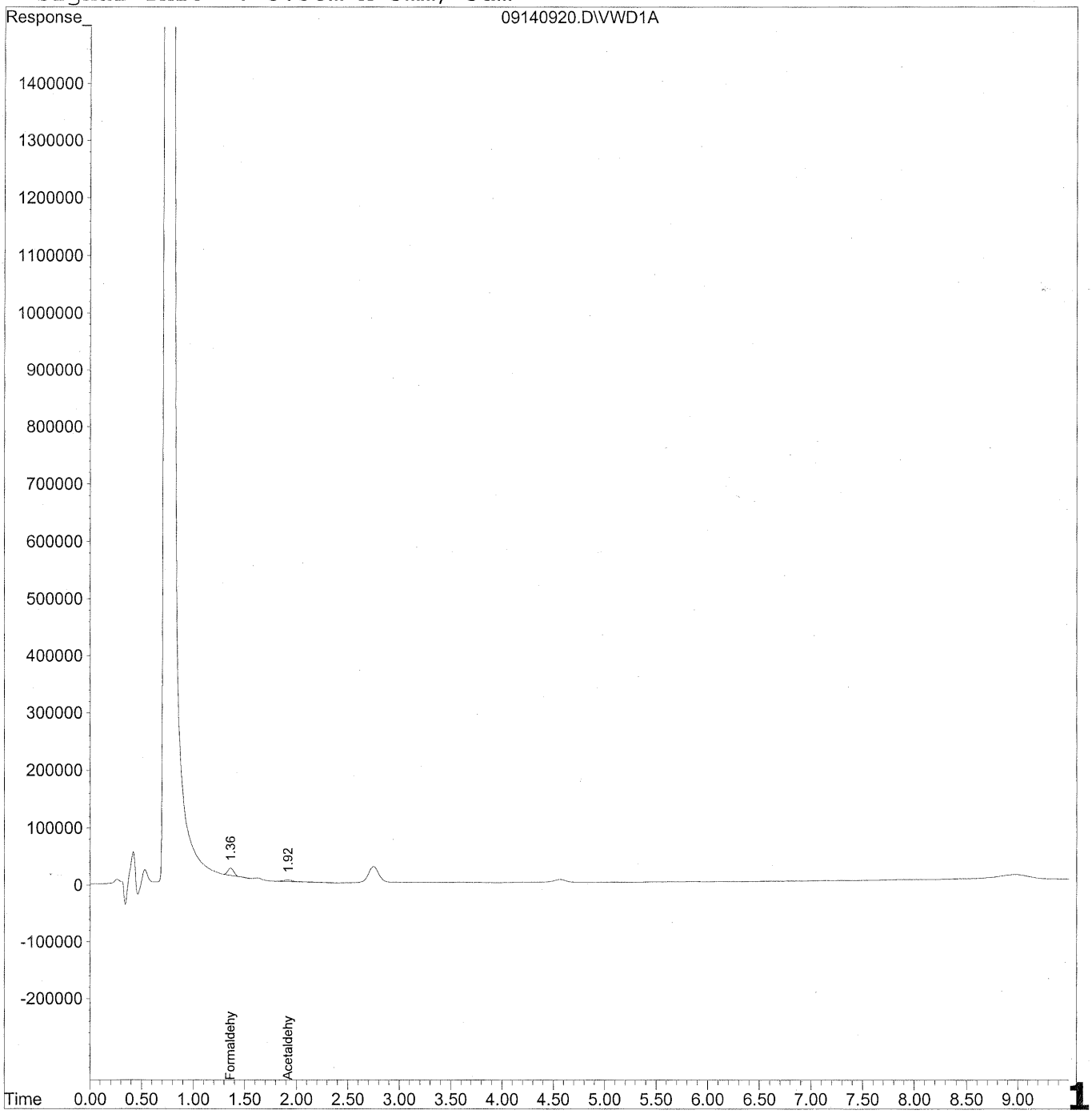
Verified By: _____ Date: 9/16/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140920.D Vial: 114
Acq On : 14-Sep-2009, 12:56 Operator: MD
Sample : P0903011-012 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 13:26 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140920.D Vial: 114
Acq On : 14-Sep-2009, 12:56 Operator: MD
Sample : P0903011-012 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 13:26 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

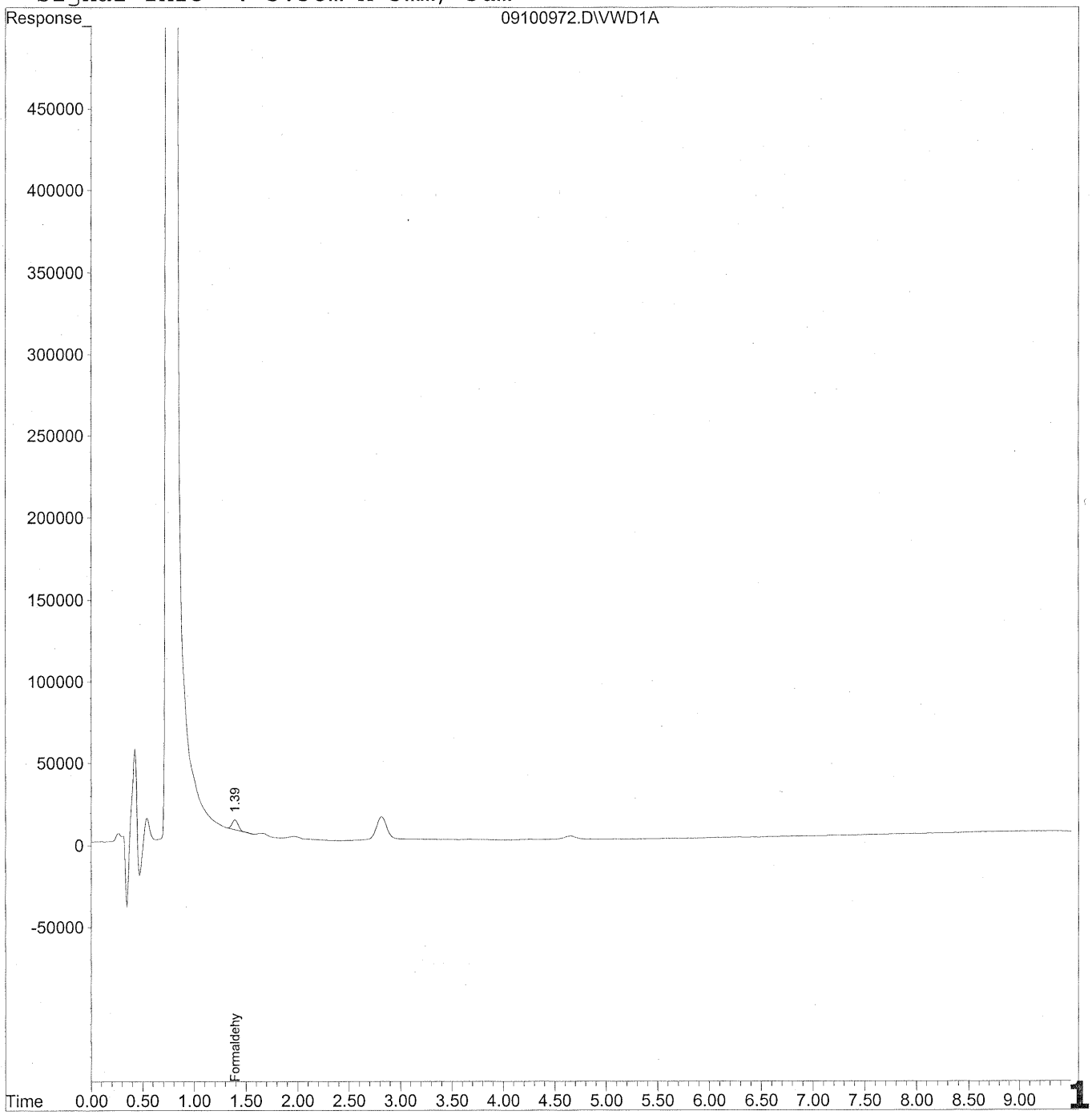
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.36	503005	56.293	ng/ml
2)	Acetaldehyde	1.92	99009	15.230	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

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100972.D Vial: 144
Acq On : 11-Sep-2009, 15:53 Operator: MD
Sample : P0903011-012 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:00 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100972.D Vial: 144
Acq On : 11-Sep-2009, 15:53 Operator: MD
Sample : P0903011-012 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:00 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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	1.40	251186	28.111	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

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P090911-MB

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: NA
Date Received: NA
Date Analyzed: 09/11/09
Desorption Volume: 1.0 ml
Volume Sampled: NA Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 100	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 100	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 100	NA	NA	NA	NA	
4170-30-3	Crotonaldehyde, Total	< 100	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 100	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 100	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 100	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 100	NA	NA	NA	NA	
529-20-4	o-Tolualdehyde	< 100	NA	NA	NA	NA	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 100	NA	NA	NA	NA	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	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.

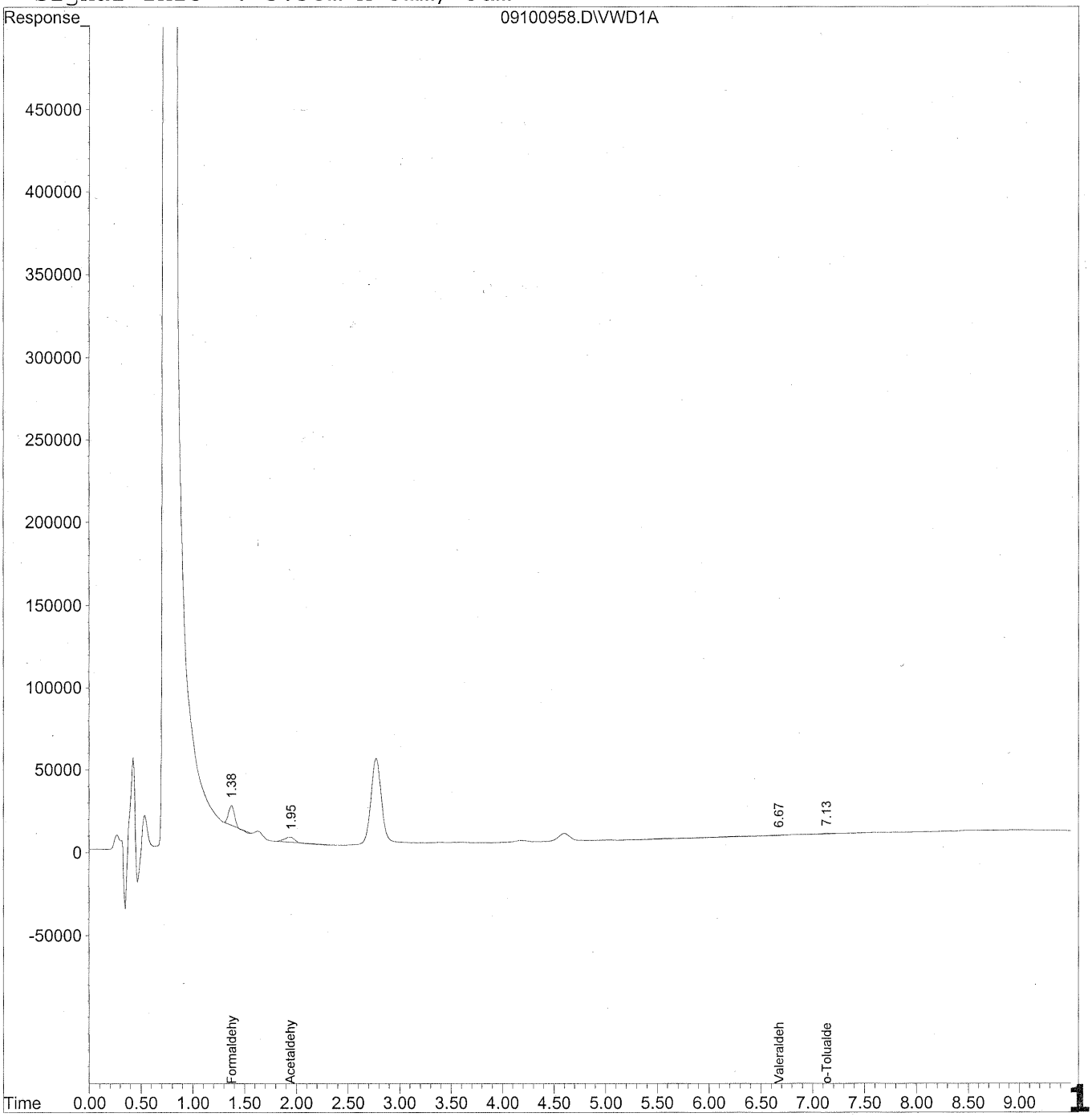
Verified By: _____ Date: 9/16/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100958.D Vial: 131
Acq On : 11-Sep-2009, 13:05 Operator: MD
Sample : MB-3 front 1.0ml lot 5855/5994 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 13:19 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100958.D Vial: 131
Acq On : 11-Sep-2009, 13:05 Operator: MD
Sample : MB-3 front 1.0ml lot 5855/5994 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 13:19 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

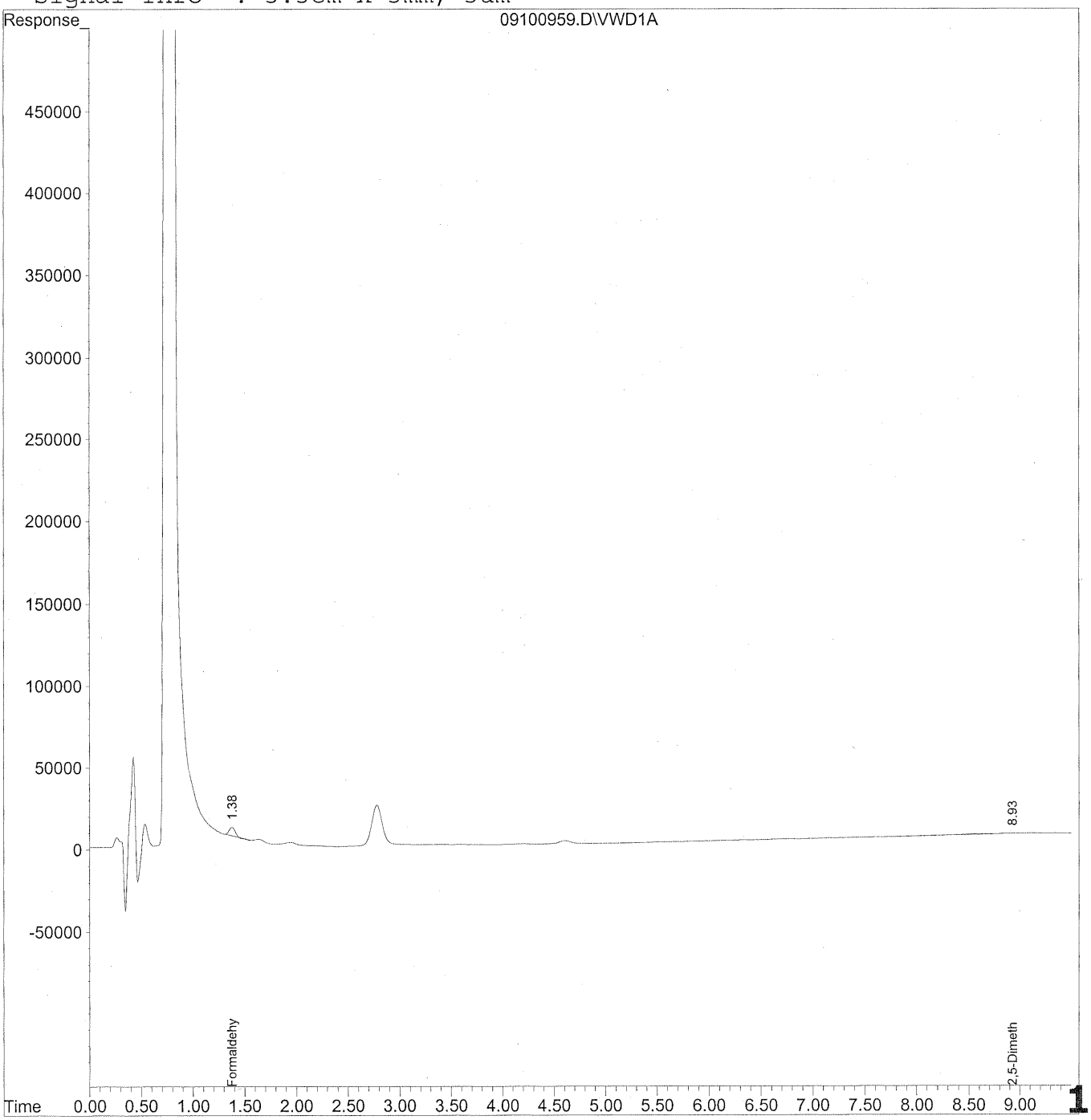
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.38	464485	51.982	ng/ml
2)	Acetaldehyde	1.95	184155	28.328	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	6.68	86275	25.378	ng/ml
9)	o-Tolualdehyde	7.14	37894	17.267	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

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100959.D Vial: 132
Acq On : 11-Sep-2009, 13:17 Operator: MD
Sample : MB-3 back 1.0ml lot 5855/5994 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:51 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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\2009_09\10\09100959.D Vial: 132
Acq On : 11-Sep-2009, 13:17 Operator: MD
Sample : MB-3 back 1.0ml lot 5855/5994 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:51 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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	1.38	201061	22.502	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	8.93f	72263	36.213	ng/ml

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **Method Blank**
Client Project ID: **16512**

CAS Project ID: P0903011
CAS Sample ID: P090914-MB

Test Code: EPA Method TO-11A
Instrument ID: HP1050/LC2
Analyst: Madeleine Dangazyan
Sampling Media: Silica Gel DNPH Tube
Test Notes: **BC**

Date Collected: NA
Date Received: NA
Date Analyzed: 09/14/09
Desorption Volume: 1.0 ml
Volume Sampled: NA Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	Formaldehyde	< 100	NA	NA	NA	NA	
75-07-0	Acetaldehyde	< 100	NA	NA	NA	NA	
123-38-6	Propionaldehyde	< 100	NA	NA	NA	NA	
4170-30-3	Crotonaldehyde, Total	< 100	NA	NA	NA	NA	
123-72-8	Butyraldehyde	< 100	NA	NA	NA	NA	
100-52-7	Benzaldehyde	< 100	NA	NA	NA	NA	
590-86-3	Isovaleraldehyde	< 100	NA	NA	NA	NA	
110-62-3	Valeraldehyde	< 100	NA	NA	NA	NA	
529-20-4	o-Tolualdehyde	< 100	NA	NA	NA	NA	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	NA	NA	NA	NA	
66-25-1	n-Hexaldehyde	< 100	NA	NA	NA	NA	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	NA	NA	NA	NA	

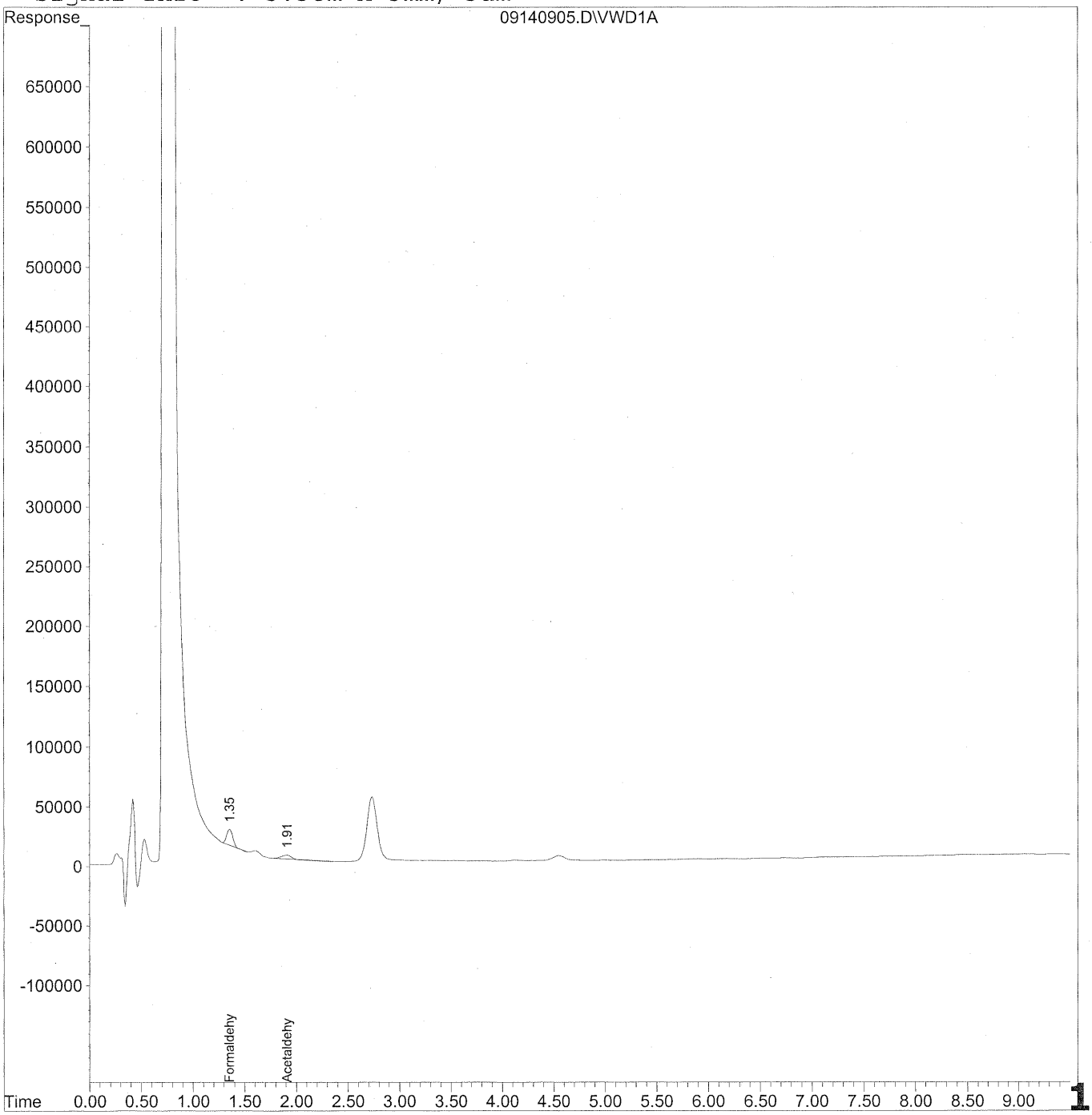
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
BC = Results reported are not blank corrected.
NA = Not applicable.

Verified By: _____ Date: 9/16/09

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140905.D Vial: 101
Acq On : 14-Sep-2009, 09:56 Operator: MD
Sample : MB-4 front 1.0ml lot 5855/5994 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 10:09 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140905.D Vial: 101
Acq On : 14-Sep-2009, 09:56 Operator: MD
Sample : MB-4 front 1.0ml lot 5855/5994 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 14 10:09 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

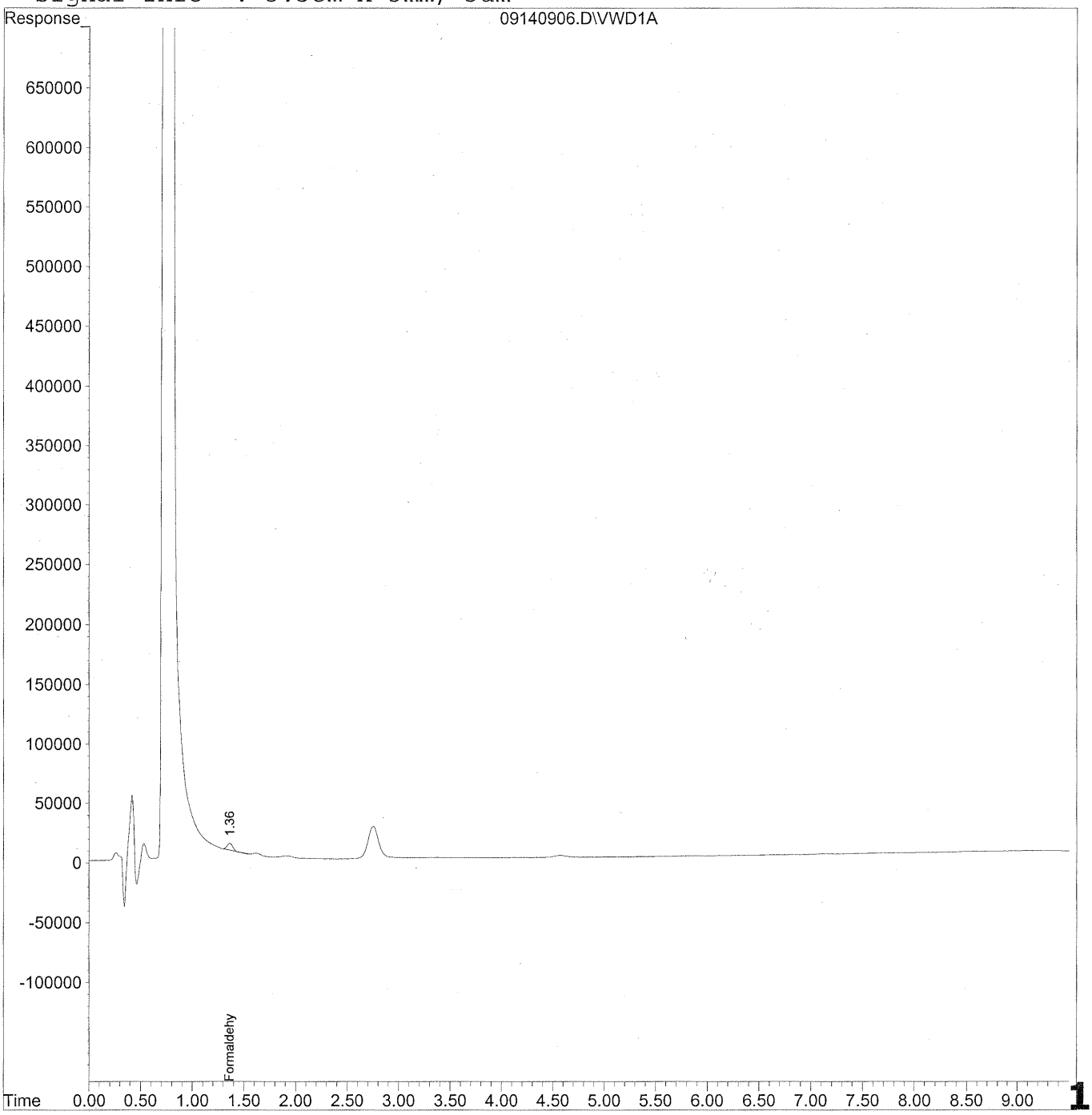
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.36	517609	57.928	ng/ml
2)	Acetaldehyde	1.91	149993	23.073	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

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140906.D Vial: 102
Acq On : 14-Sep-2009, 10:08 Operator: MD
Sample : MB-4 back 1.0ml lot 5855/5994 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:40 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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



174

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140906.D Vial: 102
Acq On : 14-Sep-2009, 10:08 Operator: MD
Sample : MB-4 back 1.0ml lot 5855/5994 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:40 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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	1.36	215152	24.079	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

INITIAL CALIBRATION STANDARDS

Response Factor Report VWD

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 11 13:54:46 2008

Calibration Files
50 =09090910.D 100 =09090913.D 500 =09090916.D
1500 =09090919.D 5000 =09090922.D 10 =09090925.D

	Compound	50	100	500	1500	5000	10	Avg	%RSD
1)	Formaldehyde	9.033	8.595	8.515	9.020	9.302	9.148	8.935 E3	3.50
2)	Acetaldehyde	6.537	6.232	6.129	6.593	6.799	6.715	6.501 E3	4.10
3)	Propionaldehyde	5.378	4.996	5.013	5.195	5.337	5.268	5.198 E3	3.13
4)	Crotonaldehyde	3.974	3.795	3.909	4.099	4.319	4.261	4.060 E3	5.04
5)	Butyraldehyde	4.071	3.828	3.819	4.080	4.290	4.229	4.053 E3	4.86
6)	Benzaldehyde	2.793	2.509	2.569	2.745	2.894	2.860	2.728 E3	5.74
7)	Isovaleraldehyde	3.594	3.260	3.257	3.437	3.577	3.525	3.442 E3	4.42
8)	Valeraldehyde	3.385	3.277	3.176	3.434	3.588	3.539	3.400 E3	4.58
9)	o-Tolualdehyde	2.114	1.981	2.037	2.249	2.401	2.386	2.195 E3	8.13
10)	m,p-Tolualdehyde	2.187	2.029	2.198	2.391	2.507	2.470	2.297 E3	8.18
11)	Hexaldehyde	2.976	2.854	2.845	2.973	3.086	3.031	2.961 E3	3.24
12)	2,5-Dimethylbenzald	1.800	1.761	1.922	2.067	2.228	2.194	1.995 E3	9.95

#) = Out of Range

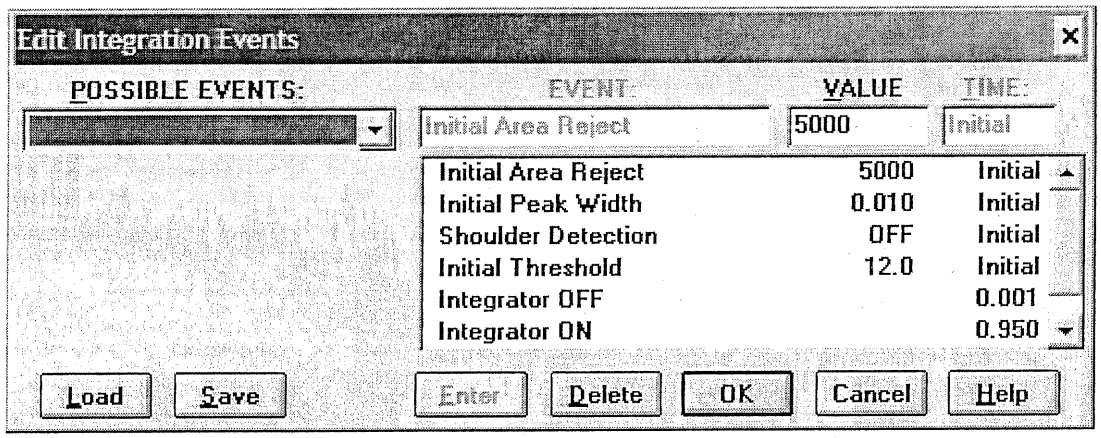
Calibration Status Report VWD

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	50	50.00	0.00	J:\LC02\DATA\TO11A\2009_09\09\09090910.D
2	100	100.00	0.00	J:\LC02\DATA\TO11A\2009_09\09\09090913.D
3	500	500.00	0.00	J:\LC02\DATA\TO11A\2009_09\09\09090916.D
4	1500	1500.00	0.00	J:\LC02\DATA\TO11A\2009_09\09\09090919.D
5	5000	5000.00	0.00	J:\LC02\DATA\TO11A\2009_09\09\09090922.D
6	10	10000.00	0.00	J:\LC02\DATA\TO11A\2009_09\09\09090924.D

#	ID	Update Time	Quant Time	Acquisition Time
1	50	Sep 10 08:49 2009	Sep 10 08:49 19109	09-Sep-2009, 15:43
2	100	Sep 10 09:03 2009	Sep 10 09:02 19109	09-Sep-2009, 16:17
3	500	Sep 10 08:54 2009	Sep 10 08:54 19109	09-Sep-2009, 16:51
4	1500	Sep 10 08:56 2009	Sep 10 08:56 19109	09-Sep-2009, 17:26
5	5000	Sep 10 08:58 2009	Sep 10 08:58 19109	09-Sep-2009, 18:00
6	10	Sep 10 08:59 2009	Sep 10 08:59 19109	09-Sep-2009, 18:23

TO110909.M Thu Sep 10 10:45:40 2009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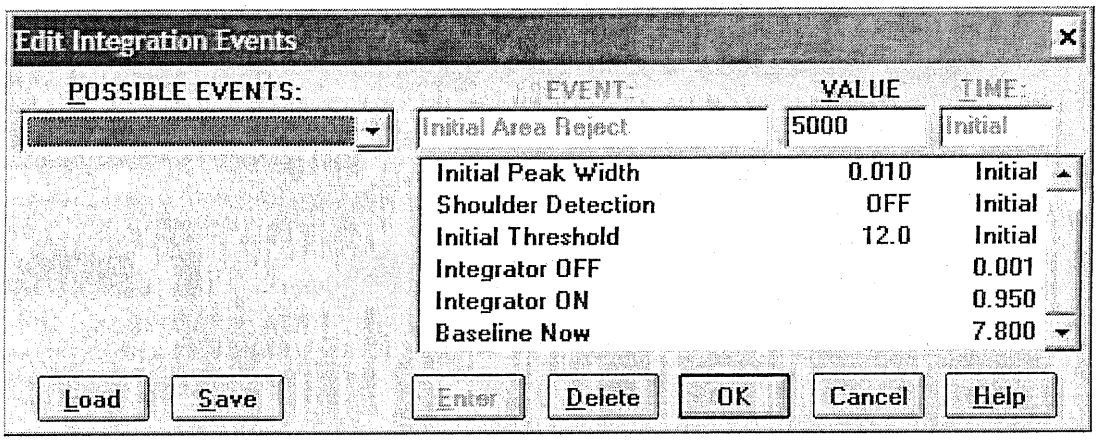
POSSIBLE EVENTS:
EVENT:
VALUE
TIME:
Initial Area Reject
5000
Initial
Initial Area Reject 5000 Initial
Initial Peak Width 0.010 Initial
Shoulder Detection OFF Initial
Initial Threshold 12.0 Initial
Integrator OFF 0.001
Integrator ON 0.950
Load
Save
Enter
Delete
OK
Cancel
Help


Edit Integration Events
POSSIBLE EVENTS:
EVENT:
VALUE
TIME:
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 0.950
Baseline Now 7.800
Load
Save
Enter
Delete
OK
Cancel
Help

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 S21-07270907 (nominal ng/mL)	ICV S21-07270907 (Actual, ng/mL)	% Diff
Formaldehyde	30.03	210.03	100	14.30	1430	1453.52	1.64%
Acetaldehyde	44.05	224.05	100.2	19.70	1970	2007.42	1.90%
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	2388.13	2.29%
Crotonaldehyde	70.09	250.09	100.2	28.08	2808	2879.18	2.53%
Butyraldehyde	72.11	252.11	100	28.60	2860	2877.59	0.61%
Benzaldehyde	106.12	286.12	100	37.09	3709	3693.25	0.42%
Isovaleraldehyde	86.13	266.13	100.2	32.43	3243	3227.07	0.49%
Valeraldehyde	86.13	266.13	100.1	32.40	3240	3280.39	1.25%
o-Tolualdehyde	120.15	300.15	100.1	40.07	4007	4053.17	1.15%
m,p-Tolualdehyde	120.15	300.15	100.3	80.30	8030	8394.52	4.54%
Hexaldehyde	100.16	280.16	100.3	35.86	3586	3443.52	3.97%
2,5-Dimethylbenzaldehyde	134.18	314.18	100.3	42.84	4284	4423.49	3.26%

(* MW of DNPH is 198g/mol. The result of a nucleophilic reaction of aldehyde & DNPH is a hydrazone derivative with the loss of H20, 18g/mol)

COLUMBIA ANALYTICAL SERVICES, INC.

Method: TO-11A
Analyst: MD

Printed : 09/10/09
Instrument : LC#02
Date Analysis : 09/09/09
Detector : UV-VIS 360
Sample Amount : 3ul

CALIBRATION RESPONSE FACTOR SUMMARY

Calibration Level	Form-Aldehyde	% rpd	Acet-Aldehyde	% rpd	Propion-Aldehyde	% rpd	Croton-Aldehyde	% rpd	Butyr-Aldehyde	% rpd	Benz-Aldehyde	% rpd
50ng/ml TO-11A S2	443088	1.89%	311721	4.62%	257497	4.24%	205520	3.43%	199284	2.09%	136041	2.60%
50ng/ml TO-11A S2	447251	0.97%	327663	0.25%	268082	0.31%	200887	1.10%	217482	6.85%	140658	0.71%
50ng/ml TO-11A S2	464552	2.86%	341116	4.37%	281140	4.55%	189710	4.53%	193856	4.76%	142307	1.89%
100ng/ml TO-11A S	857936	0.18%	602866	3.27%	495705	0.77%	389577	2.65%	390139	1.92%	249897	0.42%
100ng/ml TO-11A S	856527	0.34%	664731	6.66%	489979	1.92%	375407	1.09%	399611	4.39%	241433	3.79%
100ng/ml TO-11A S	864000	0.53%	602096	3.39%	512978	2.69%	373596	1.56%	358623	6.31%	261486	4.20%
500ng/ml TO-11A S	4290125	0.77%	3109621	1.47%	2494796	0.47%	1900371	2.76%	1886701	1.19%	1323186	3.01%
500ng/ml TO-11A S	4242920	0.34%	2996333	2.23%	2520033	0.54%	1968873	0.75%	1894865	0.76%	1238947	3.54%
500ng/ml TO-11A S	4239441	0.42%	3088021	0.76%	2504937	0.07%	1993623	2.01%	1946571	1.95%	1291253	0.53%
1500ng/ml TO-11A	13461963	0.50%	9836721	0.53%	7740242	0.67%	6180043	0.51%	6161274	0.67%	4059200	1.43%
1500ng/ml TO-11A	13578339	0.36%	9942887	0.54%	7876607	1.08%	6053894	1.54%	6038847	1.33%	4163474	1.11%
1500ng/ml TO-11A	13548320	0.14%	9888425	0.01%	7759817	0.42%	6211709	1.03%	6160753	0.66%	4131112	0.32%
5000ng/ml TO-11A	46422998	0.19%	33949113	0.13%	26460164	0.85%	21469148	0.59%	21371531	0.37%	14455457	0.09%
5000ng/ml TO-11A	46464064	0.10%	33977292	0.05%	26758092	0.27%	21604348	0.03%	21444271	0.03%	14435192	0.23%
5000ng/ml TO-11A	46648983	0.29%	34054104	0.18%	26843474	0.59%	21717189	0.56%	21538832	0.41%	14515721	0.32%
10000ng/ml TO-11A	91542792	0.07%	67198566	0.07%	52731710	0.10%	42623472	0.03%	42304249	0.04%	28602353	0.02%
10000ng/ml TO-11A	91301664	0.20%	67004053	0.22%	52551284	0.24%	42531897	0.18%	42207282	0.19%	28552063	0.15%
10000ng/ml TO-11A	91595894	0.13%	67244158	0.14%	52752024	0.14%	42676337	0.15%	42347195	0.14%	28631645	0.13%

COLUMBIA ANALYTICAL SERVICES, INC.

Method: TO-11A
Analyst:

Printed : 09/10/09
Instrument : LC#02
Date Analysis : 09/09/09
Detector : UV-VIS 360
Sample Amount : 3ul

CALIBRATION RESPONSE FACTOR SUMMARY

Calibration Level	Isovaler-Aldehyde	% rpd	Valer-Aldehyde	% rpd	o-Tolu-Aldehyde	% rpd	m,p-Tolu-Aldehyde	% rpd	Hex-Aldehyde	% rpd	2,5-Dimethl benz-Aldehyde	% rpd
50ng/ml TO-11A S2	186226	3.64%	166401	1.67%	109996	4.04%	216426	1.05%	145487	2.24%	84766	5.84%
50ng/ml TO-11A S2	175760	2.19%	171974	1.62%	93386	11.67%	227448	3.99%	145697	2.10%	96663	7.37%
50ng/ml TO-11A S2	177082	1.45%	169317	0.05%	113786	7.63%	212270	2.95%	155285	4.34%	88645	1.53%
100ng/ml TO-11A S	323665	0.72%	320426	2.21%	207105	4.56%	397976	1.92%	282439	1.03%	170783	3.03%
100ng/ml TO-11A S	313564	3.82%	335005	2.24%	188768	4.70%	416110	2.55%	285615	0.08%	182724	3.75%
100ng/ml TO-11A S	340775	4.53%	327561	0.03%	198353	0.14%	403186	0.63%	288074	0.95%	174836	0.73%
500ng/ml TO-11A S	1631123	0.17%	1598180	0.63%	1023918	0.55%	2205841	0.36%	1425262	0.21%	964881	0.39%
500ng/ml TO-11A S	1614213	0.87%	1593172	0.32%	1018615	0.03%	2181093	0.76%	1423115	0.06%	956005	0.53%
500ng/ml TO-11A S	1639714	0.70%	1572954	0.95%	1012283	0.59%	2206747	0.40%	1418487	0.27%	962409	0.14%
1500ng/ml TO-11A	5115478	0.79%	5104937	0.89%	3347391	0.77%	7133126	0.55%	4465907	0.15%	3088612	0.37%
1500ng/ml TO-11A	5182178	0.51%	5176264	0.50%	3396097	0.67%	7179077	0.09%	4448983	0.23%	3056583	1.41%
1500ng/ml TO-11A	5170579	0.28%	5170597	0.39%	3376687	0.10%	7206393	0.47%	4462344	0.07%	3155386	1.78%
5000ng/ml TO-11A	17854488	0.18%	17905508	0.18%	11990582	0.11%	25039167	0.12%	15466841	0.25%	11107870	0.29%
5000ng/ml TO-11A	17875029	0.07%	17921465	0.09%	11986554	0.15%	25032033	0.15%	15380456	0.31%	11113181	0.24%
5000ng/ml TO-11A	17932725	0.25%	17988106	0.28%	12035186	0.26%	25134428	0.26%	15437631	0.06%	11198210	0.52%
10000ng/ml TO-11A	35277028	0.07%	35412579	0.06%	23892692	0.14%	49431359	0.07%	30345892	0.11%	21989696	0.21%
10000ng/ml TO-11A	35194712	0.17%	35338059	0.15%	23813504	0.19%	49315533	0.17%	30246038	0.22%	21823086	0.55%
10000ng/ml TO-11A	35288997	0.10%	35418570	0.08%	23869930	0.05%	49446486	0.10%	30343150	0.10%	22018475	0.34%

AVERAGE RESPONSE FACTOR

	Form-Aldehyde	Acet-Aldehyde	Propion-Aldehyde	Croton-Aldehyde	Butyr-Aldehyde	Benz-Aldehyde
50ng/ml TO-11A S	451630	326833	268906	198706	203541	139669
100ng/ml TO-11A S	859488	623231	499554	379527	382791	250939
500ng/ml TO-11A S	4257495	3064658	2506589	1954289	1909379	1284462
1500ng/ml TO-11A	13529541	9889344	7792222	6148549	6120291	4117929
5000ng/ml TO-11A	46512015	33993503	26687243	21596895	21451545	14468790
10000ng/ml TO-11L	91480117	67148926	52678339	42610569	42286242	28595354

AVERAGE RESPONSE FACTOR

	Isovaler-Aldehyde	Valer-Aldehyde	o-Tolu-Aldehyde	m,p-Tolu-Aldehyde	Hex-Aldehyde	2,5-Dimethl benz-Aldehyde
50ng/ml TO-11A S	179689	169231	105723	218715	148823	90025
100ng/ml TO-11A S	326001	327664	198075	405757	285376	176114
500ng/ml TO-11A S	1628350	1588102	1018272	2197894	1422288	961098
1500ng/ml TO-11A	5156078	5150599	3373392	7172865	4459078	3100194
5000ng/ml TO-11A	17887414	17938360	12004107	25068543	15428309	11139754
10000ng/ml TO-11L	35253579	35389736	23858709	49397793	30311693	21943752

COMPOUND	50	100	500	1500	5000	10000	AVERAGE	SD	%RSD
Formaldehyde	9.033E+03	8.595E+03	8.515E+03	9.020E+03	9.302E+03	9.148E+03	8.935E+03	3.13E+02	3.50%
Acetaldehyde	6.537E+03	6.232E+03	6.129E+03	6.593E+03	6.799E+03	6.715E+03	6.501E+03	2.66E+02	4.10%
Propionaldehyde	5.378E+03	4.996E+03	5.013E+03	5.195E+03	5.337E+03	5.268E+03	5.198E+03	1.62E+02	3.13%
Crotonaldehyde	3.974E+03	3.795E+03	3.909E+03	4.099E+03	4.319E+03	4.261E+03	4.060E+03	2.05E+02	5.04%
Butyraldehyde	4.071E+03	3.828E+03	3.819E+03	4.080E+03	4.290E+03	4.229E+03	4.053E+03	1.97E+02	4.86%
Benzaldehyde	2.793E+03	2.509E+03	2.569E+03	2.745E+03	2.894E+03	2.860E+03	2.728E+03	1.56E+02	5.74%
Isovaleraldehyde	3.594E+03	3.260E+03	3.257E+03	3.437E+03	3.577E+03	3.525E+03	3.442E+03	1.52E+02	4.42%
Valeraldehyde	3.385E+03	3.277E+03	3.176E+03	3.434E+03	3.588E+03	3.539E+03	3.400E+03	1.56E+02	4.58%
o-Tolualdehyde	2.114E+03	1.981E+03	2.037E+03	2.249E+03	2.401E+03	2.386E+03	2.195E+03	1.78E+02	8.13%
m,p-Tolualdehyde	2.187E+03	2.029E+03	2.198E+03	2.391E+03	2.507E+03	2.470E+03	2.297E+03	1.88E+02	8.18%
Hexaldehyde	2.976E+03	2.854E+03	2.845E+03	2.973E+03	3.086E+03	3.031E+03	2.961E+03	9.58E+01	3.24%
2,5-Dimethylbenzaldehyde	1.800E+03	1.761E+03	1.922E+03	2.067E+03	2.228E+03	2.194E+03	1.995E+03	1.98E+02	9.95%

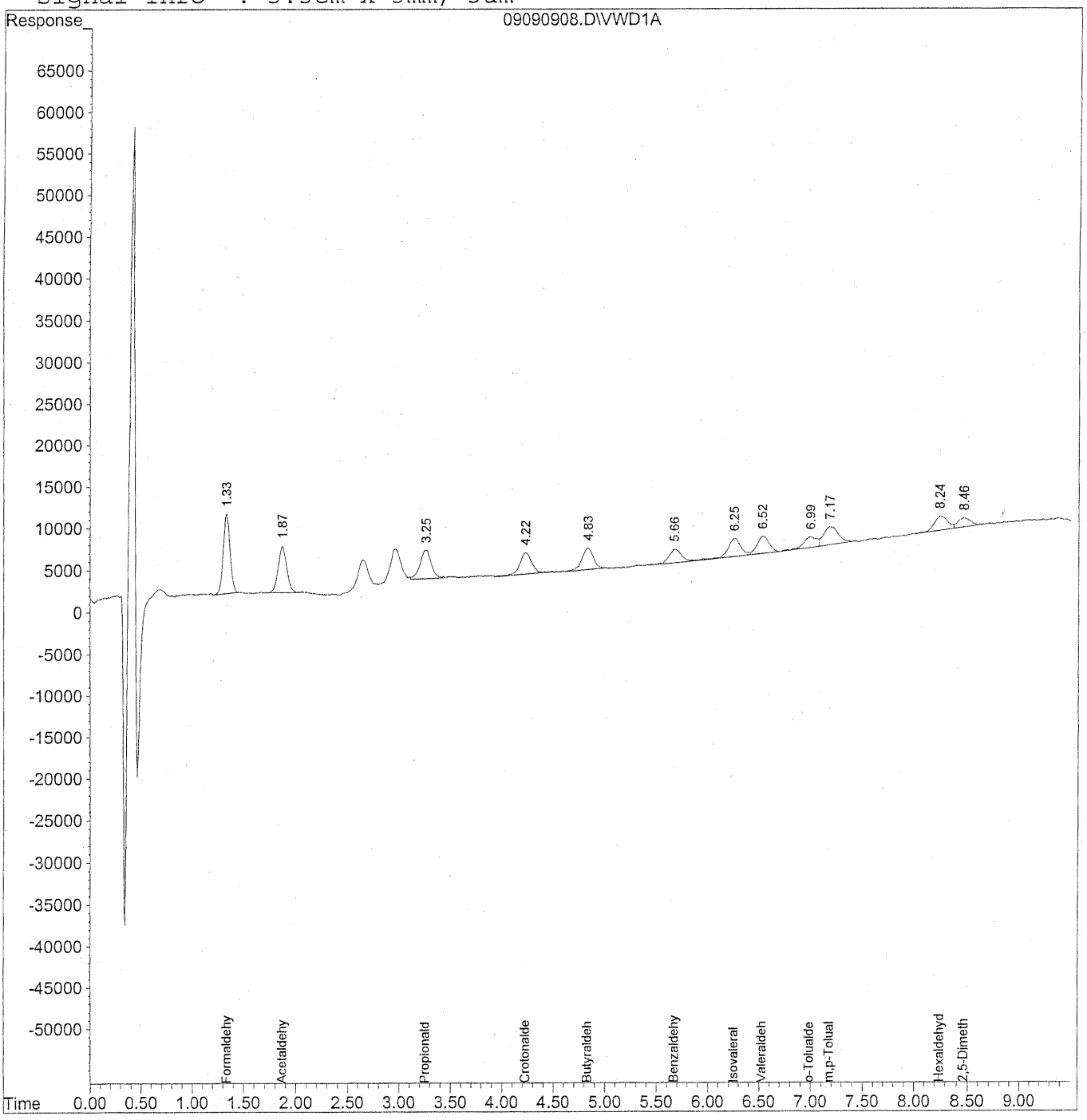
TO-11A CALIBRATION STANDARDS LIST							
50ng/ml TO-11A S21-09080905							
100ng/ml TO-11A S21-09080904							
500ng/ml TO-11A S21-09080903							
1500ng/ml TO-11A S21-09090903							
5000ng/ml TO-11A S21-09080902							
10000ng/ml TO-11A S21-09080901							

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090908.D Vial: 9
Acq On : 09-Sep-2009, 15:20 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:46 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



187

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090908.D Vial: 9
Acq On : 09-Sep-2009, 15:20 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:46 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

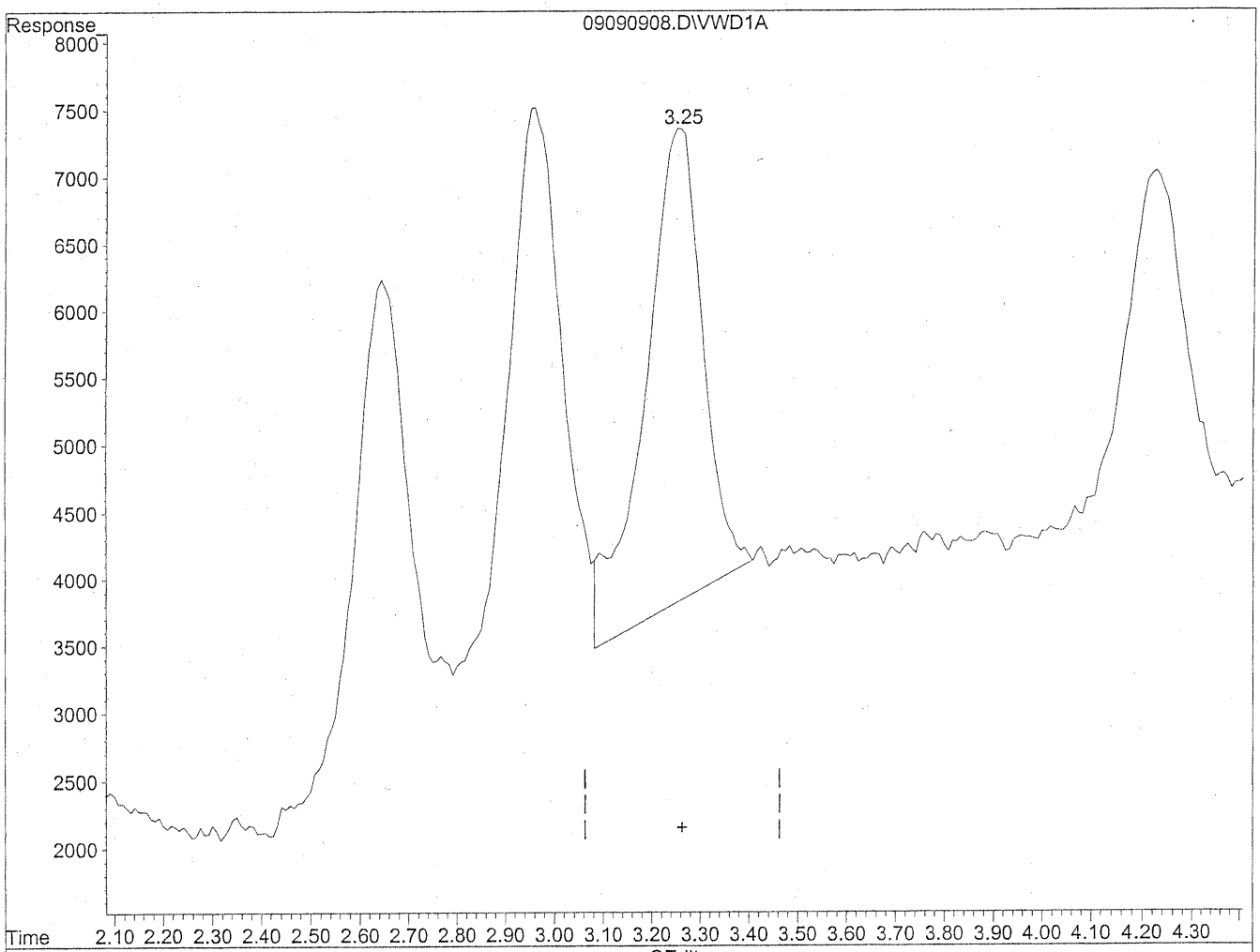
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.33	443088	48.300	ng/ml
2)	Acetaldehyde	1.87	311721	47.262	ng/ml
3)	Propionaldehyde	3.25	257497	49.595	ng/mlm
4)	Crotonaldehyde	4.23	205520	50.553	ng/ml
5)	Butyraldehyde	4.83	199284	48.165	ng/ml
6)	Benzaldehyde	5.67	136041	50.640	ng/ml
7)	Isovaleraldehyde	6.25	186226	53.155	ng/ml
8)	Valeraldehyde	6.53	166401	50.588	ng/ml
9)	o-Tolualdehyde	6.99	109996	48.007	ng/ml
10)	m,p-Tolualdehyde	7.18	216426	93.961	ng/ml
11)	Hexaldehyde	8.24	145487	51.040	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.46	84766	42.867	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090908.D Vial: 9
Acq On : 09-Sep-2009, 15:20 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:45 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.26min 56.431ng/ml

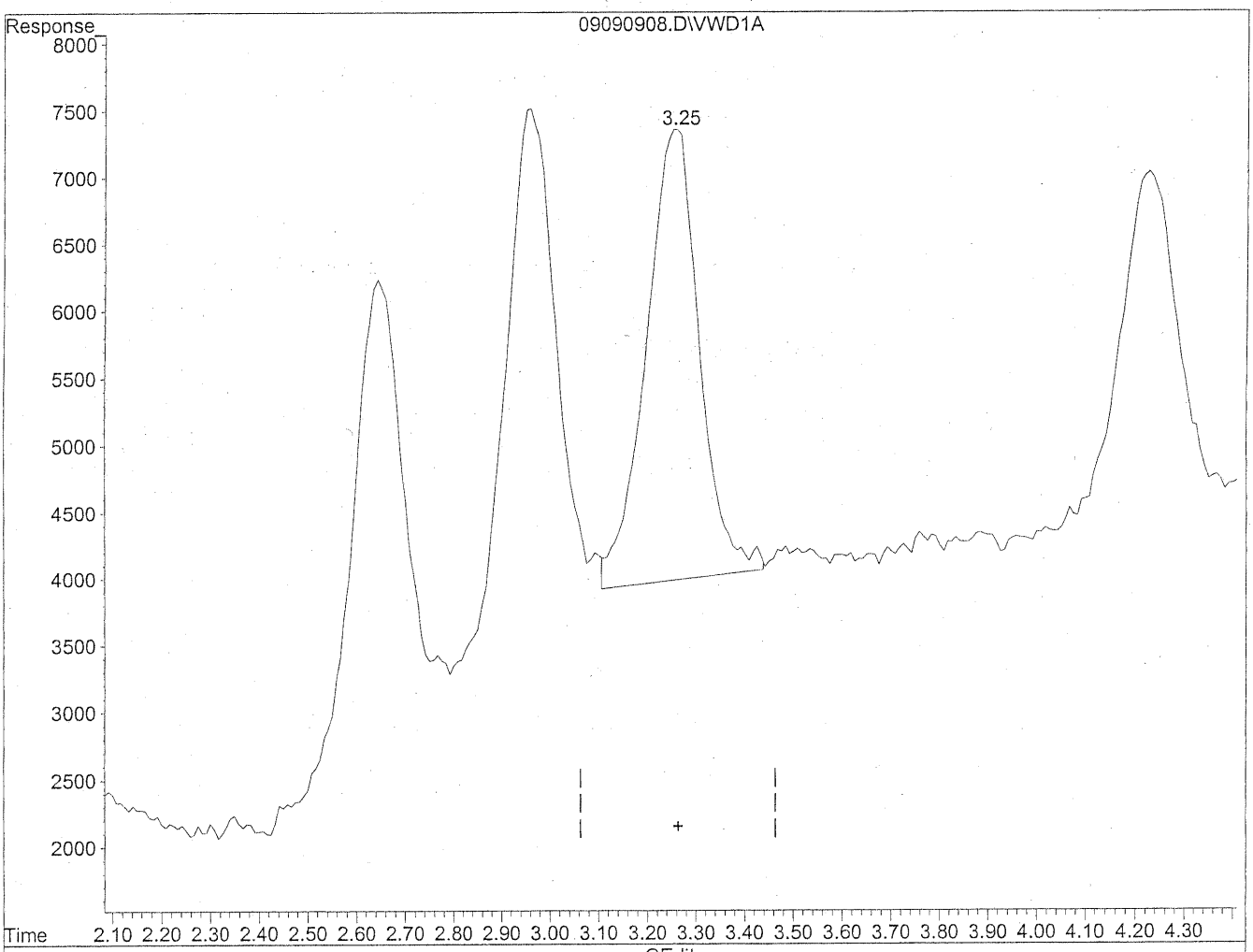
response 292995

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090908.D Vial: 9
Acq On : 09-Sep-2009, 15:20 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:45 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



QEdit

(3) Propionaldehyde

3.25min 49.595ng/ml m

response 257497

9/10/09

KK 9/10/09

(+) = Expected Retention Time

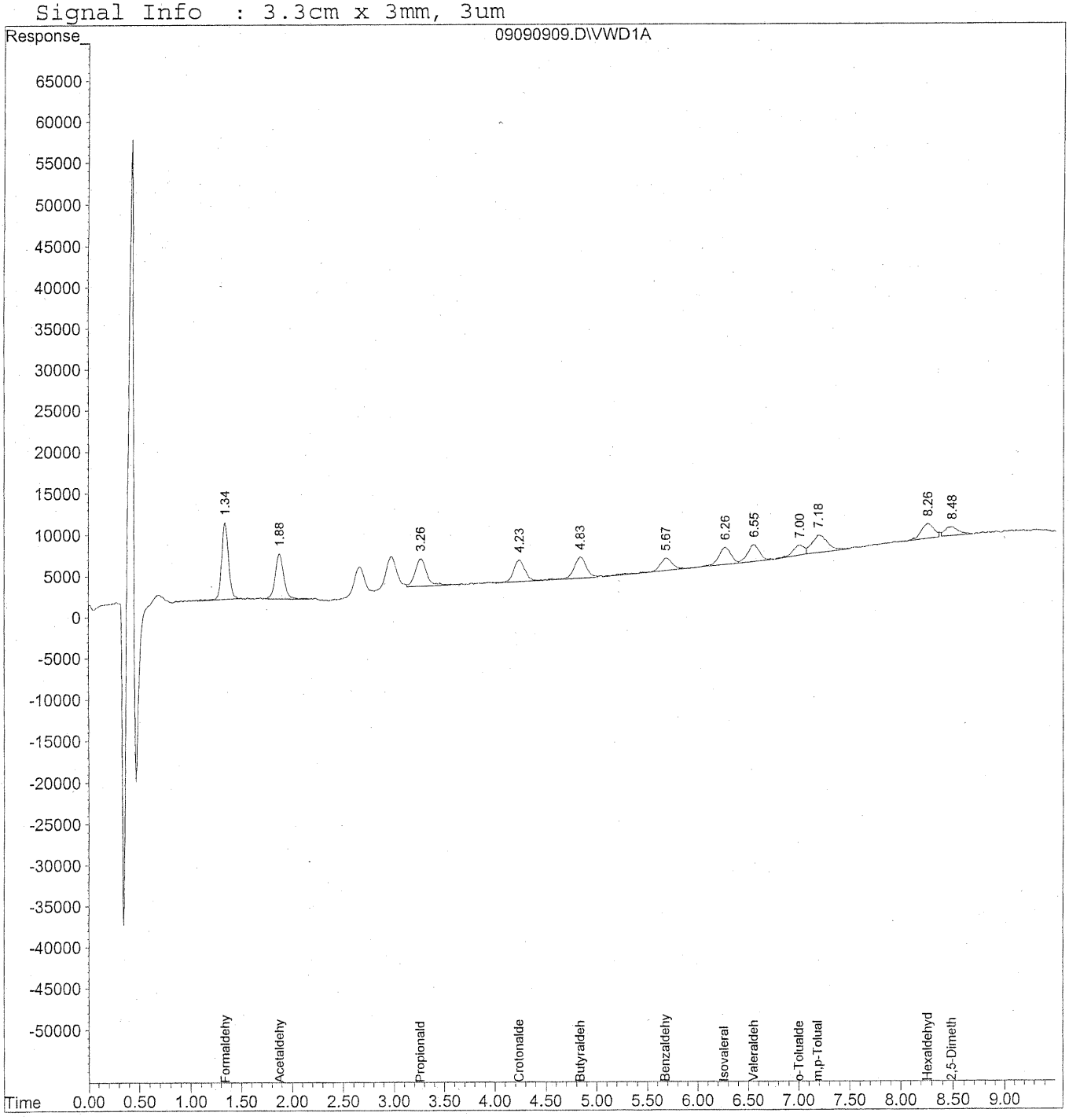
09090908.D TO110909.M Thu Sep 10 08:46:01 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090909.D Vial: 9
Acq On : 09-Sep-2009, 15:31 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:48 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



191

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090909.D Vial: 9
Acq On : 09-Sep-2009, 15:31 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:48 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

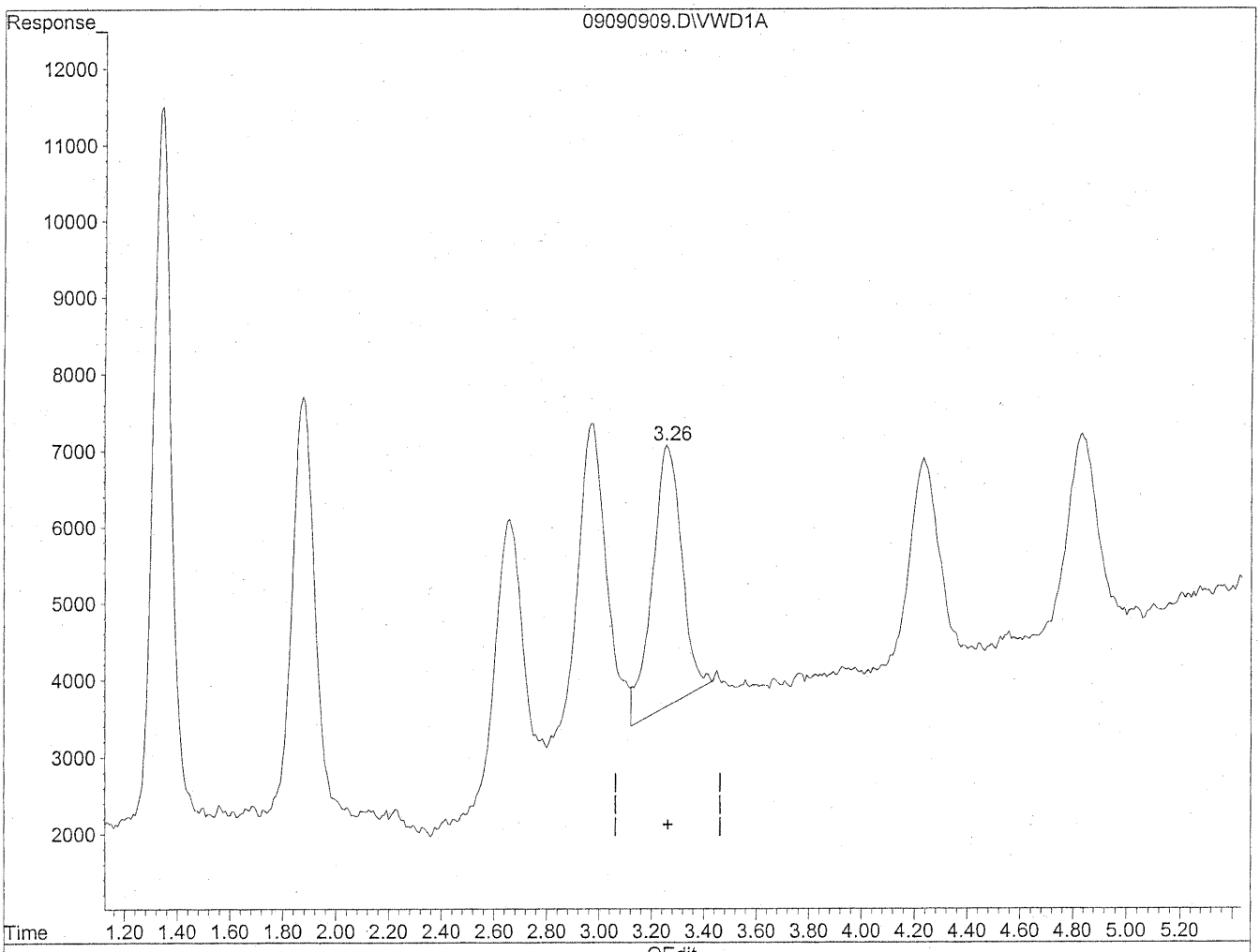
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	447251	48.810	ng/ml
2)	Acetaldehyde	1.88	327663	49.697	ng/ml
3)	Propionaldehyde	3.26	268082	51.767	ng/mlm
4)	Crotonaldehyde	4.24	200887	48.943	ng/ml
5)	Butyraldehyde	4.84	217482	52.896	ng/ml
6)	Benzaldehyde	5.68	140658	52.629	ng/ml
7)	Isovaleraldehyde	6.27	175760	49.313	ng/ml
8)	Valeraldehyde	6.55	171974	52.000	ng/ml
9)	o-Tolualdehyde	7.01	93386	40.816	ng/ml
10)	m,p-Tolualdehyde	7.18	227448	98.156	ng/mlm
11)	Hexaldehyde	8.26	145697	49.945	ng/mlm
12)	2,5-Dimethylbenzaldehyde	8.48	96663	49.614	ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090909.D Vial: 9
Acq On : 09-Sep-2009, 15:31 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:46 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.26min 51.274ng/ml

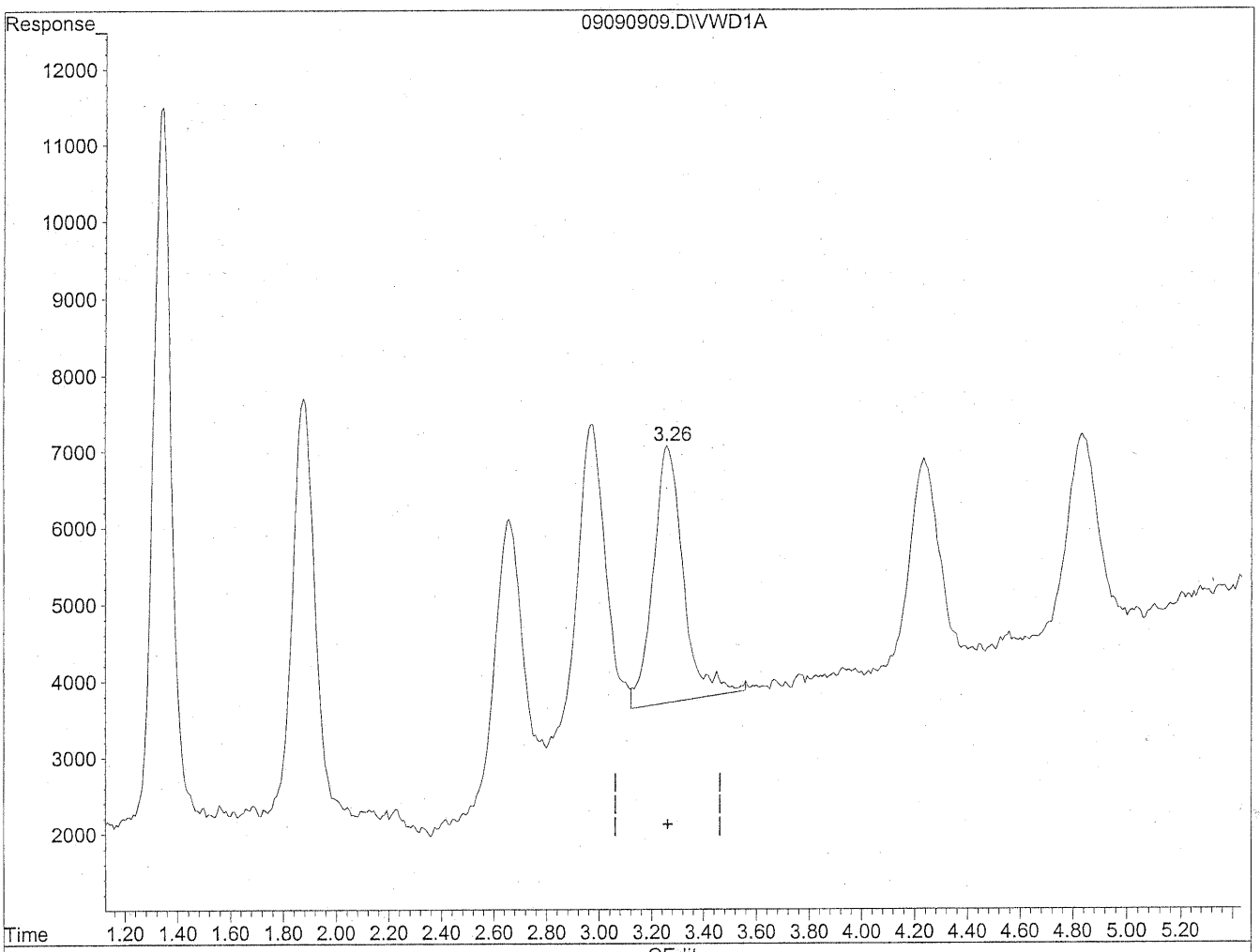
response 265532

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090909.D Vial: 9
Acq On : 09-Sep-2009, 15:31 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:46 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



QEdit

(3) Propionaldehyde

3.26min 51.767ng/ml m

response 268082

9/10/09

9/10/09

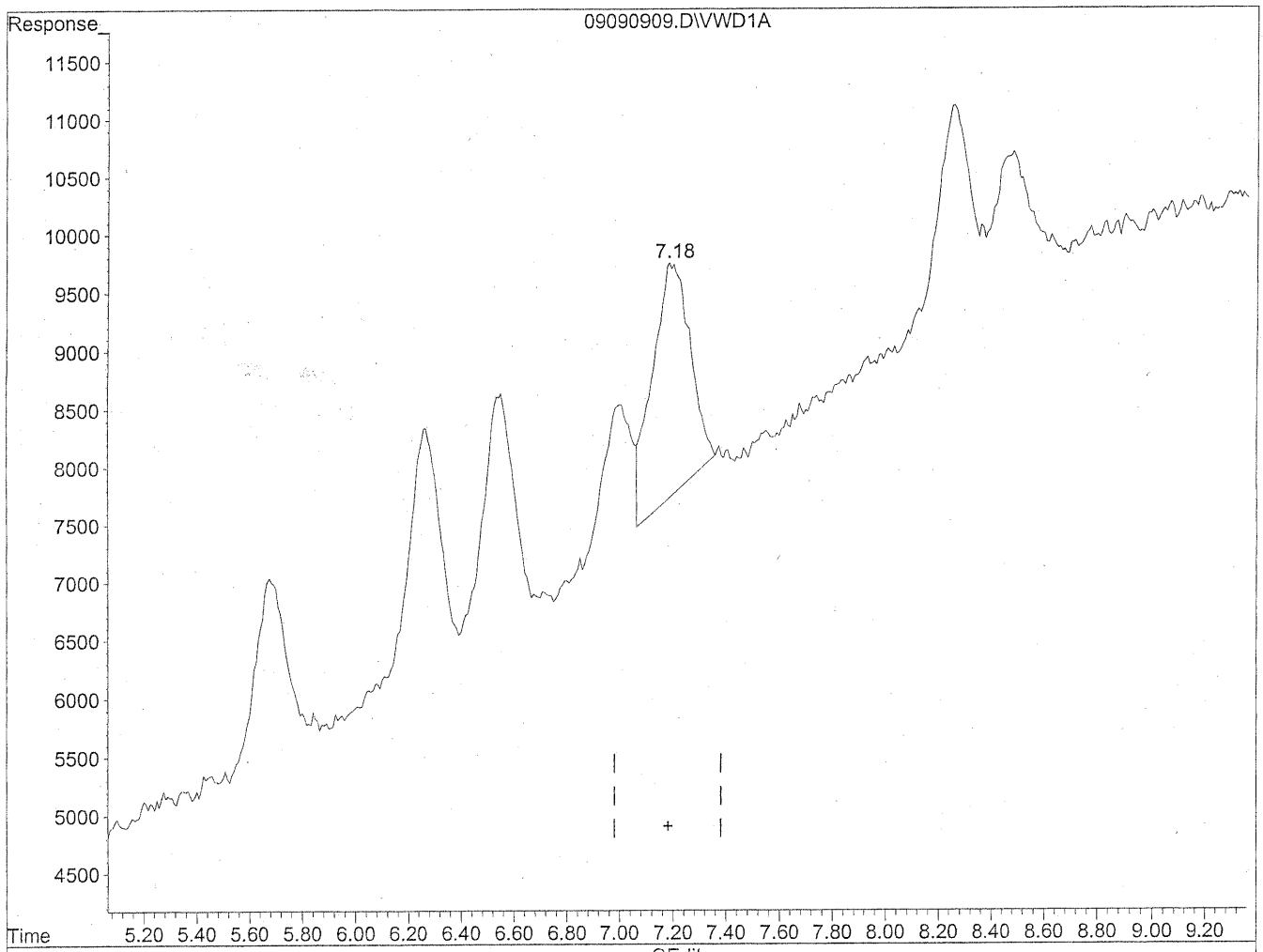
194

(+) = Expected Retention Time
09090909.D TO110909.M Thu Sep 10 08:47:01 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090909.D Vial: 9
Acq On : 09-Sep-2009, 15:31 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:46 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

7.19min 86.656ng/ml

response 200799

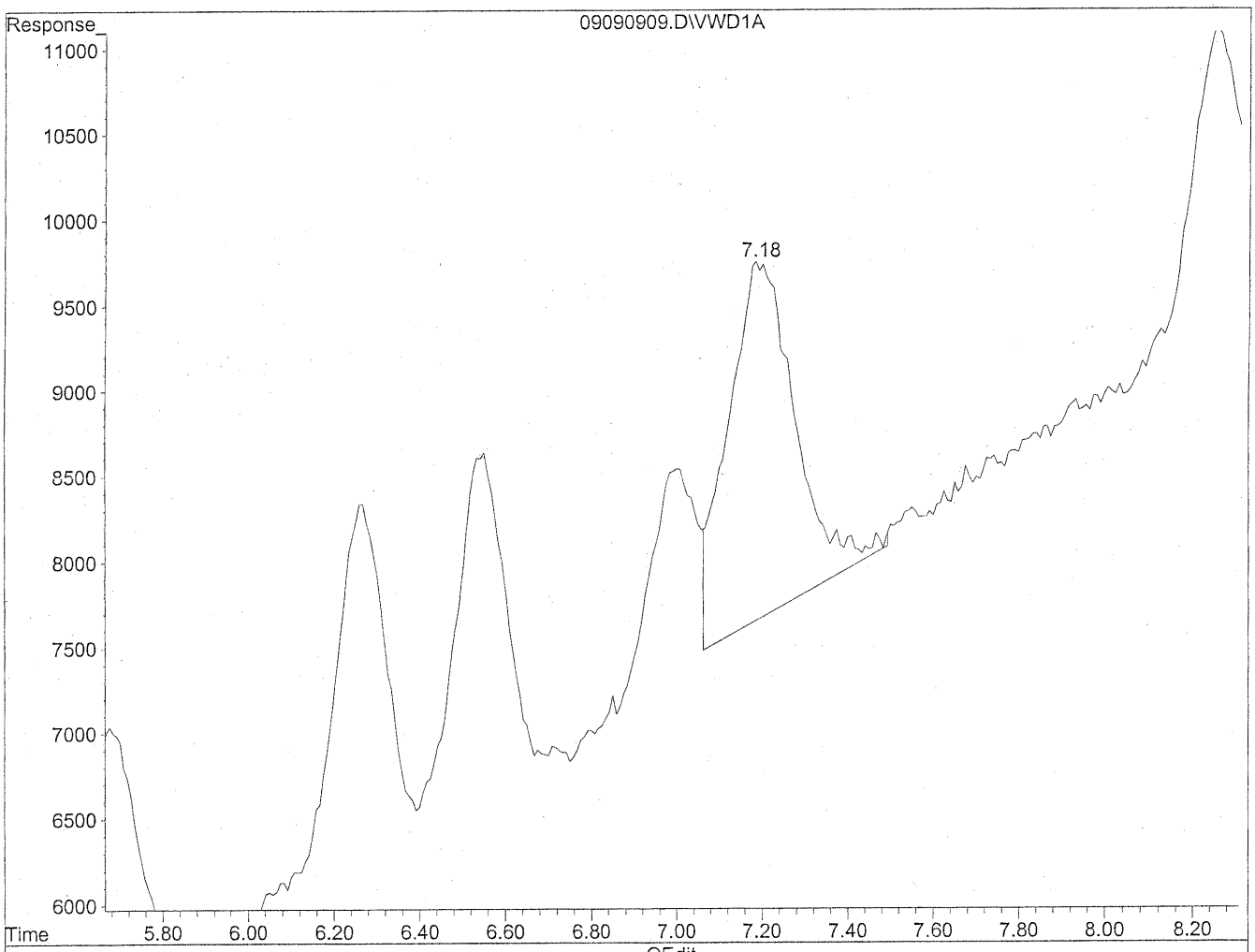
(+) = Expected Retention Time

09090909.D TO110909.M Thu Sep 10 08:47:13 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090909.D Vial: 9
Acq On : 09-Sep-2009, 15:31 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:46 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

7.18min 98.156ng/ml m

response 227448

9/10/09

KP 9/10/09

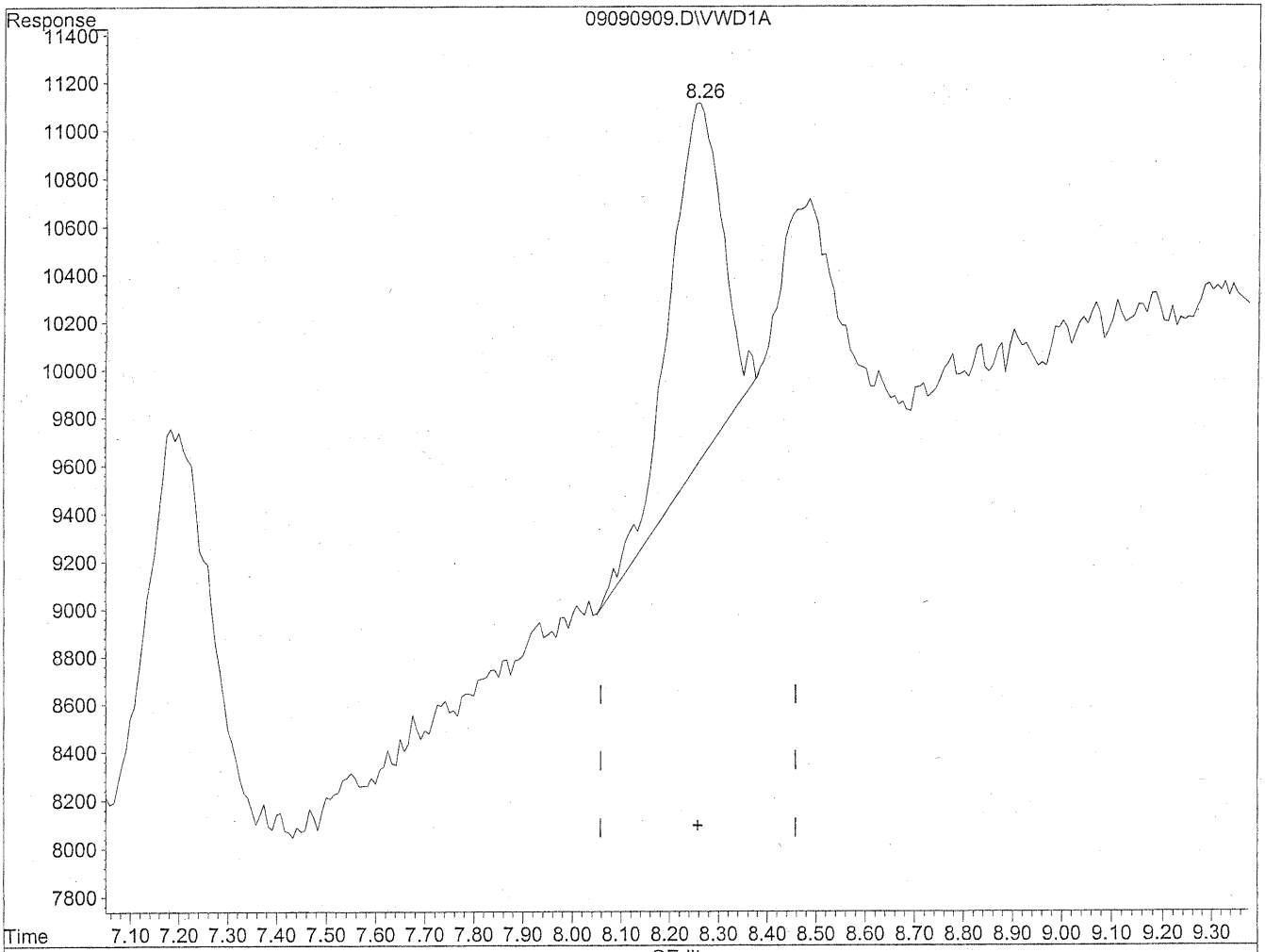
196

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090909.D Vial: 9
Acq On : 09-Sep-2009, 15:31 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:46 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.26min 38.176ng/ml

response 111365

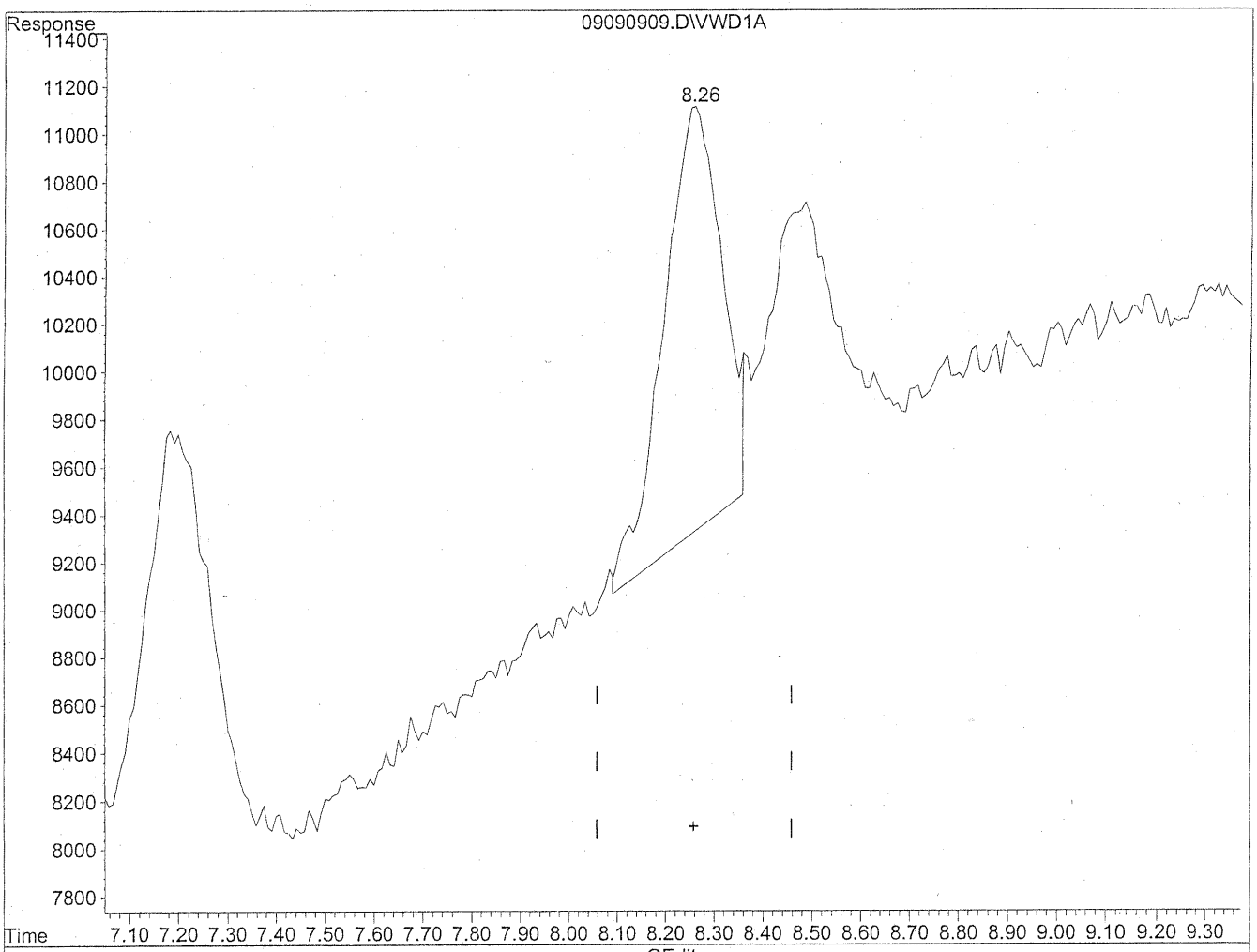
(+) = Expected Retention Time

09090909.D TO110909.M Thu Sep 10 08:48:01 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090909.D Vial: 9
Acq On : 09-Sep-2009, 15:31 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:46 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.26min 49.945ng/ml m

response 145697

9/10/09

9/10/09

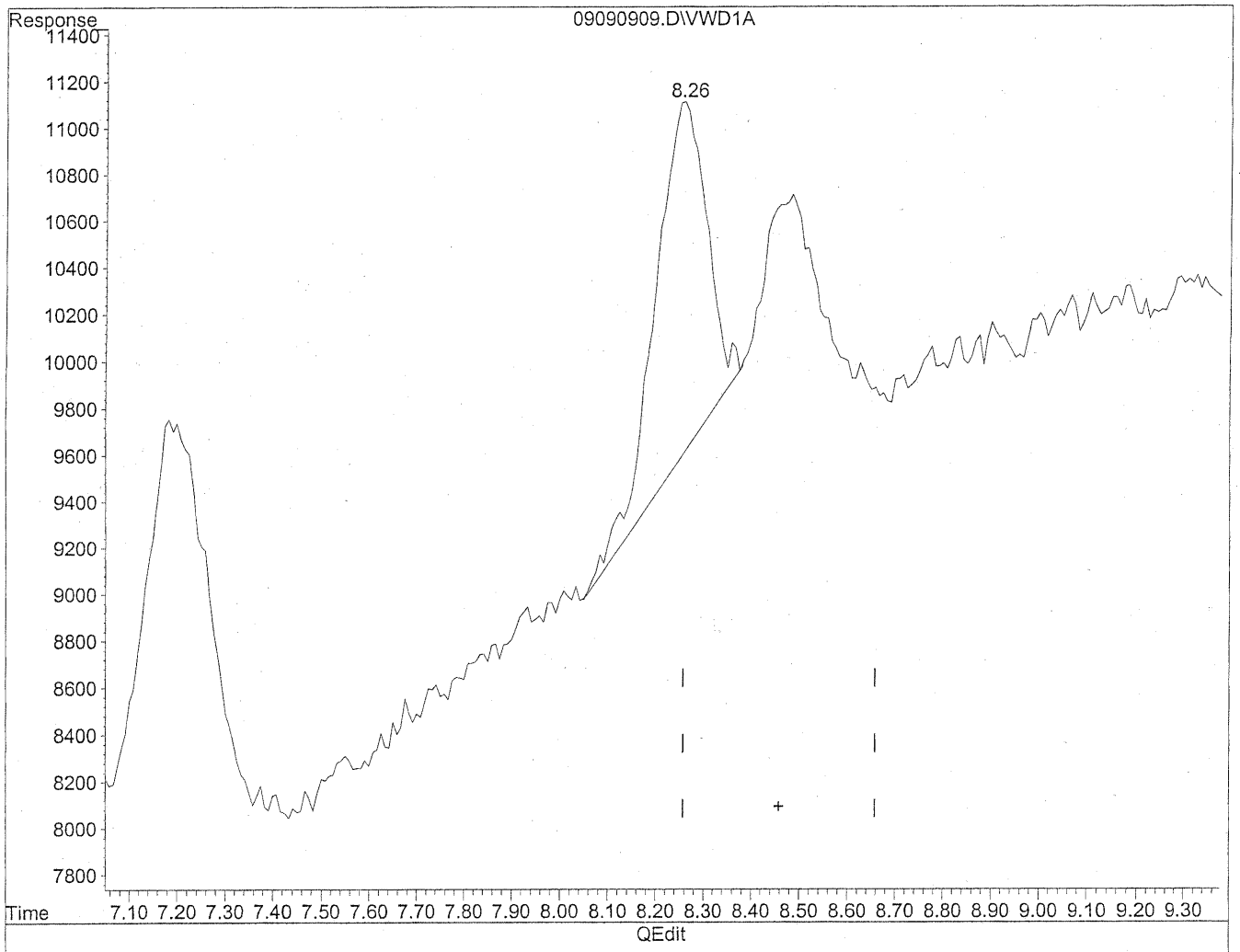
(+) = Expected Retention Time

09090909.D TO110909.M Thu Sep 10 08:48:07 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090909.D Vial: 9
Acq On : 09-Sep-2009, 15:31 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:46 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.26min 57.160ng/ml

response 111365

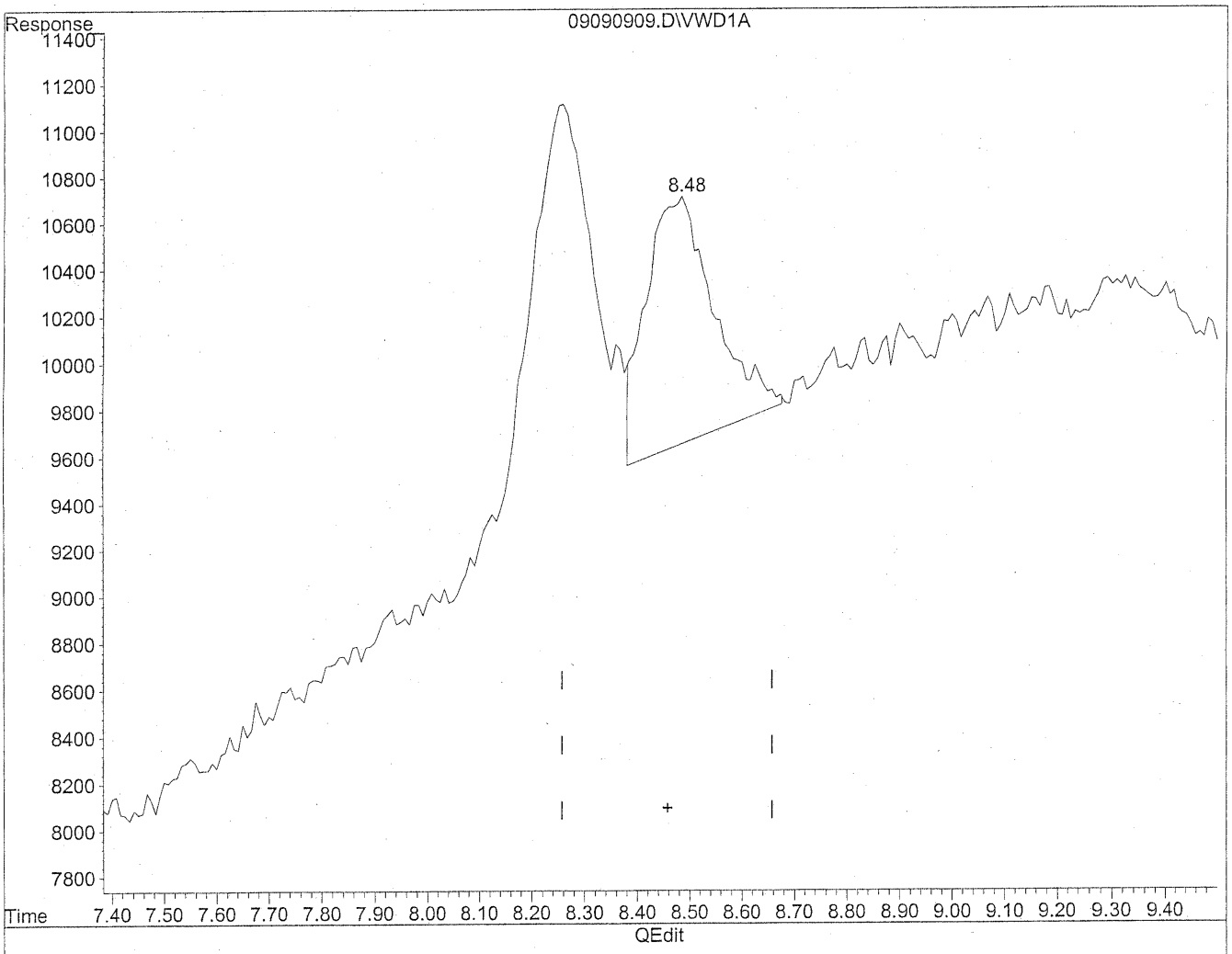
(+) = Expected Retention Time

09090909.D TO110909.M Thu Sep 10 08:48:09 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090909.D Vial: 9
Acq On : 09-Sep-2009, 15:31 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:48 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 11 13:54:46 2008
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.48min 49.614ng/ml m

response 96663

9/10/09 mp

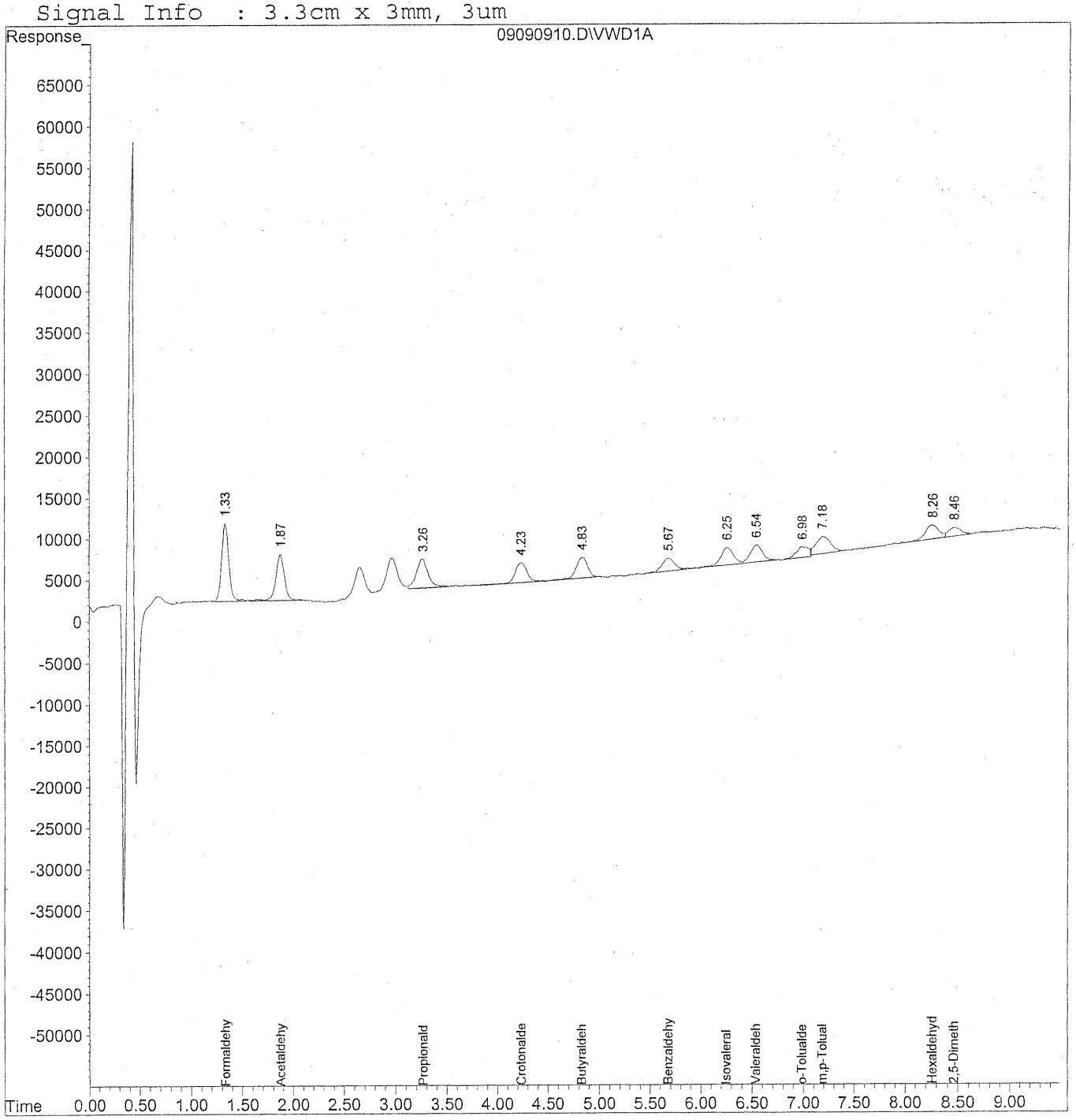
mp 9/10/09

(+) = Expected Retention Time

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090910.D Vial: 9
Acq On : 09-Sep-2009, 15:43 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:49 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



201

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090910.D Vial: 9
Acq On : 09-Sep-2009, 15:43 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:49 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

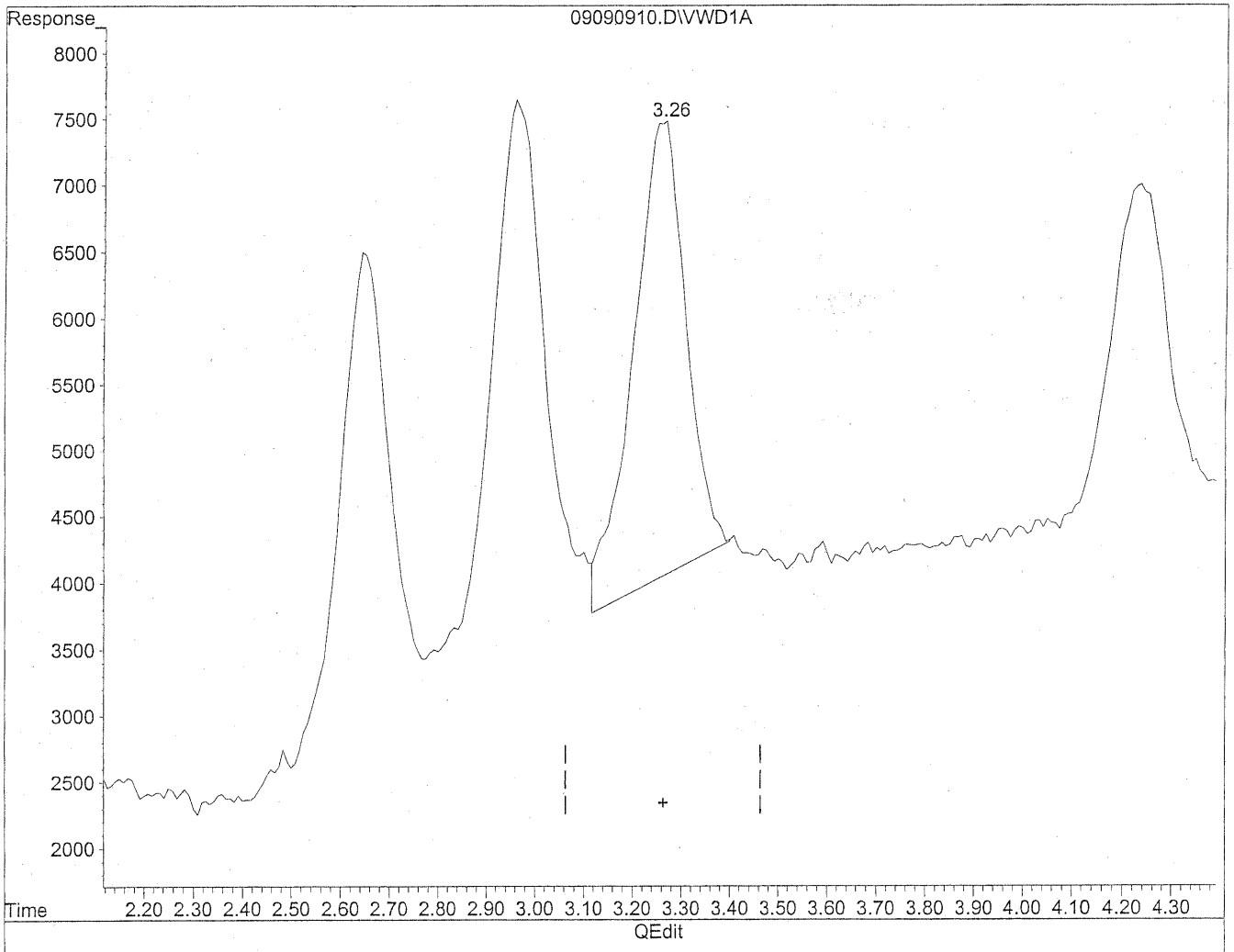
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.33	464552	50.660	ng/ml
2)	Acetaldehyde	1.87	341116	51.530	ng/ml
3)	Propionaldehyde	3.26	281140	54.104	ng/mlm
4)	Crotonaldehyde	4.23	189710	46.307	ng/ml
5)	Butyraldehyde	4.83	193856	46.804	ng/ml
6)	Benzaldehyde	5.67	142307	53.093	ng/mlm
7)	Isovaleraldehyde	6.26	177082	49.928	ng/ml
8)	Valeraldehyde	6.54	169317	51.053	ng/ml
9)	o-Tolualdehyde	6.98	113786	50.342	ng/mlm
10)	m,p-Tolualdehyde	7.19	212270	91.245	ng/ml
11)	Hexaldehyde	8.26	155285	53.226	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.46	88645	45.040	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090910.D Vial: 9
Acq On : 09-Sep-2009, 15:43 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:48 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.26min 49.837ng/ml

response 258964

203

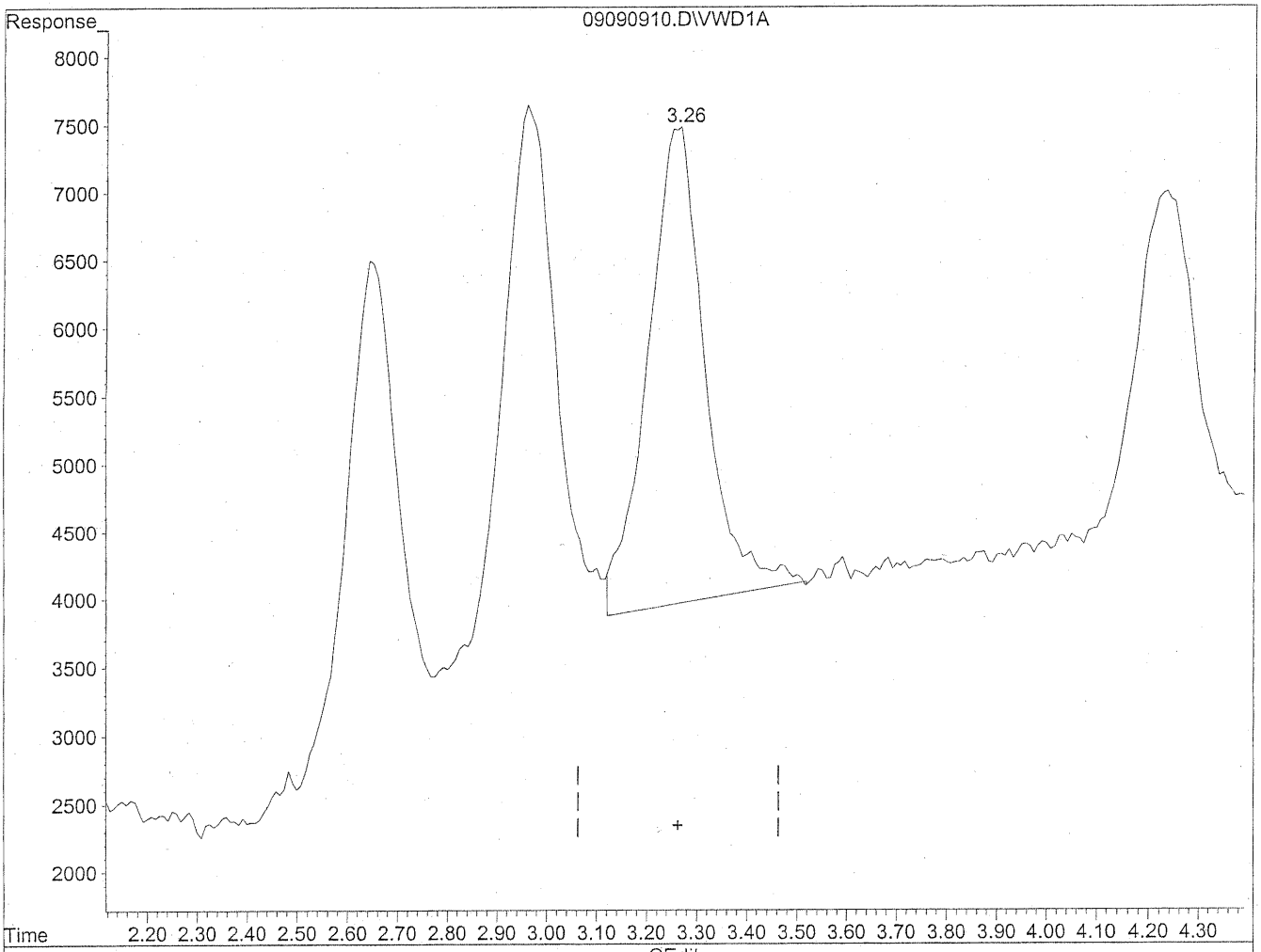
(+) = Expected Retention Time

09090910.D TO110909.M Thu Sep 10 08:48:55 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090910.D Vial: 9
Acq On : 09-Sep-2009, 15:43 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:48 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.26min 54.104ng/ml m

response 281140

9/10/09

9/10/09

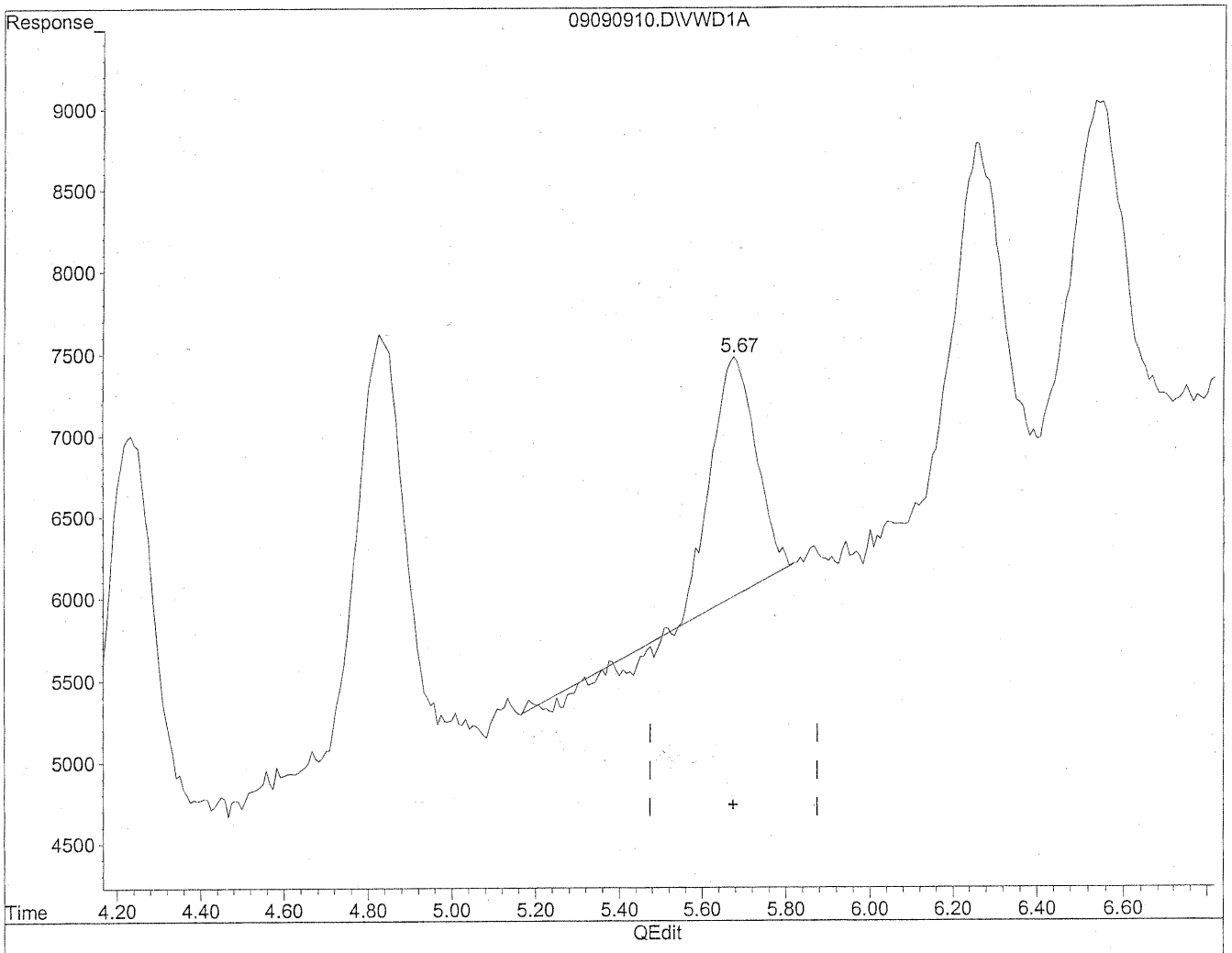
(+) = Expected Retention Time

09090910.D TO110909.M Thu Sep 10 08:49:06 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090910.D Vial: 9
Acq On : 09-Sep-2009, 15:43 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:48 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.68min 37.890ng/ml

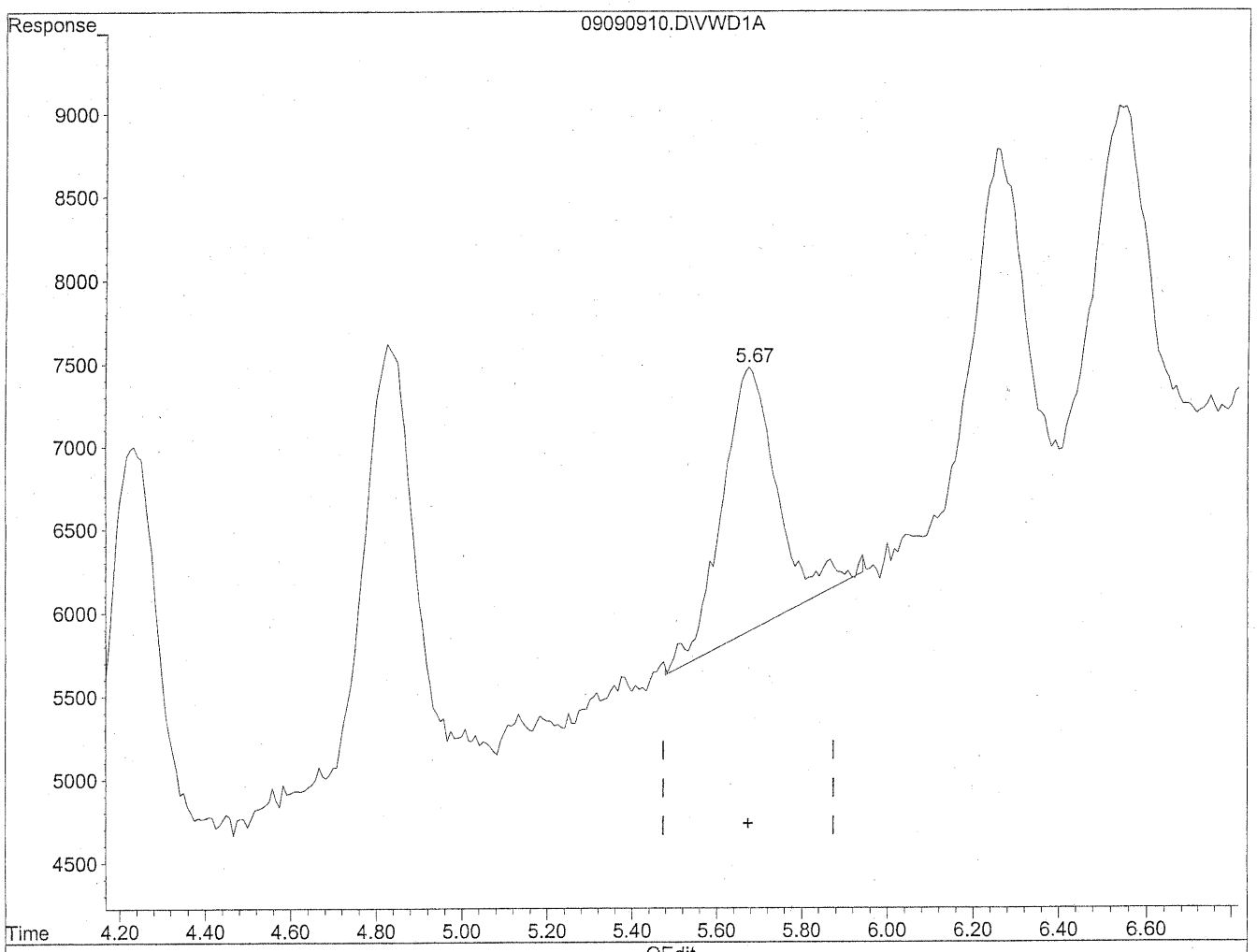
response 101557

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090910.D Vial: 9
Acq On : 09-Sep-2009, 15:43 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:48 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.67min 53.093ng/ml m

response 142307

9/10/09

9/10/09

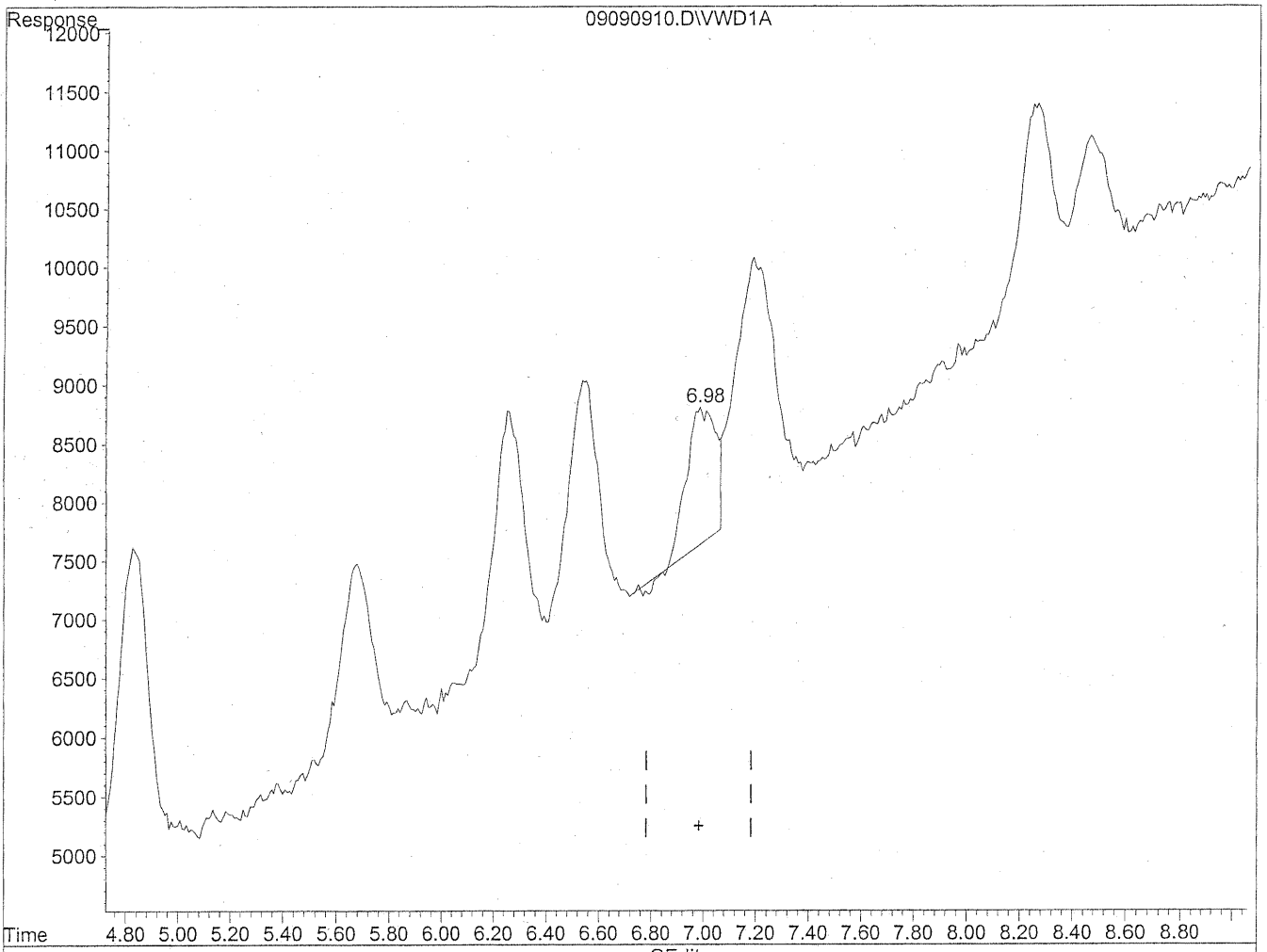
206

(+) = Expected Retention Time
09090910.D TO110909.M Thu Sep 10 08:49:16 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090910.D Vial: 9
Acq On : 09-Sep-2009, 15:43 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:48 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

6.99min 38.054ng/ml

response 86012

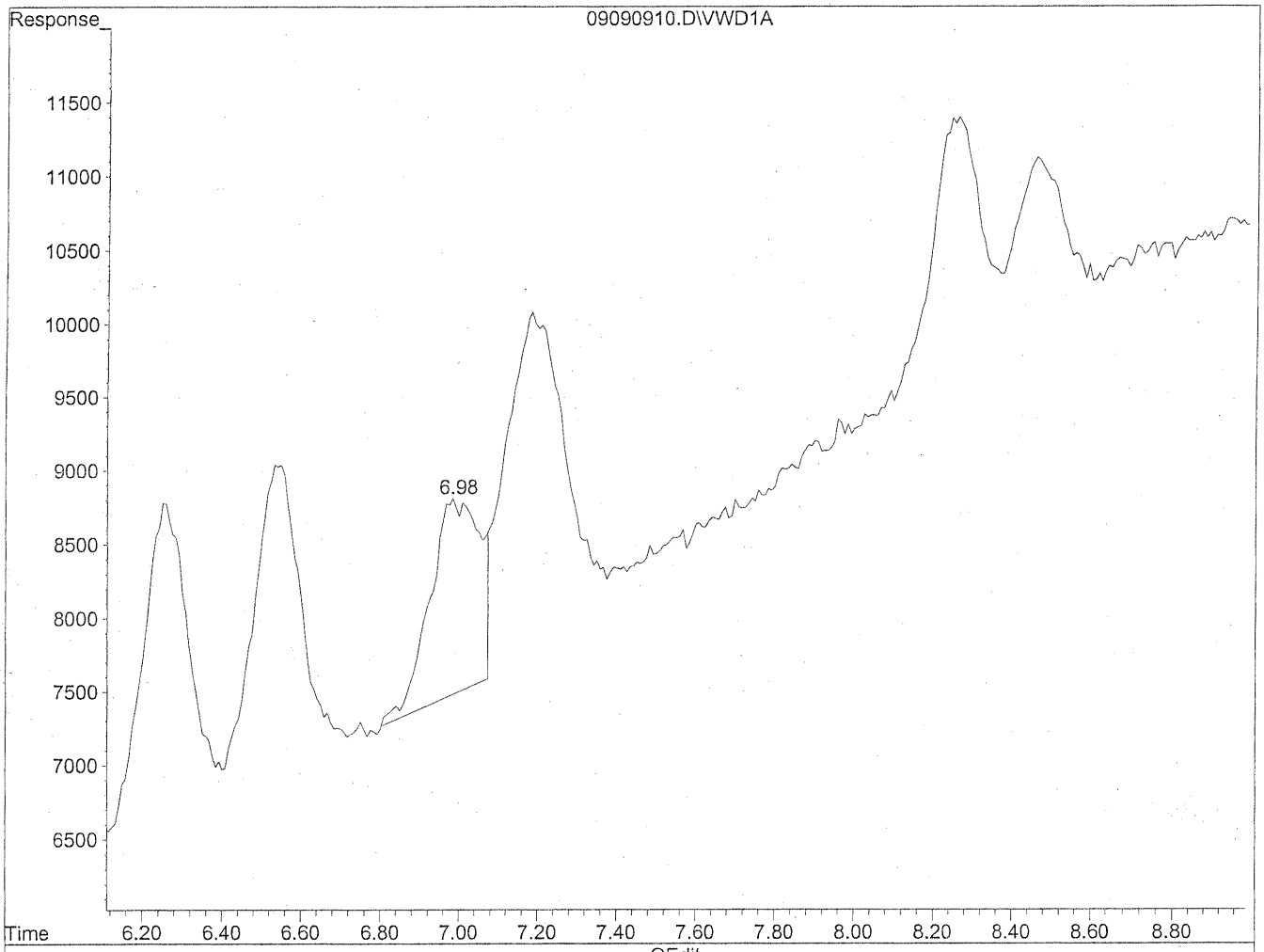
(+) = Expected Retention Time

09090910.D TO110909.M Thu Sep 10 08:49:25 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090910.D Vial: 9
Acq On : 09-Sep-2009, 15:43 Operator: MD
Sample : 50ng/ml TO-11A S21-09080905 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:48 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



QEdit

(9) o-Tolualdehyde

6.98min 50.342ng/ml m

response 113786

9/10/09

9/10/09

208

(+) = Expected Retention Time

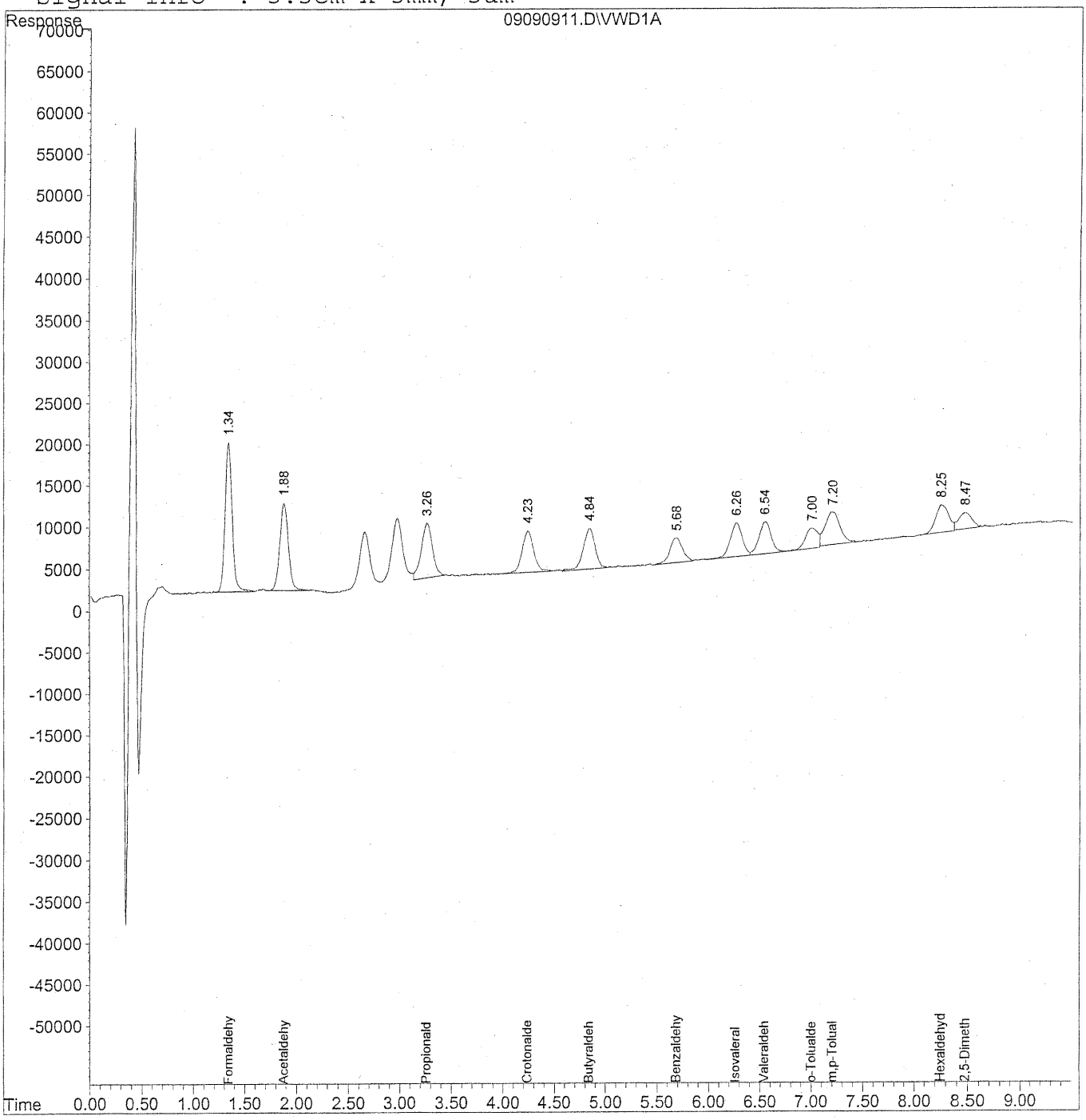
09090910.D TO110909.M Thu Sep 10 08:49:36 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090911.D Vial: 8
Acq On : 09-Sep-2009, 15:54 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 9:02 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



209

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090911.D Vial: 8
Acq On : 09-Sep-2009, 15:54 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 9:02 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

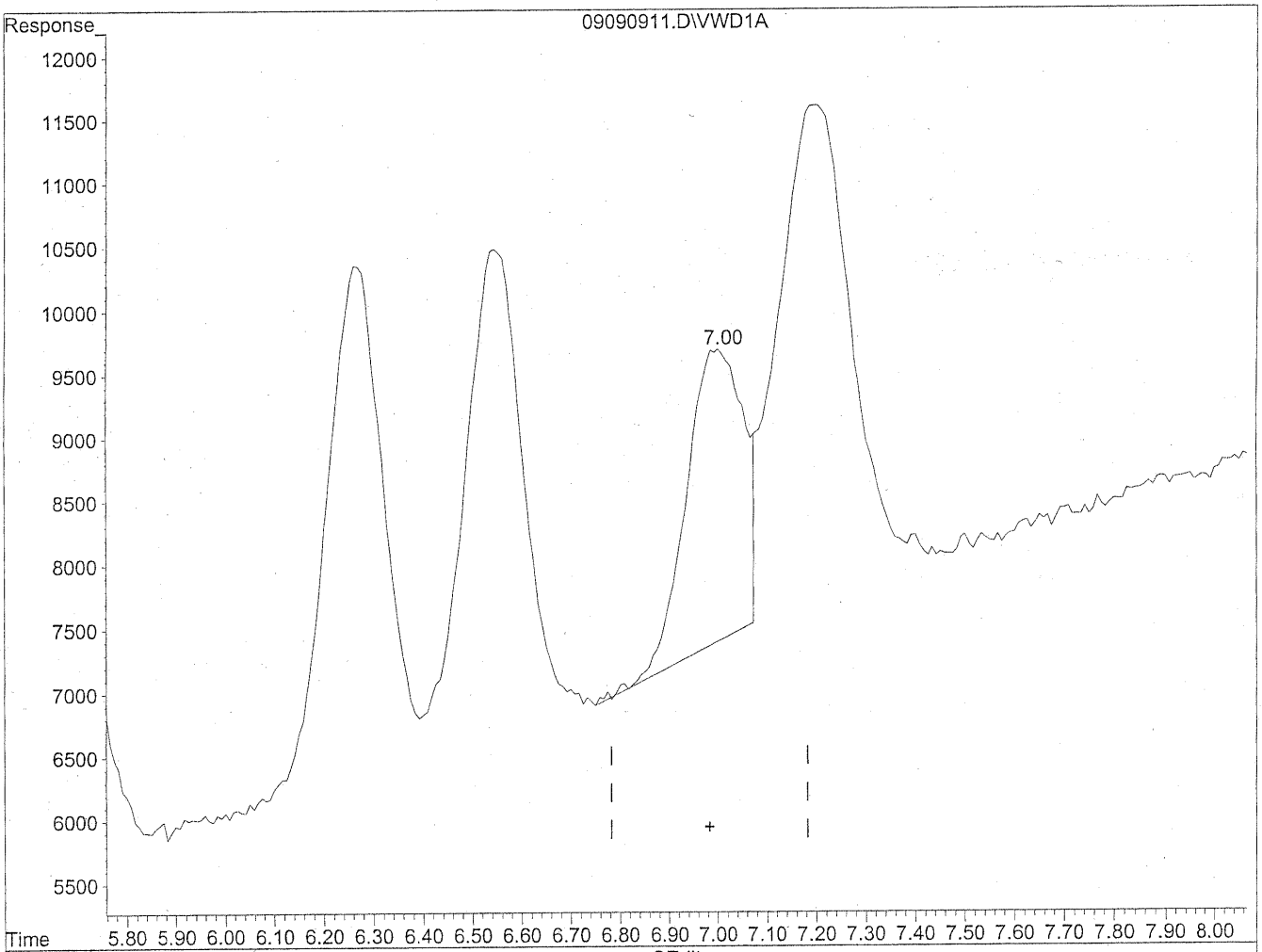
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	857936	93.340	ng/ml
2)	Acetaldehyde	1.88	602866	90.745	ng/ml
3)	Propionaldehyde	3.26	495705	95.023	ng/ml
4)	Crotonaldehyde	4.24	389577	95.443	ng/ml
5)	Butyraldehyde	4.84	390139	94.563	ng/ml
6)	Benzaldehyde	5.68	249897	93.081	ng/ml
7)	Isovaleraldehyde	6.27	323665	91.369	ng/ml
8)	Valeraldehyde	6.55	320426	96.613	ng/ml
9)	o-Tolualdehyde	7.00	207105	91.087	ng/mlm
10)	m,p-Tolualdehyde	7.20	397976	171.466	ng/mlm
11)	Hexaldehyde	8.25	282439	96.453	ng/mlm
12)	2,5-Dimethylbenzaldehyde	8.48	170783	86.876	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090911.D Vial: 8
Acq On : 09-Sep-2009, 15:54 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:50 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

7.00min 80.006ng/ml

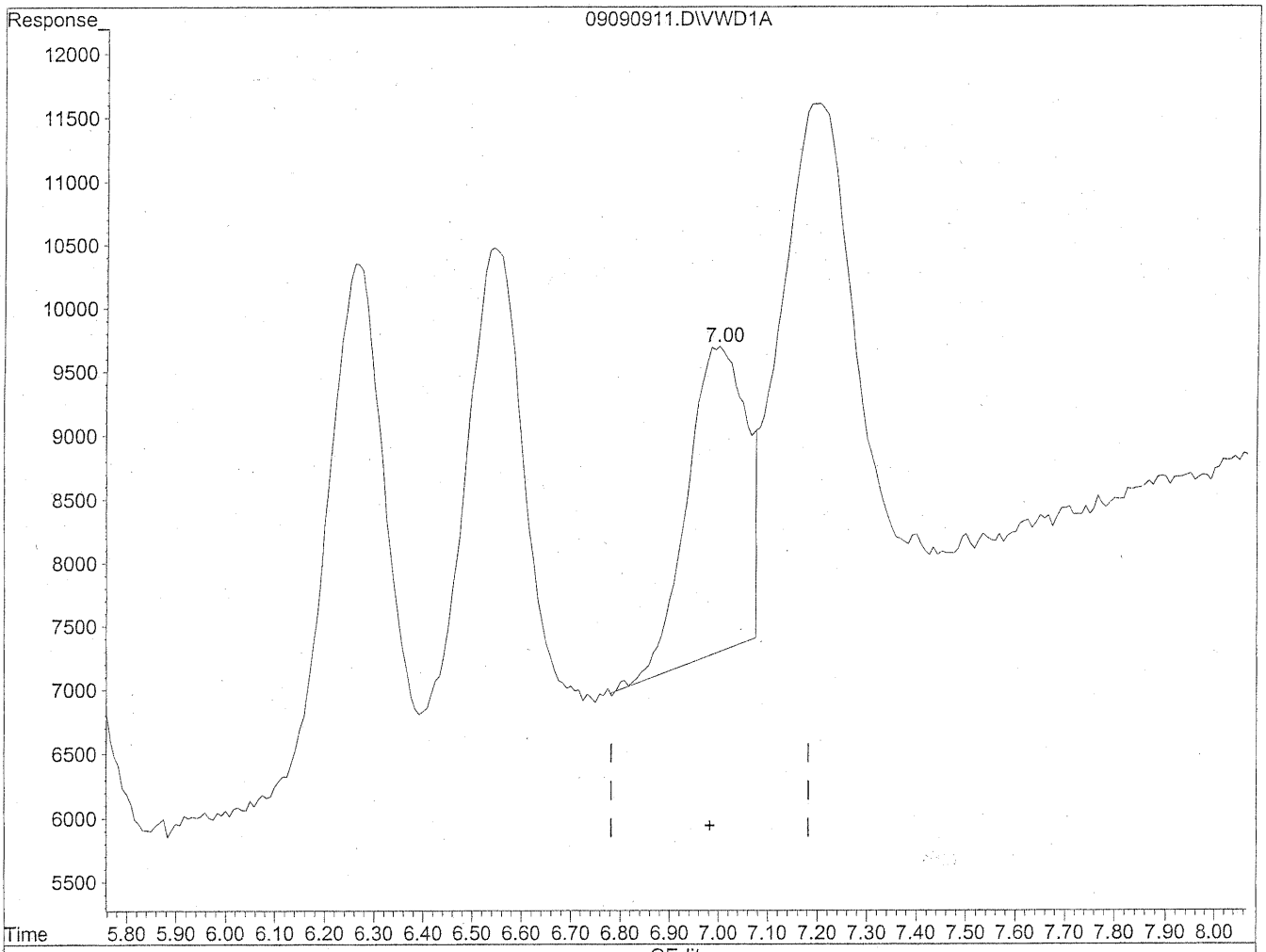
response 181910

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090911.D Vial: 8
Acq On : 09-Sep-2009, 15:54 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:50 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



QEdit

(9) o-Tolualdehyde

7.00min 91.087ng/ml m

response 207105

9/10/09

9/10/09

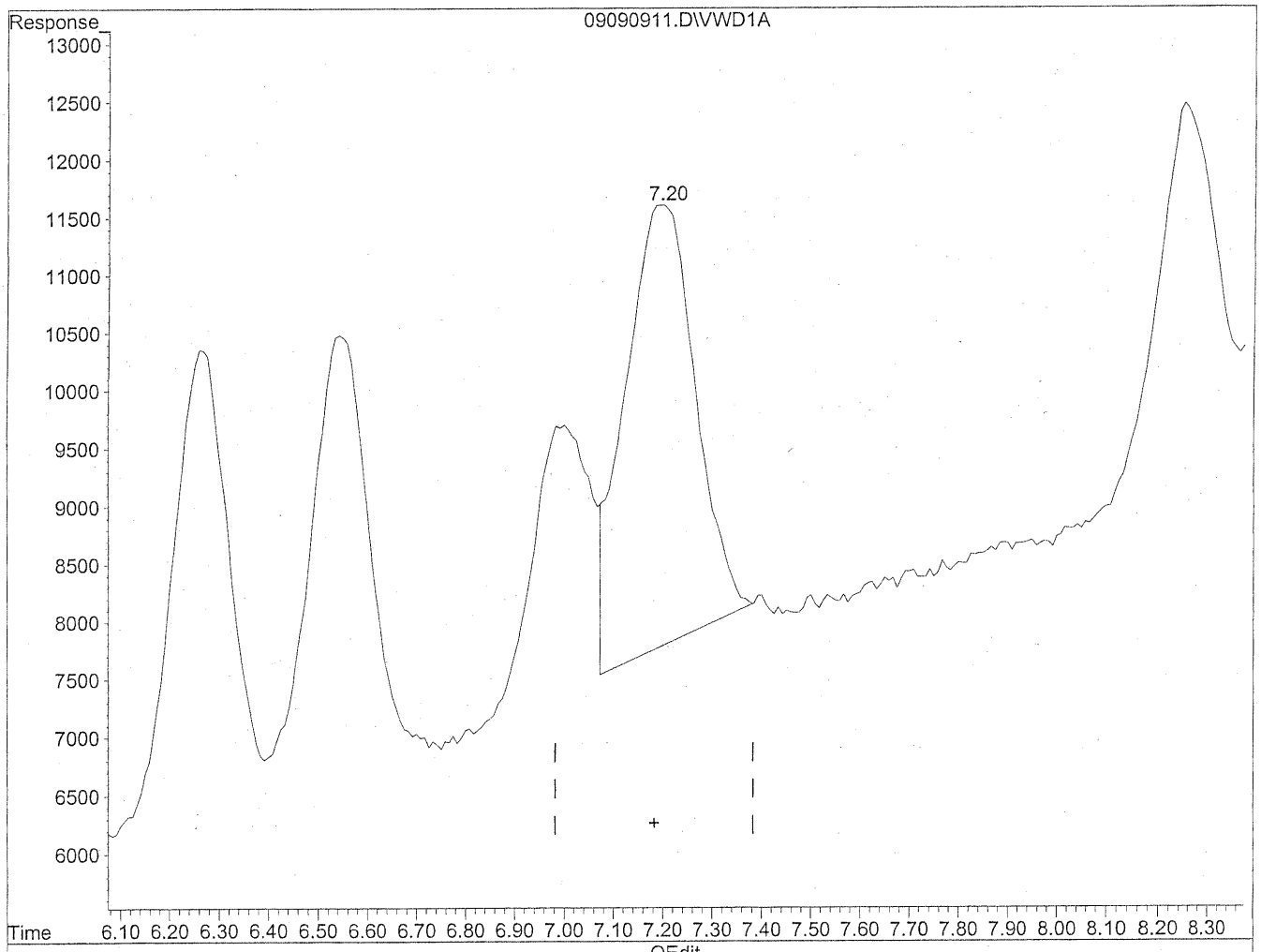
(+) = Expected Retention Time

09090911.D TO110909.M Thu Sep 10 09:02:10 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090911.D Vial: 8
Acq On : 09-Sep-2009, 15:54 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:50 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



QEdit

(10) m,p-Tolualdehyde

7.20min 165.581ng/ml

response 384316

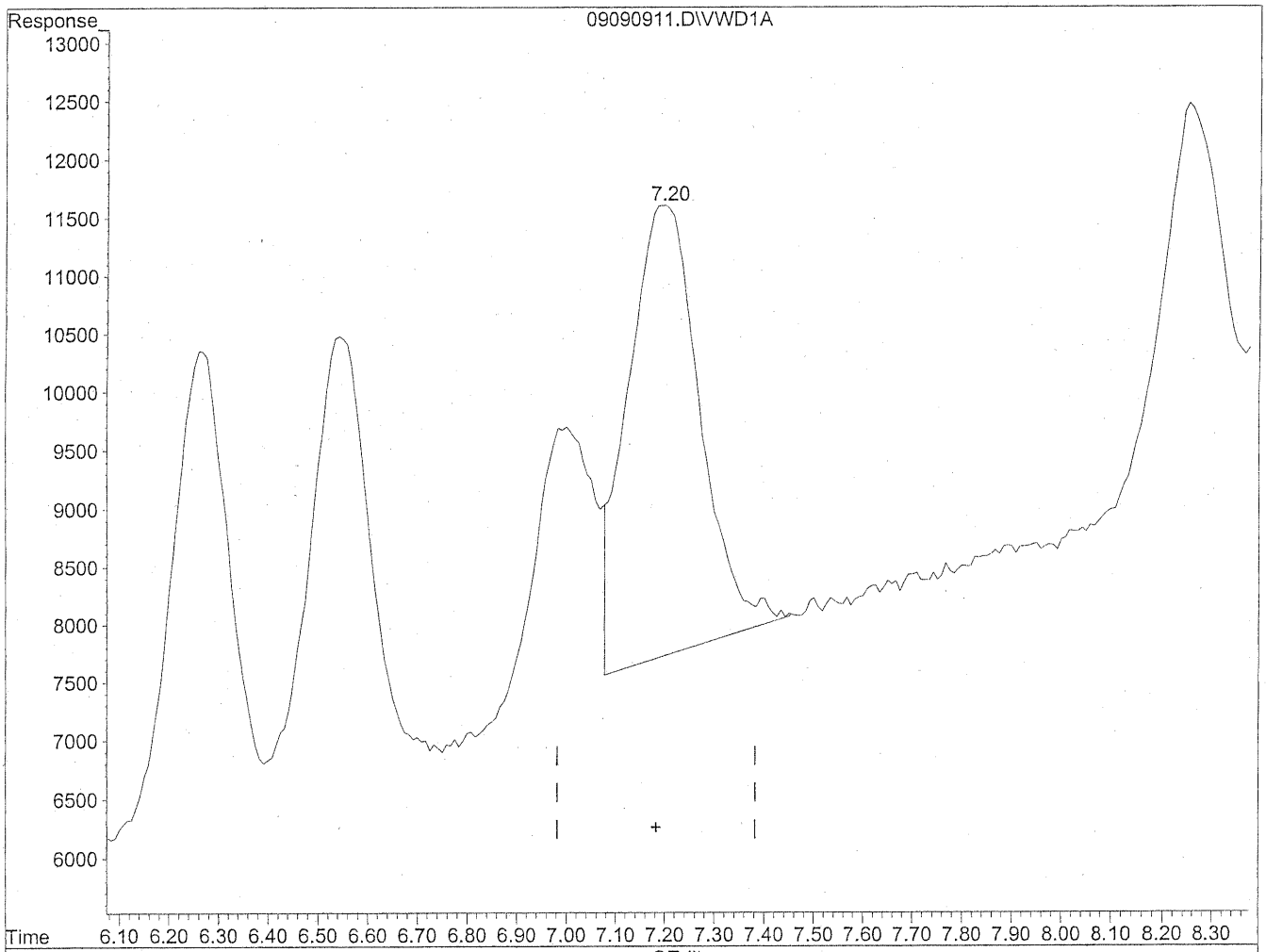
(+) = Expected Retention Time

09090911.D TO110909.M Thu Sep 10 08:50:13 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090911.D Vial: 8
Acq On : 09-Sep-2009, 15:54 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:50 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



QEdit

(10) m,p-Tolualdehyde

7.20min 171.466ng/ml m

response 397976

9/10/09

9/10/09

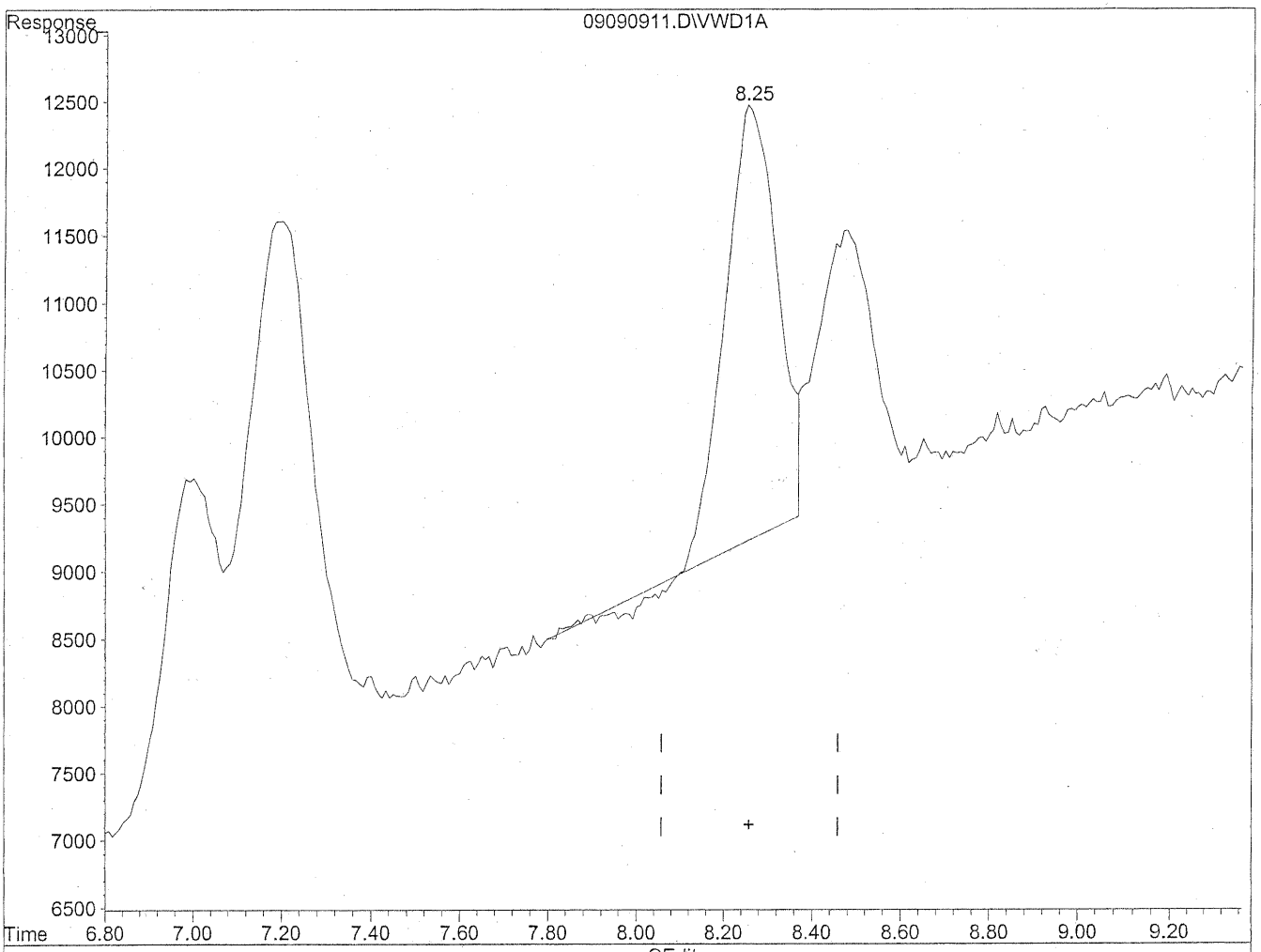
214

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090911.D Vial: 8
Acq On : 09-Sep-2009, 15:54 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:50 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.25min 88.073ng/ml

response 257900

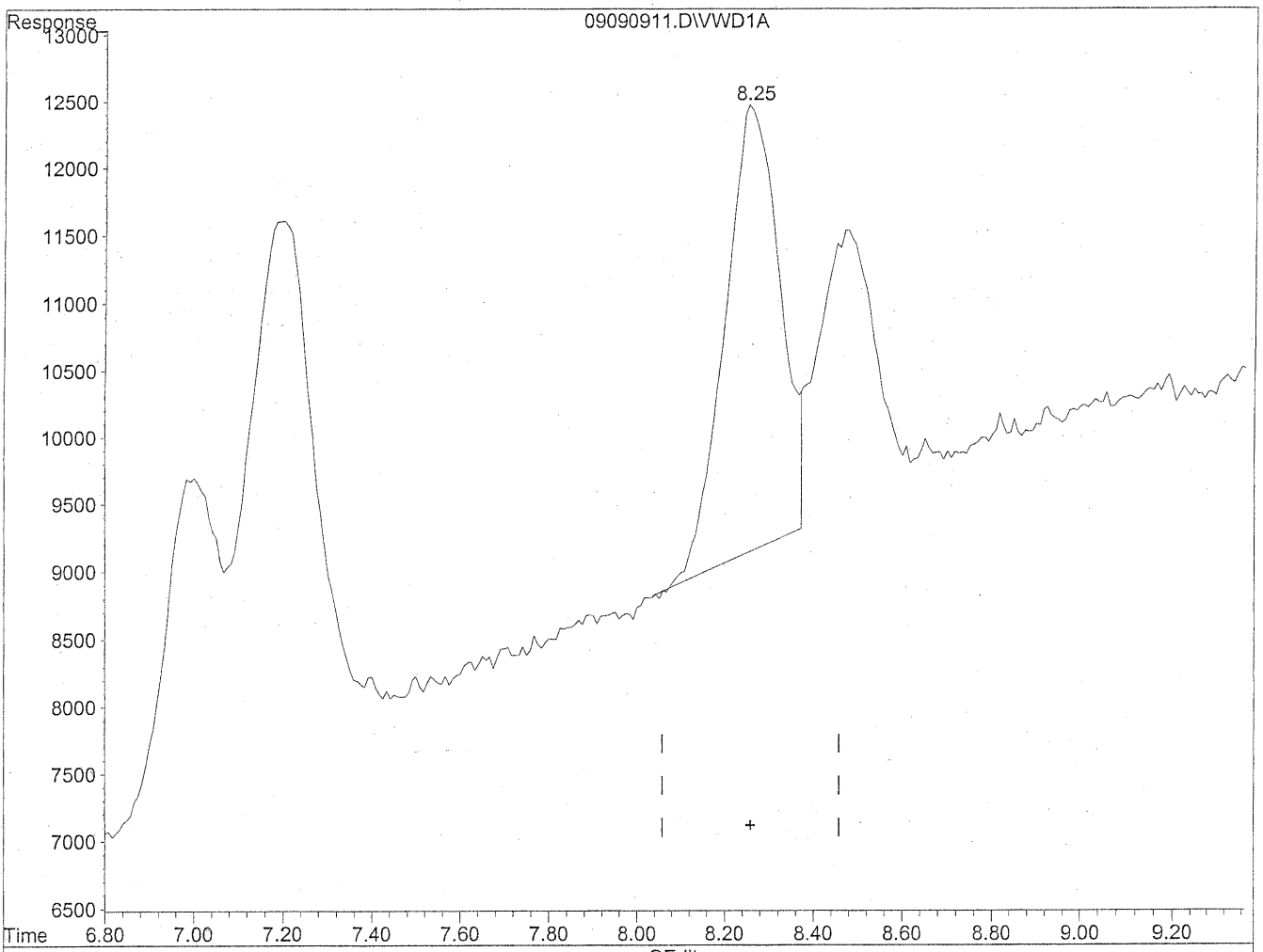
(+) = Expected Retention Time

09090911.D TO110909.M Thu Sep 10 08:50:25 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090911.D Vial: 8
Acq On : 09-Sep-2009, 15:54 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:50 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



QEdit

(11) Hexaldehyde

8.25min 96.453ng/ml m

response 282439

9/10/09

9/10/09

(+) = Expected Retention Time

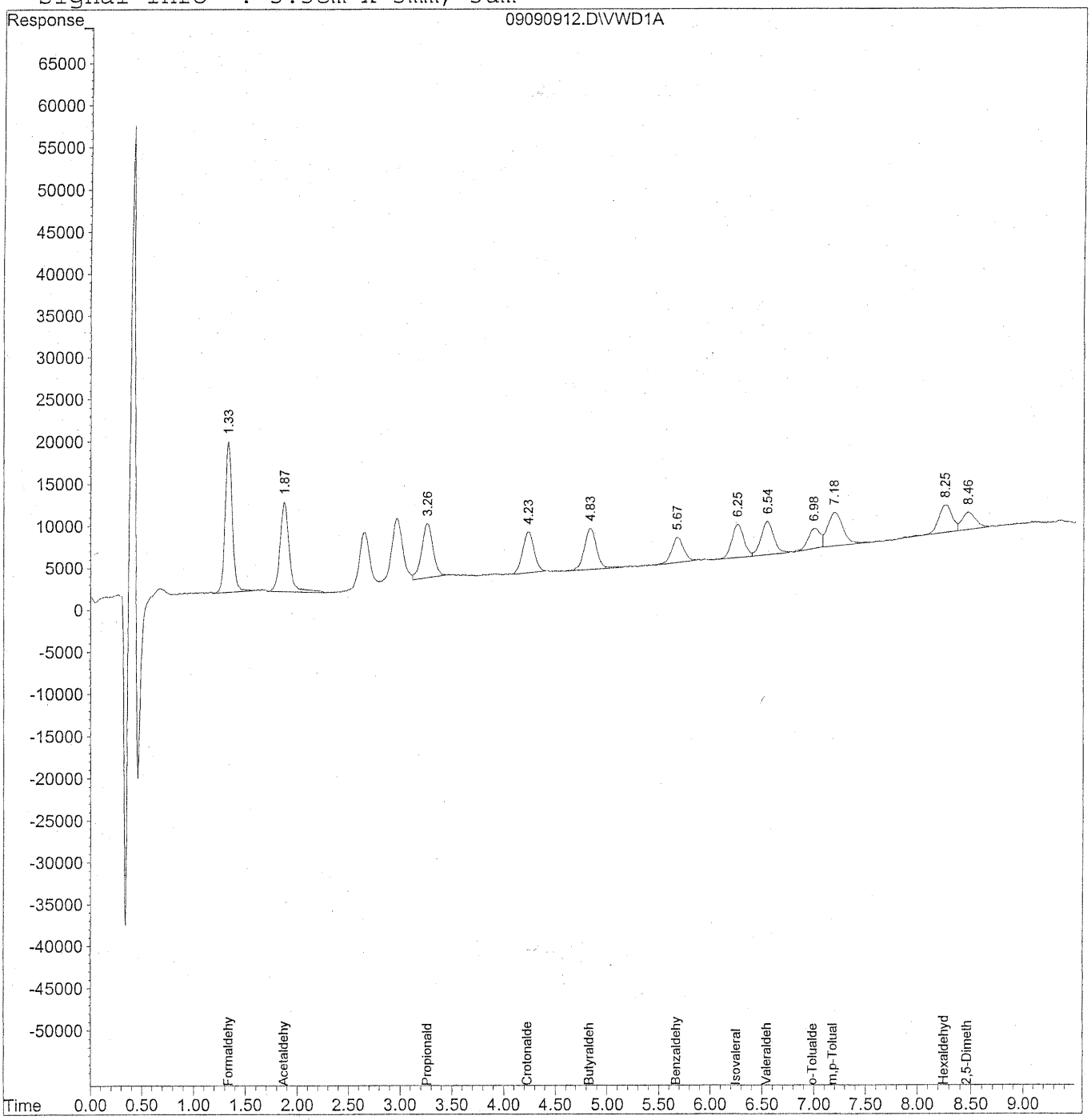
09090911.D TO110909.M Thu Sep 10 08:50:31 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090912.D Vial: 8
Acq On : 09-Sep-2009, 16:06 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:51 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



217

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090912.D Vial: 8
Acq On : 09-Sep-2009, 16:06 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:51 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

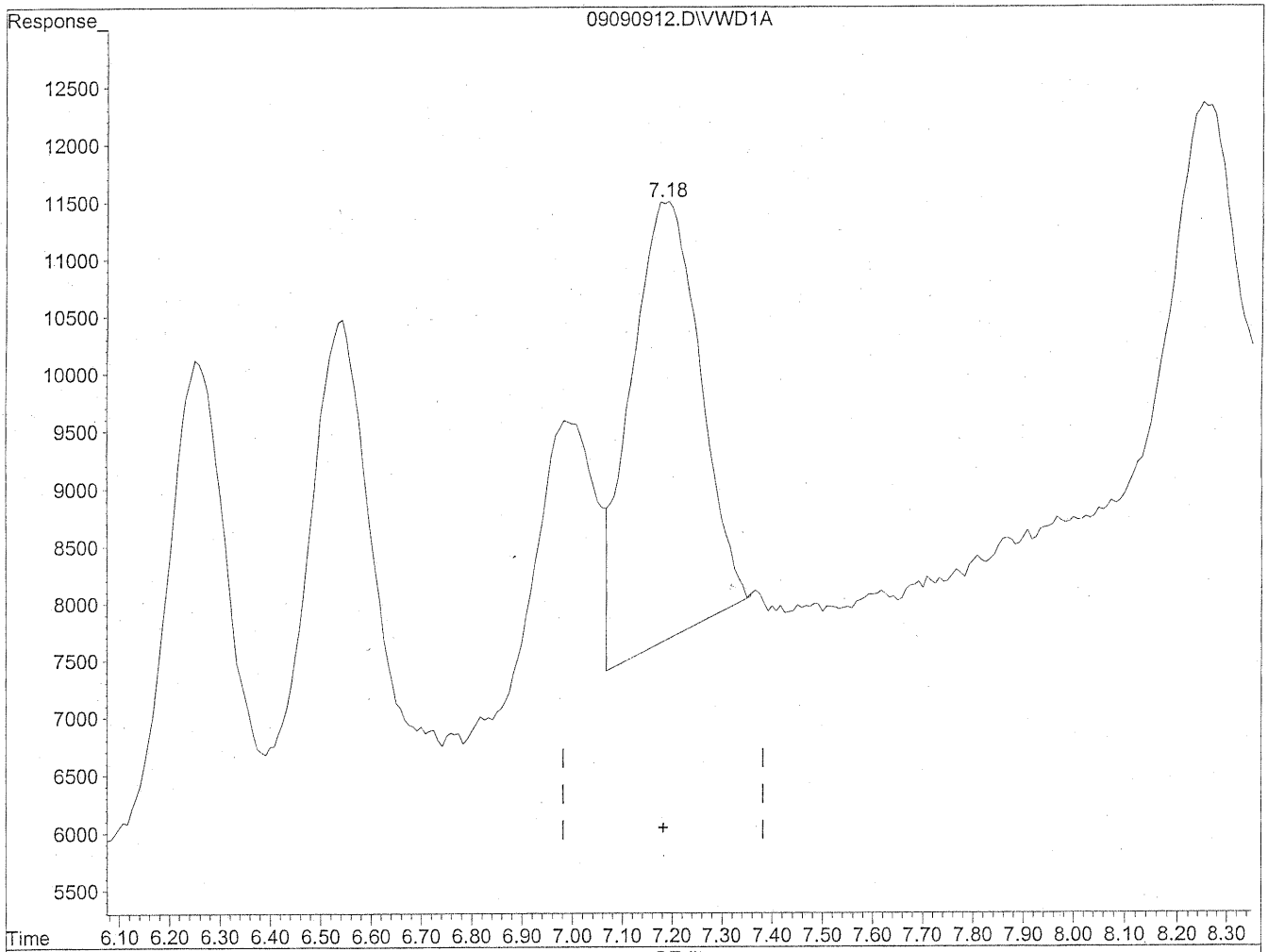
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.33	856527	95.214	ng/ml
2)	Acetaldehyde	1.87	664731	103.021	ng/ml
3)	Propionaldehyde	3.26	489979	96.720	ng/ml
4)	Crotonaldehyde	4.23	375407	93.706	ng/ml
5)	Butyraldehyde	4.83	399611	98.840	ng/ml
6)	Benzaldehyde	5.67	241433	91.160	ng/ml
7)	Isovaleraldehyde	6.26	313564	91.728	ng/ml
8)	Valeraldehyde	6.54	335005	102.594	ng/ml
9)	o-Tolualdehyde	6.99	188768	88.367	ng/ml
10)	m,p-Tolualdehyde	7.18	416110	187.485	ng/mlm
11)	Hexaldehyde	8.26	285615	98.813	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.47	182724	97.357	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090912.D Vial: 8
Acq On : 09-Sep-2009, 16:06 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:50 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

7.19min 169.858ng/ml

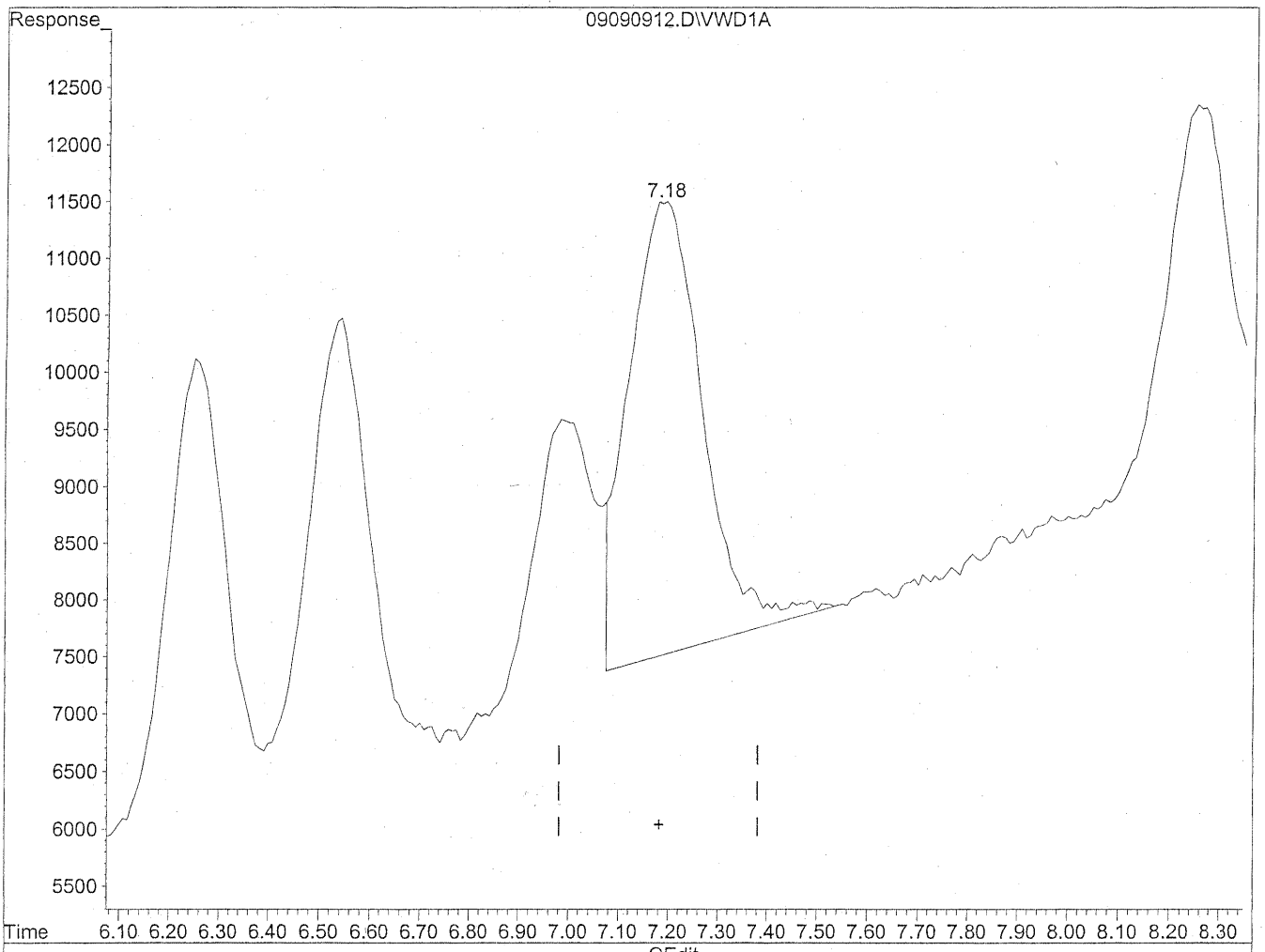
response 376988

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090912.D Vial: 8
Acq On : 09-Sep-2009, 16:06 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:50 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



QEdit

(10) m,p-Tolualdehyde

7.18min 187.485ng/ml m

response 416110

9/10/09

9/10/09

220

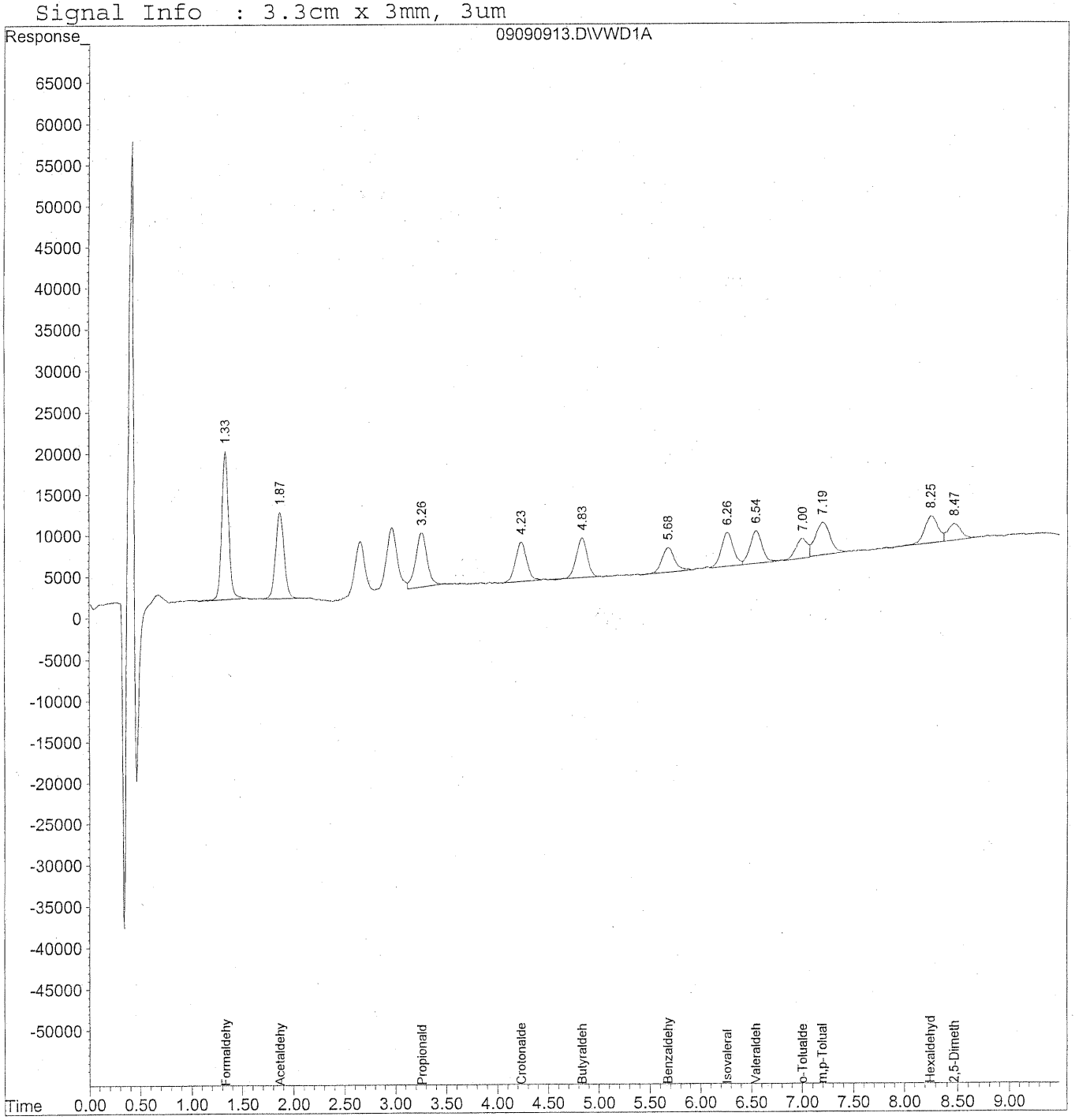
(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090913.D Vial: 8
Acq On : 09-Sep-2009, 16:17 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 9:02 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



221

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090913.D Vial: 8
Acq On : 09-Sep-2009, 16:17 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 9:02 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

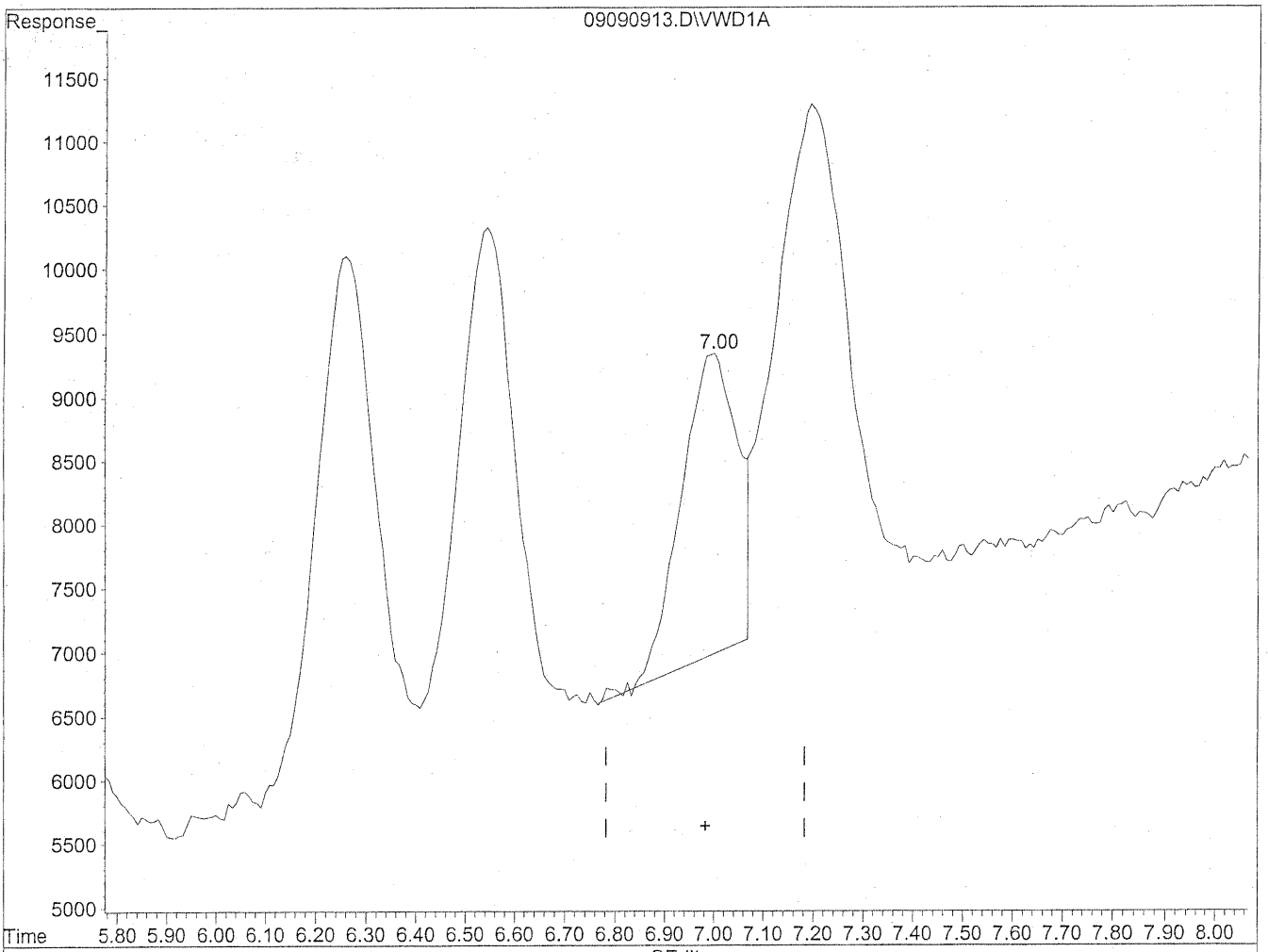
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	864000	96.057	ng/ml
2)	Acetaldehyde	1.87	602096	92.574	ng/ml
3)	Propionaldehyde	3.26	512978	101.355	ng/ml
4)	Crotonaldehyde	4.24	373596	93.529	ng/ml
5)	Butyraldehyde	4.84	358623	88.529	ng/ml
6)	Benzaldehyde	5.68	261486	98.995	ng/ml
7)	Isovaleraldehyde	6.26	340775	99.934	ng/ml
8)	Valeraldehyde	6.54	327561	99.943	ng/ml
9)	o-Tolualdehyde	7.00	198353	92.606	ng/mlm
10)	m,p-Tolualdehyde	7.20	403186	181.045	ng/ml
11)	Hexaldehyde	8.26	288074	99.573	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.47	174836	92.662	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090913.D Vial: 8
Acq On : 09-Sep-2009, 16:17 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:51 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 09:02:40 2009
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

7.00min 84.692ng/ml

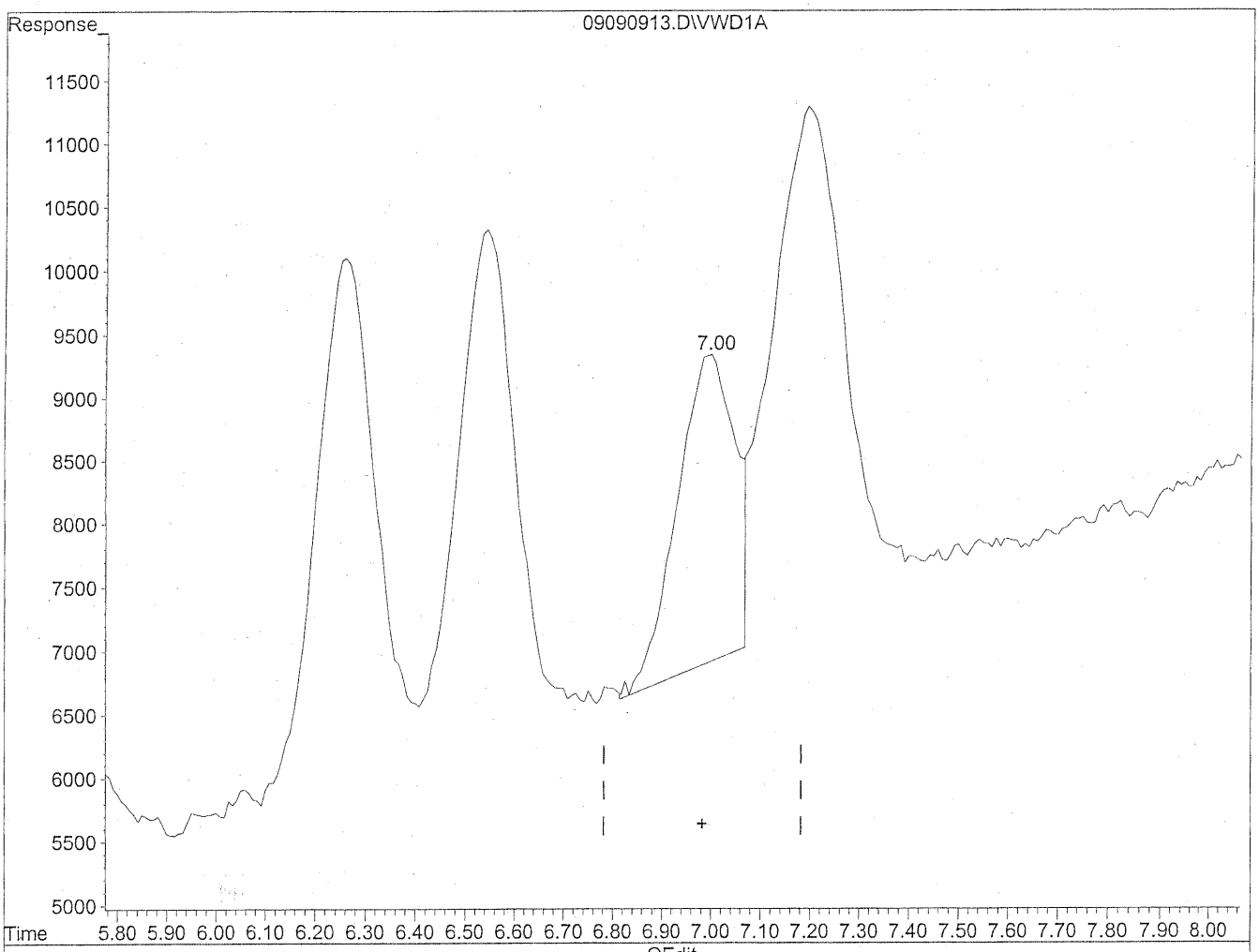
response 181403

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090913.D Vial: 8
Acq On : 09-Sep-2009, 16:17 Operator: MD
Sample : 100ng/ml TO-11A S21-09080904 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:51 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 09:02:40 2009
Response via : Multiple Level Calibration



QEdit

(9) o-Tolualdehyde

7.00min 92.606ng/ml m

response 198353

9/10/09

KR 9/10/09

224

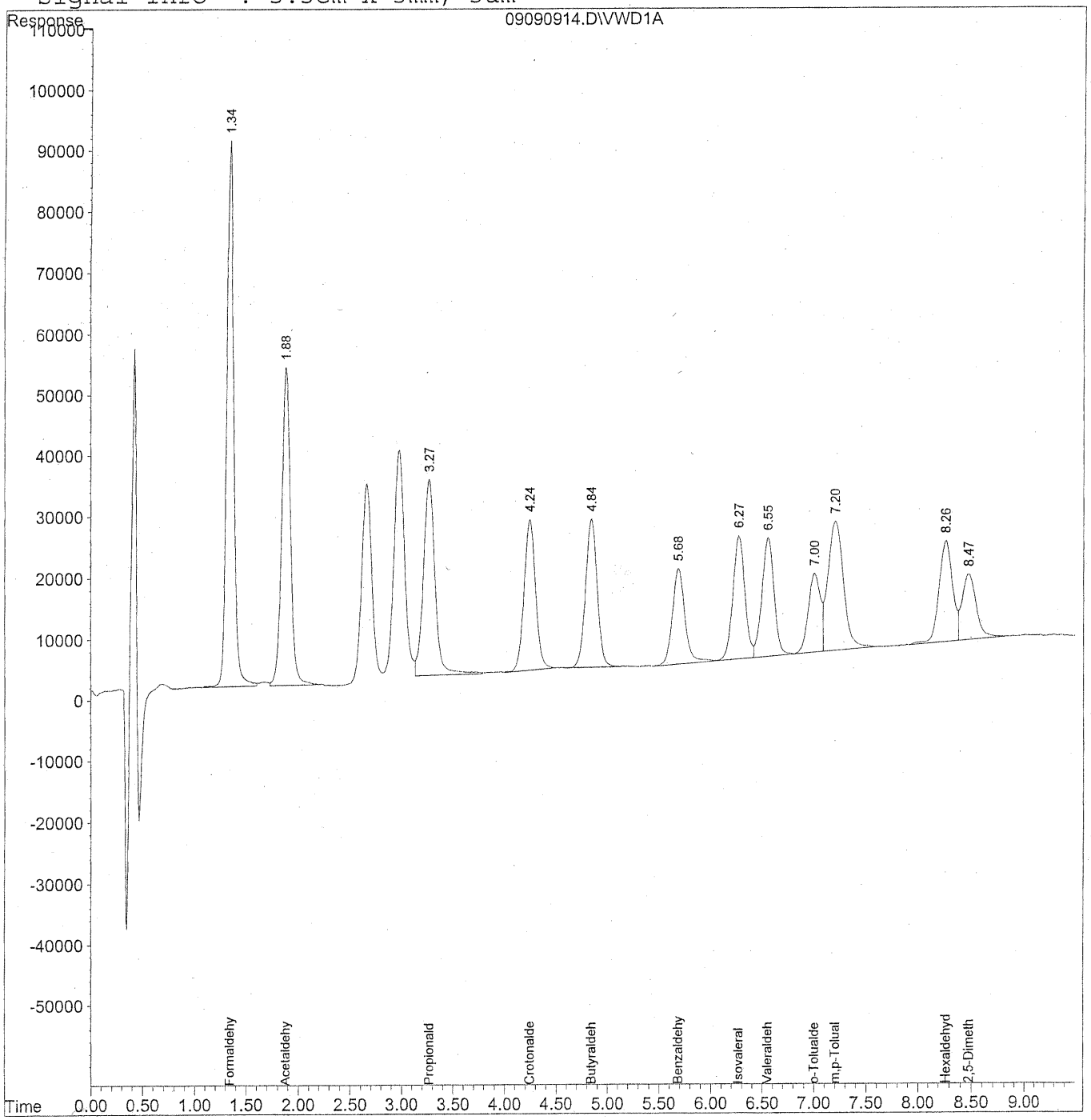
(+) = Expected Retention Time
09090913.D TO110909.M Thu Sep 10 09:02:56 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090914.D Vial: 7
Acq On : 09-Sep-2009, 16:29 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:52 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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\2009_09\09\09090914.D Vial: 7
Acq On : 09-Sep-2009, 16:29 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:52 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

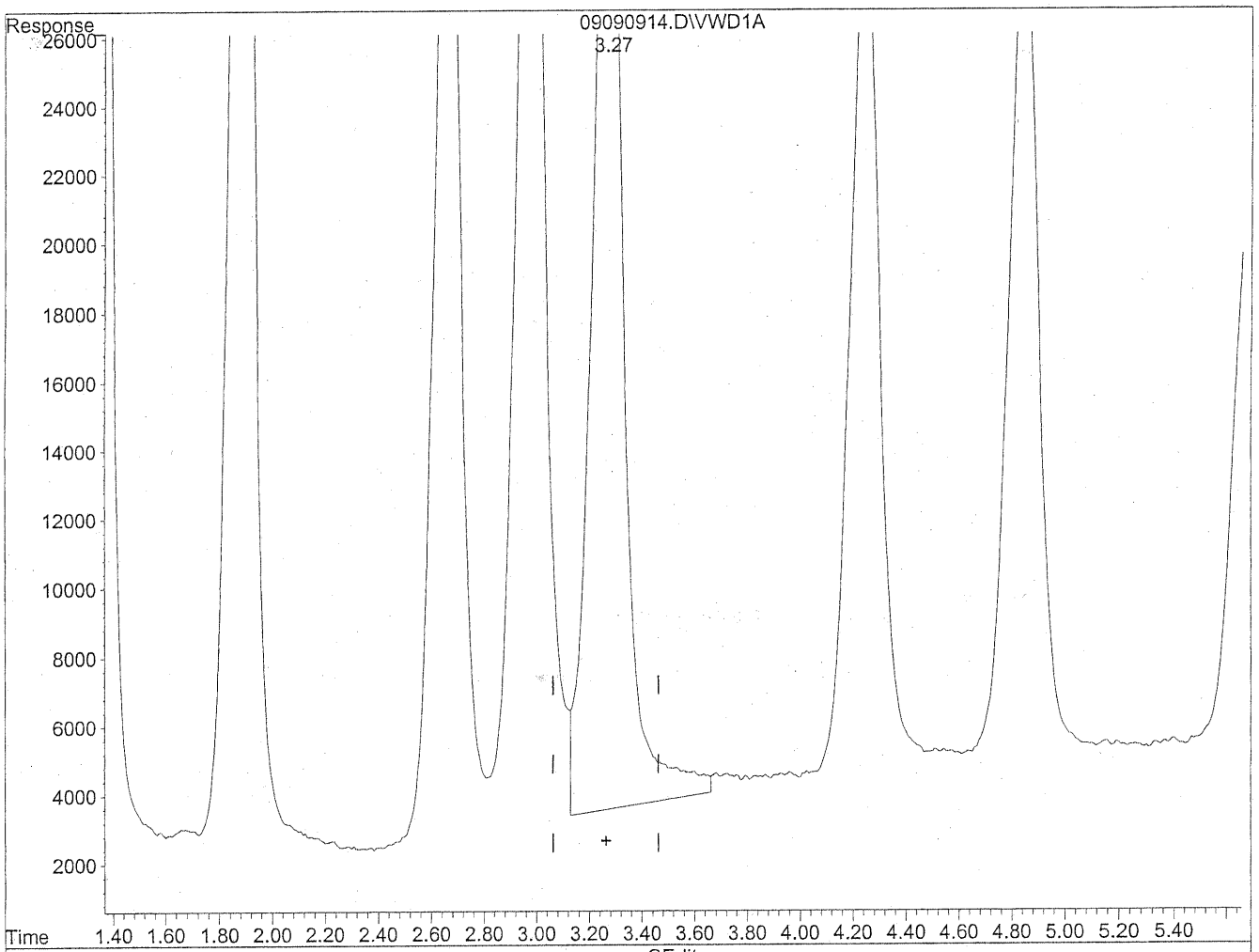
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	4290125	476.763	ng/ml
2)	Acetaldehyde	1.88	3109621	479.414	ng/ml
3)	Propionaldehyde	3.27	2494796	491.839	ng/mlm
4)	Crotonaldehyde	4.24	1900371	476.346	ng/ml
5)	Butyraldehyde	4.84	1886701	468.075	ng/ml
6)	Benzaldehyde	5.69	1323186	499.277	ng/ml
7)	Isovaleraldehyde	6.27	1631123	476.614	ng/ml
8)	Valeraldehyde	6.55	1598180	487.637	ng/ml
9)	o-Tolualdehyde	7.00	1023918	478.529	ng/ml
10)	m,p-Tolualdehyde	7.20	2205841	990.981	ng/ml
11)	Hexaldehyde	8.27	1425262	492.260	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.48	964881	511.672	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090914.D Vial: 7
Acq On : 09-Sep-2009, 16:29 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:52 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.27min 515.231ng/ml

response 2613453

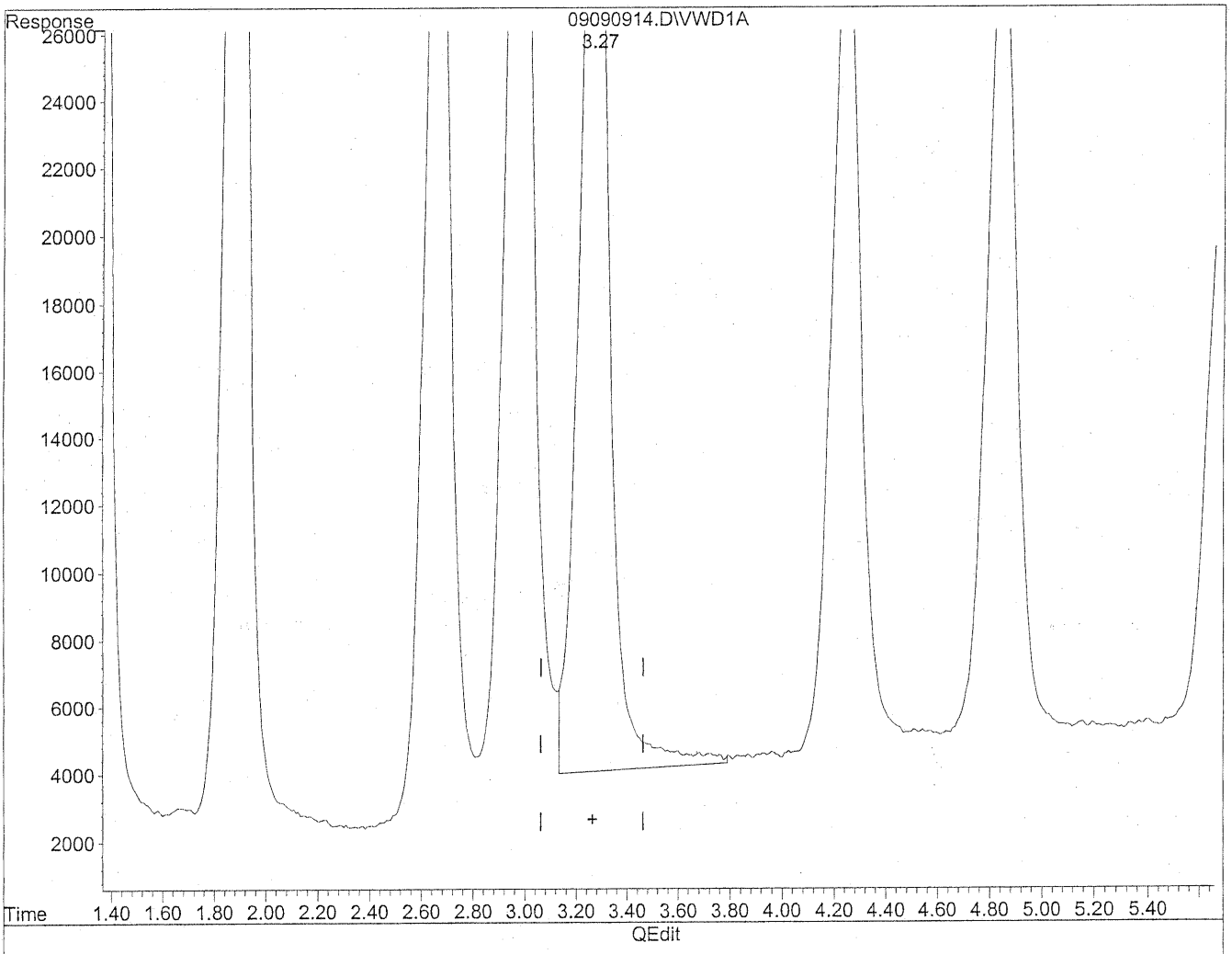
(+) = Expected Retention Time

09090914.D TO110909.M Thu Sep 10 08:52:51 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090914.D Vial: 7
Acq On : 09-Sep-2009, 16:29 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:52 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.27min 491.839ng/ml m

response 2494796

9/10/09

9/10/09

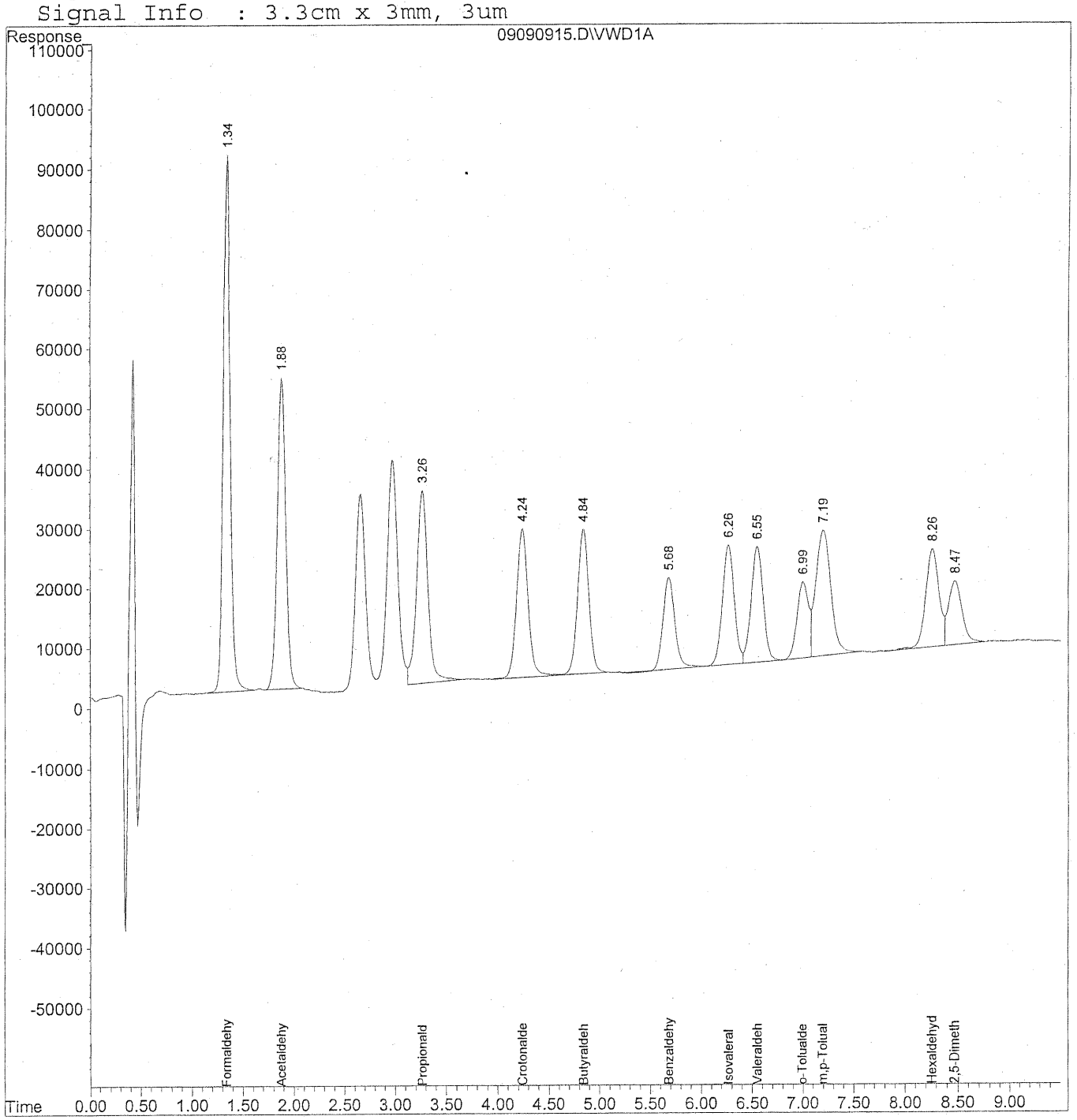
(+) = Expected Retention Time

09090914.D TO110909.M Thu Sep 10 08:52:57 2009

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090915.D Vial: 7
Acq On : 09-Sep-2009, 16:40 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:53 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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\2009_09\09\09090915.D Vial: 7
Acq On : 09-Sep-2009, 16:40 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:53 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

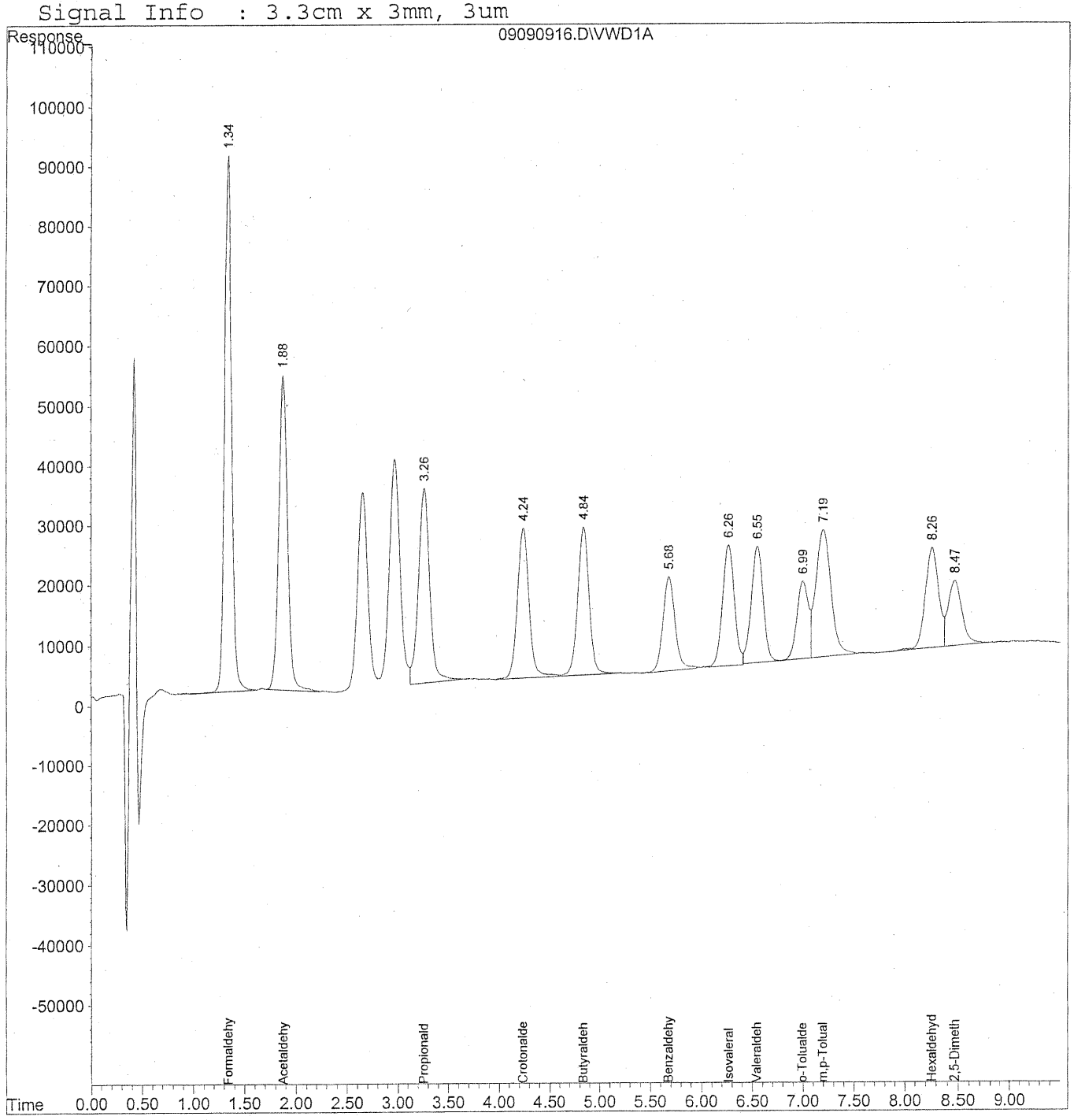
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	4242920	476.675	ng/ml
2)	Acetaldehyde	1.88	2996333	465.530	ng/ml
3)	Propionaldehyde	3.27	2520033	495.333	ng/ml
4)	Crotonaldehyde	4.24	1968873	499.829	ng/ml
5)	Butyraldehyde	4.84	1894865	474.705	ng/ml
6)	Benzaldehyde	5.68	1238947	466.007	ng/ml
7)	Isovaleraldehyde	6.27	1614213	474.093	ng/ml
8)	Valeraldehyde	6.55	1593172	485.301	ng/ml
9)	o-Tolualdehyde	7.00	1018615	479.067	ng/ml
10)	m,p-Tolualdehyde	7.20	2181093	980.898	ng/ml
11)	Hexaldehyde	8.26	1423115	491.568	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.47	956005	504.834	ng/ml

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090916.D Vial: 7
Acq On : 09-Sep-2009, 16:51 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:54 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090916.D Vial: 7
Acq On : 09-Sep-2009, 16:51 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:54 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

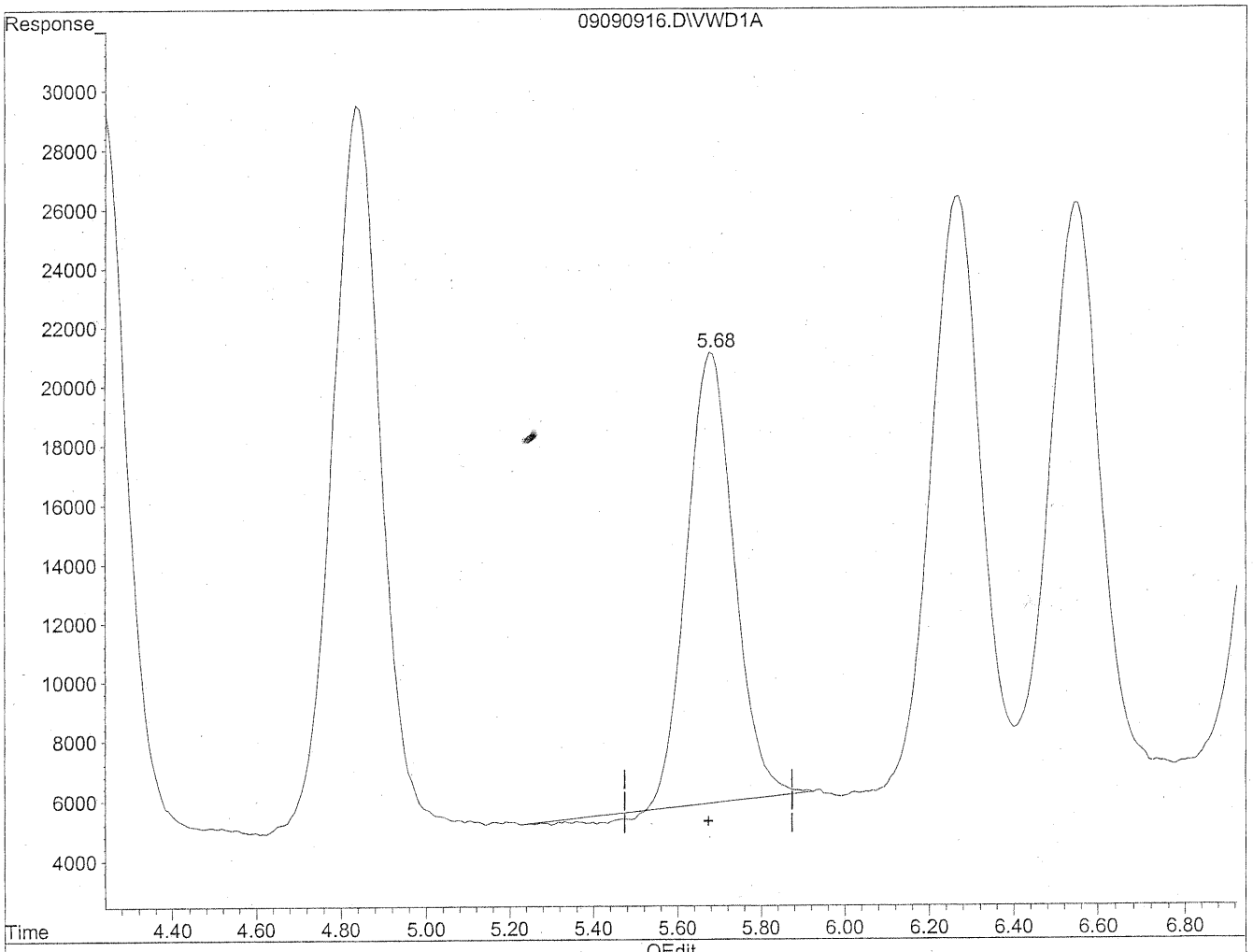
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	4239441	476.706	ng/ml
2)	Acetaldehyde	1.88	3088021	481.187	ng/ml
3)	Propionaldehyde	3.27	2504937	491.959	ng/ml
4)	Crotonaldehyde	4.24	1993623	504.650	ng/ml
5)	Butyraldehyde	4.84	1946571	487.492	ng/ml
6)	Benzaldehyde	5.68	1291253	488.260	ng/mlm
7)	Isovaleraldehyde	6.26	1639714	481.982	ng/mlm
8)	Valeraldehyde	6.55	1572954	479.264	ng/ml
9)	o-Tolualdehyde	7.00	1012283	476.287	ng/ml
10)	m,p-Tolualdehyde	7.20	2206747	993.357	ng/ml
11)	Hexaldehyde	8.26	1418487	490.030	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.47	962409	508.613	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090916.D Vial: 7
Acq On : 09-Sep-2009, 16:51 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:53 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.68min 446.383ng/ml

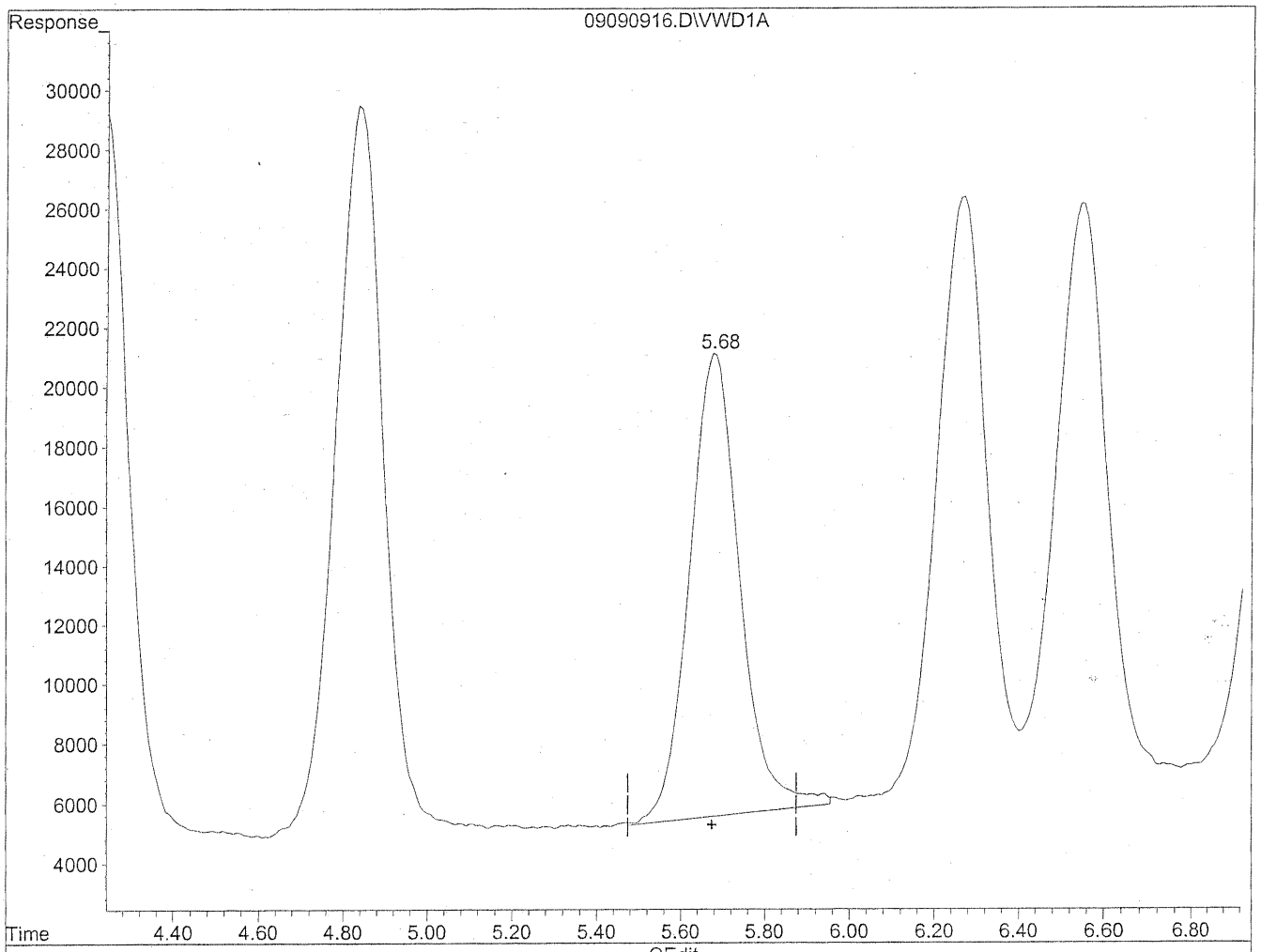
response 1180507

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090916.D Vial: 7
Acq On : 09-Sep-2009, 16:51 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:53 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.68min 488.260ng/ml m

response 1291253

9/10/09

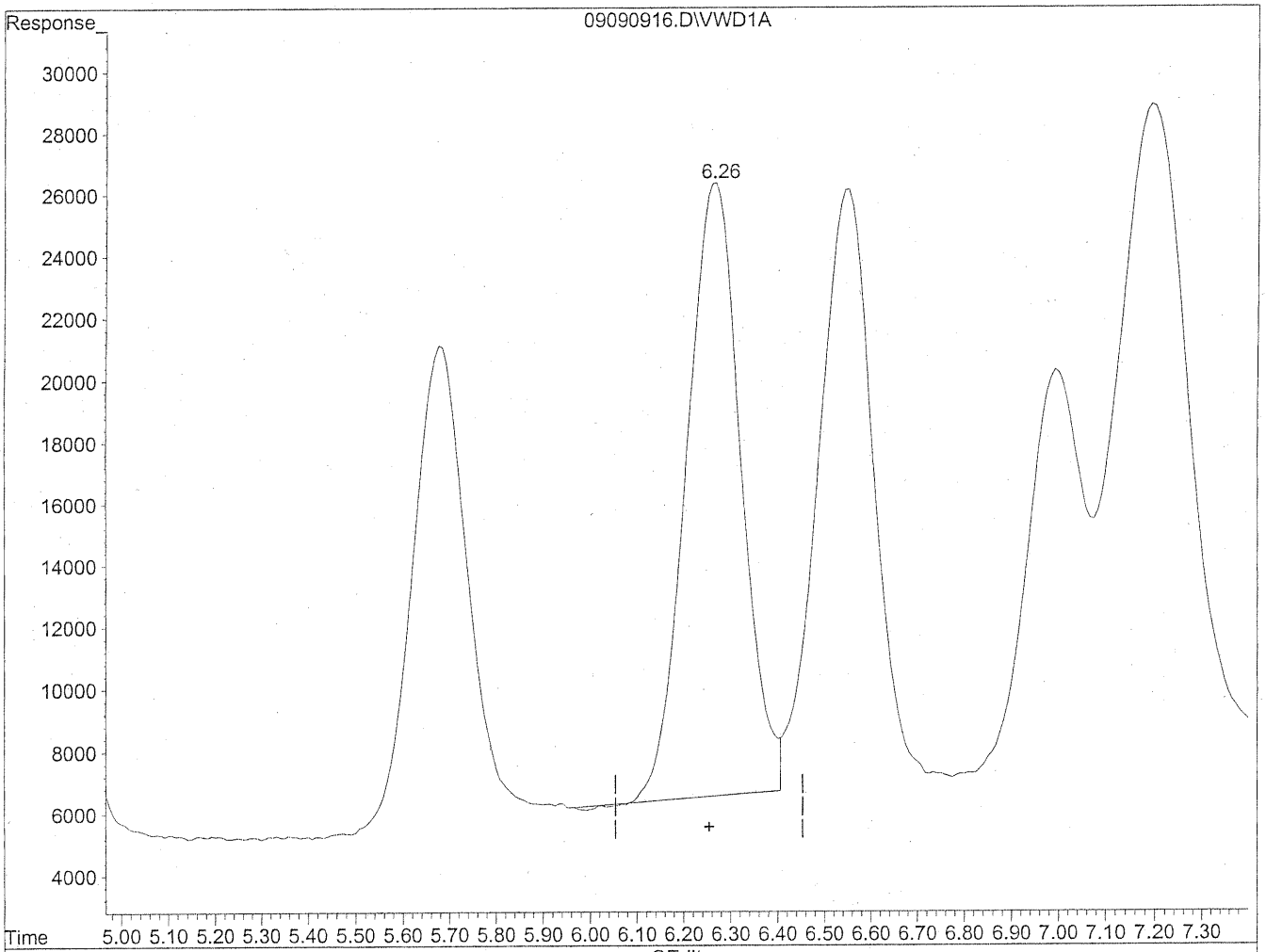
9/10/09

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090916.D Vial: 7
Acq On : 09-Sep-2009, 16:51 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:53 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.27min 466.813ng/ml

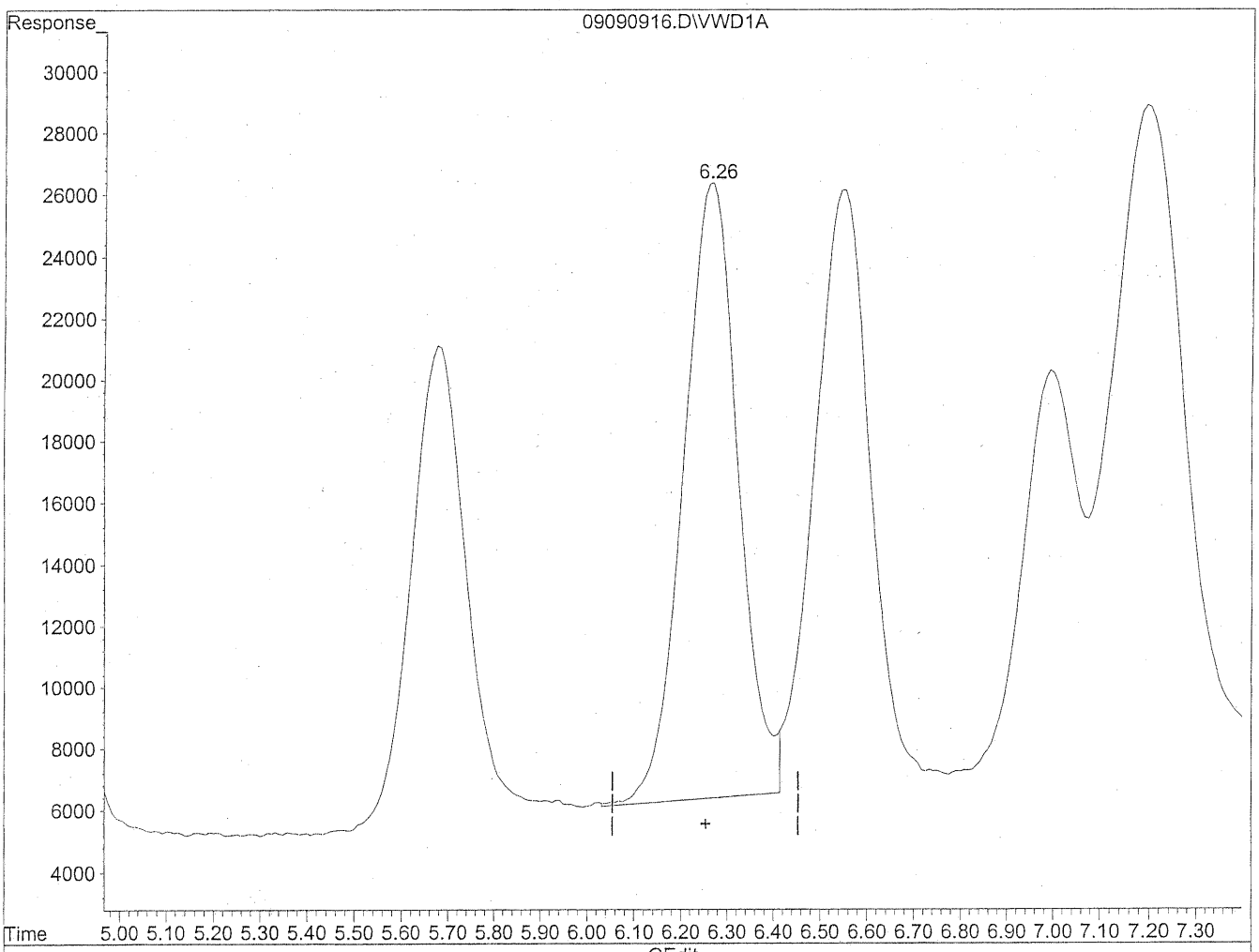
response 1588109

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090916.D Vial: 7
Acq On : 09-Sep-2009, 16:51 Operator: MD
Sample : 500ng/ml TO-11A S21-09080903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:53 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Multiple Level Calibration



QEdit

(7) Isovaleraldehyde

6.26min 481.982ng/ml m

response 1639714

9/10/09

KR 9/10/09

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(+) = Expected Retention Time

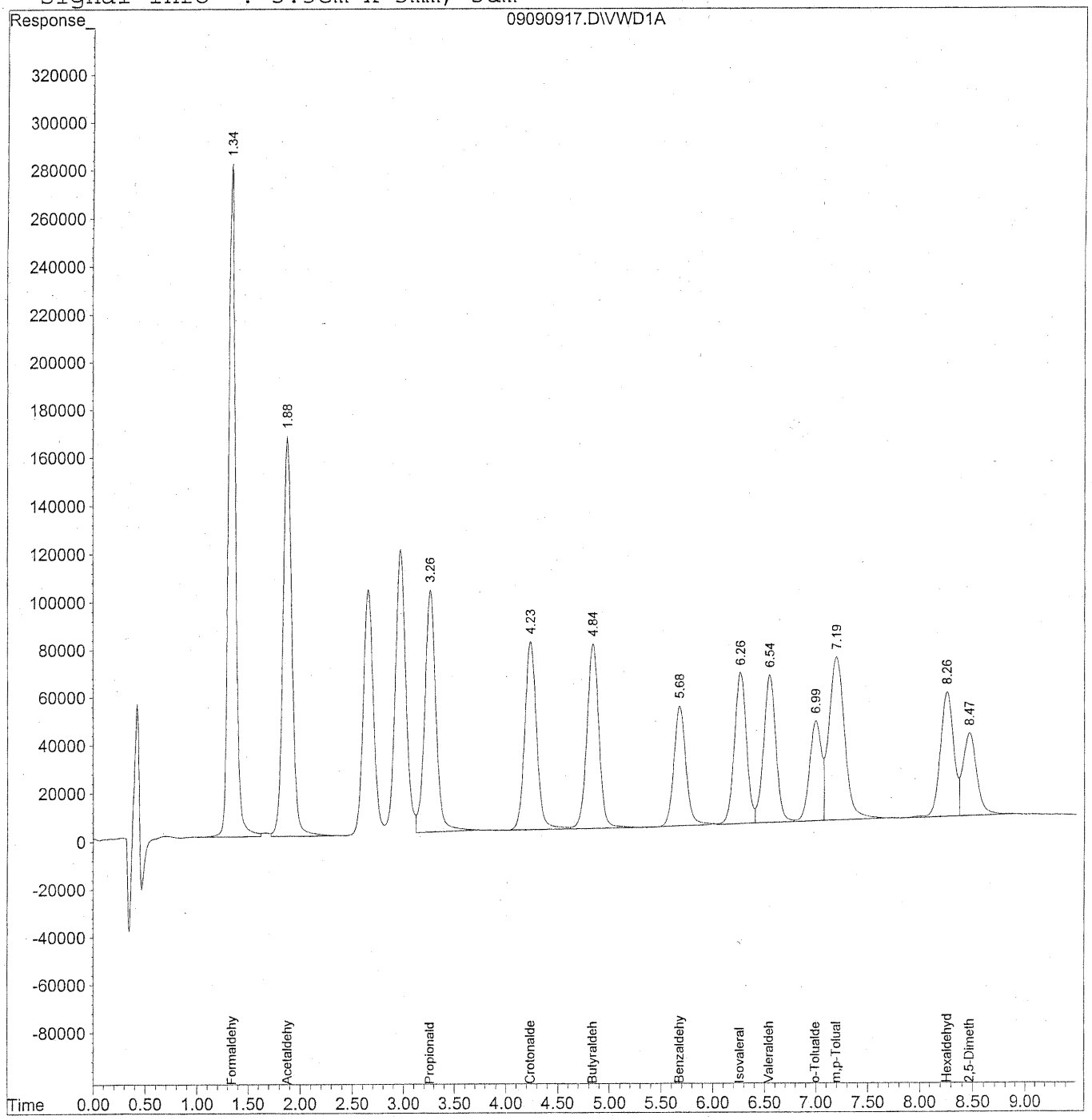
09090916.D TO110909.M Thu Sep 10 08:54:27 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090917.D Vial: 6
Acq On : 09-Sep-2009, 17:03 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:54 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090917.D Vial: 6
Acq On : 09-Sep-2009, 17:03 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:54 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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	1.34	13461963	1514.248	ng/ml
2)	Acetaldehyde	1.88	9836721	1531.865	ng/ml
3)	Propionaldehyde	3.26	7740242	1520.232	ng/ml
4)	Crotonaldehyde	4.24	6180043	1561.774	ng/ml
5)	Butyraldehyde	4.84	6161274	1540.616	ng/ml
6)	Benzaldehyde	5.68	4059200	1534.243	ng/ml
7)	Isovaleraldehyde	6.27	5115478	1502.821	ng/ml
8)	Valeraldehyde	6.55	5104937	1556.624	ng/ml
9)	o-Tolualdehyde	7.00	3347391	1575.714	ng/ml
10)	m,p-Tolualdehyde	7.20	7133126	3209.878	ng/ml
11)	Hexaldehyde	8.26	4465907	1543.128	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.47	3088612	1632.078	ng/ml

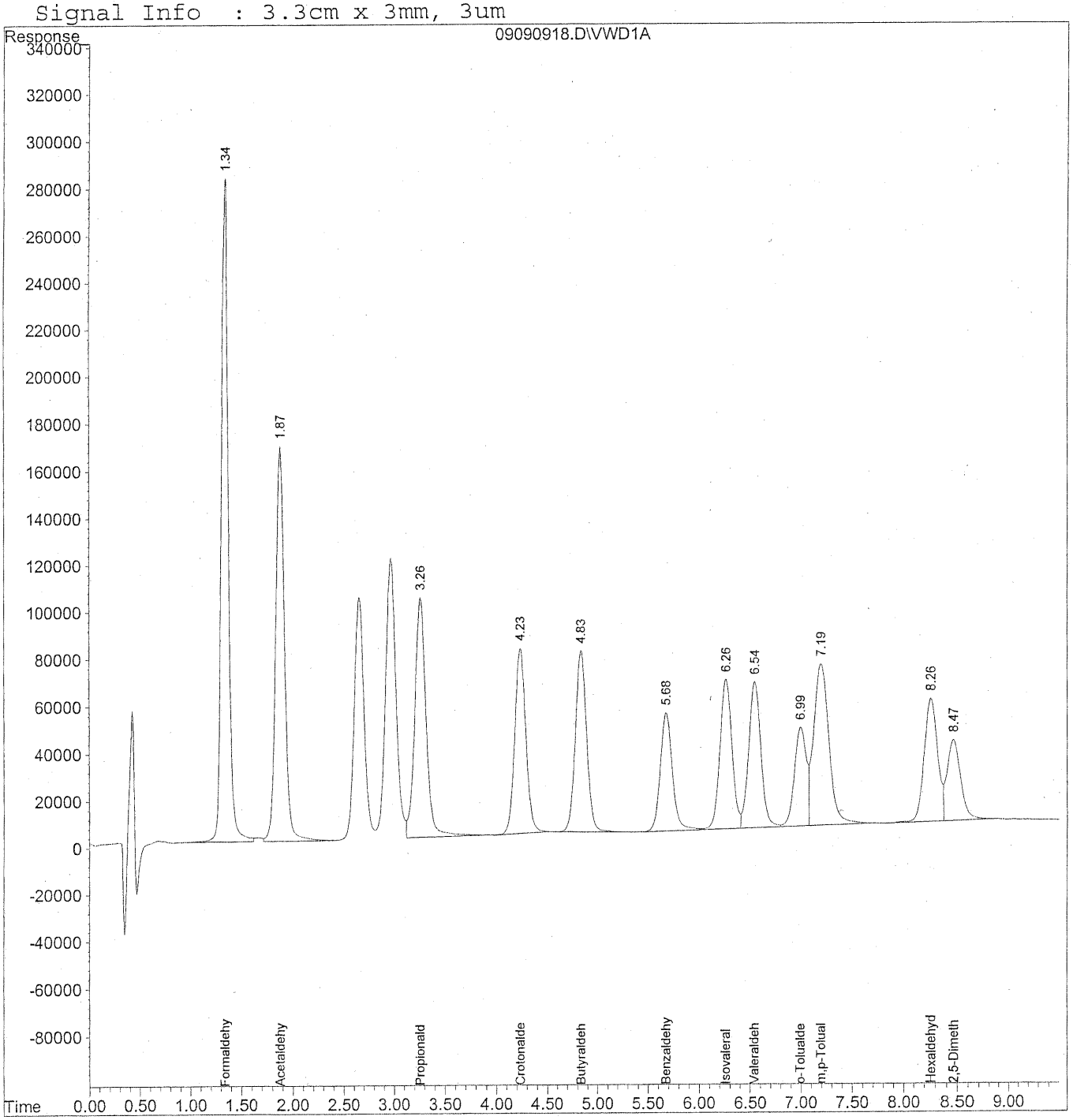
(f)=RT Delta > 1/2 Window (m)=manual int.
09090917.D TO110909.M Thu Sep 10 10:44:33 2009 Page 1

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090918.D Vial: 6
Acq On : 09-Sep-2009, 17:14 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:55 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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\2009_09\09\09090918.D Vial: 6
Acq On : 09-Sep-2009, 17:14 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:55 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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	1.34	13578339	1534.981	ng/ml
2)	Acetaldehyde	1.88	9942887	1551.020	ng/ml
3)	Propionaldehyde	3.26	7876607	1547.881	ng/ml
4)	Crotonaldehyde	4.24	6053894	1529.058	ng/ml
5)	Butyraldehyde	4.84	6038847	1511.965	ng/ml
6)	Benzaldehyde	5.68	4163474	1571.850	ng/ml
7)	Isovaleraldehyde	6.27	5182178	1528.173	ng/ml
8)	Valeraldehyde	6.55	5176264	1571.132	ng/ml
9)	o-Tolualdehyde	7.00	3396097	1598.500	ng/ml
10)	m,p-Tolualdehyde	7.20	7179077	3215.253	ng/ml
11)	Hexaldehyde	8.26	4448983	1533.800	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.47	3056583	1602.761	ng/ml

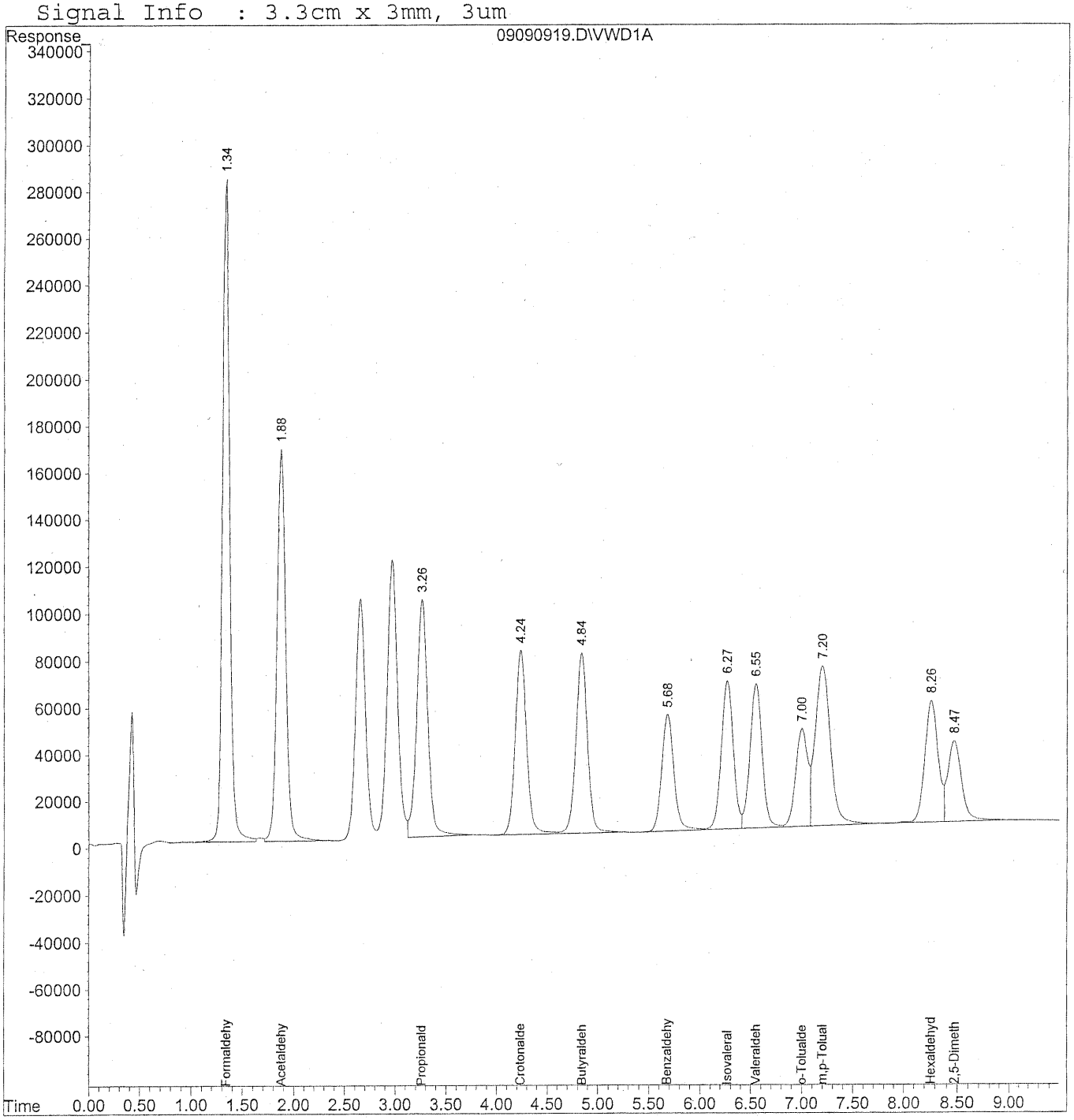
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090919.D Vial: 6
Acq On : 09-Sep-2009, 17:26 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:56 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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\2009_09\09\09090919.D Vial: 6
Acq On : 09-Sep-2009, 17:26 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:56 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

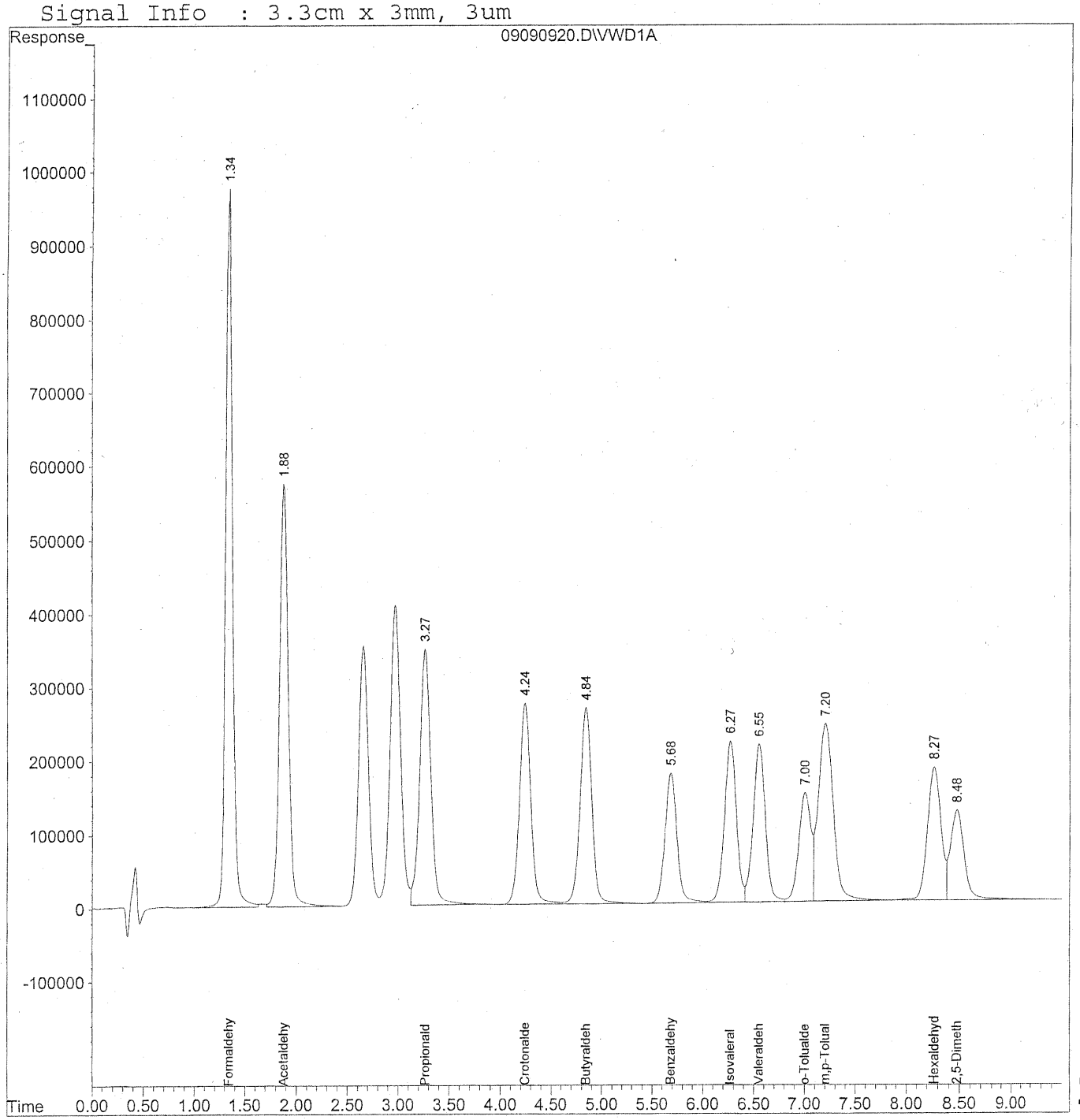
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	13548320	1530.469	ng/ml
2)	Acetaldehyde	1.88	9888425	1541.106	ng/ml
3)	Propionaldehyde	3.27	7759817	1522.663	ng/ml
4)	Crotonaldehyde	4.24	6211709	1571.700	ng/ml
5)	Butyraldehyde	4.84	6160753	1545.118	ng/ml
6)	Benzaldehyde	5.68	4131112	1556.228	ng/ml
7)	Isovaleraldehyde	6.27	5170579	1523.089	ng/ml
8)	Valeraldehyde	6.55	5170597	1567.526	ng/ml
9)	o-Tolualdehyde	7.00	3376687	1587.343	ng/ml
10)	m,p-Tolualdehyde	7.20	7206393	3225.643	ng/ml
11)	Hexaldehyde	8.27	4462344	1538.905	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.47	3155386	1656.115	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090920.D Vial: 5
Acq On : 09-Sep-2009, 17:37 Operator: MD
Sample : 5000ng/ml TO-11A S21-09080902 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:56 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090920.D Vial: 5
Acq On : 09-Sep-2009, 17:37 Operator: MD
Sample : 5000ng/ml TO-11A S21-09080902 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:56 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

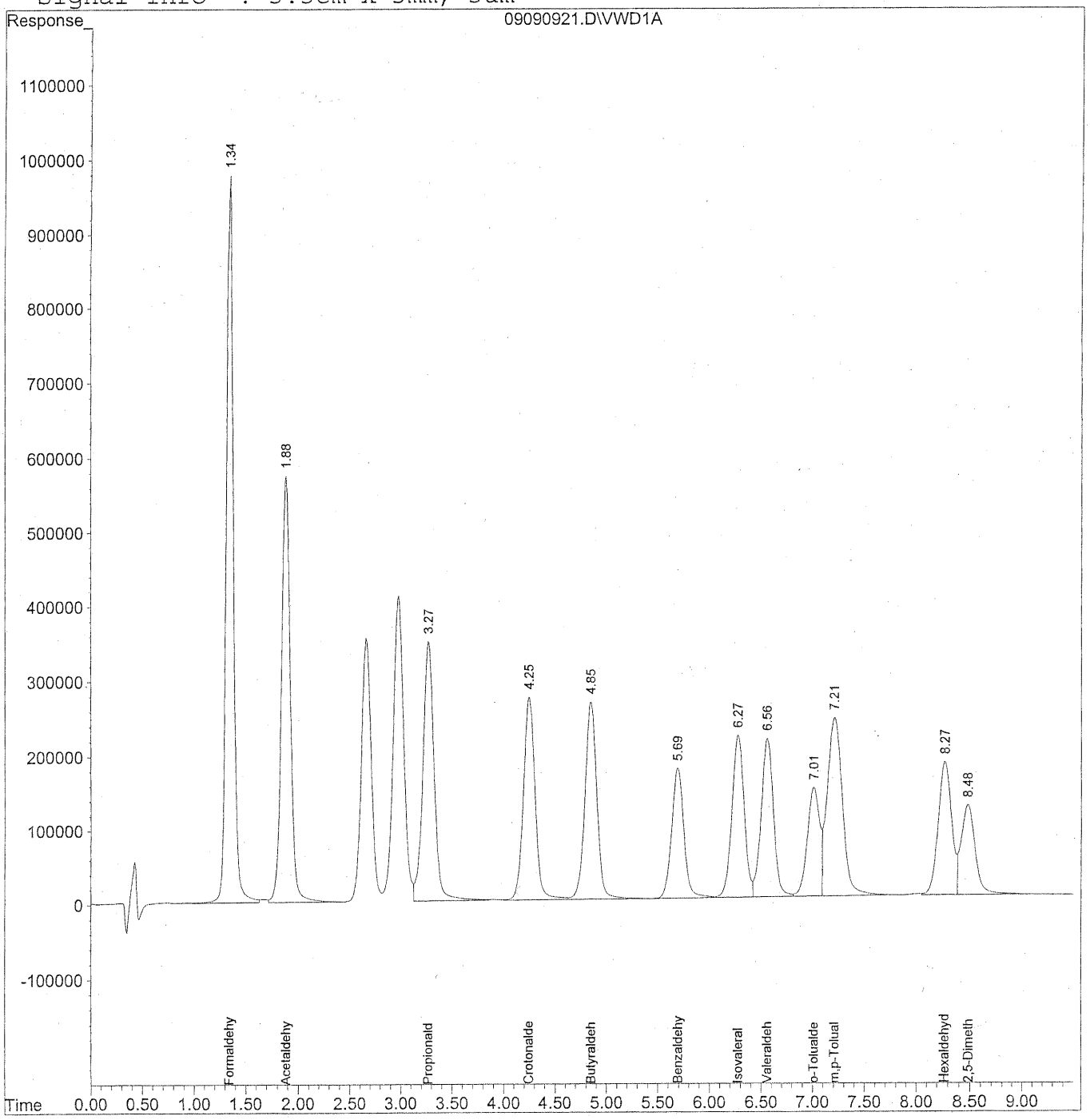
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	46422998	5243.497	ng/ml
2)	Acetaldehyde	1.88	33949113	5290.994	ng/ml
3)	Propionaldehyde	3.27	26460164	5193.957	ng/ml
4)	Crotonaldehyde	4.24	21469148	5427.351	ng/ml
5)	Butyraldehyde	4.84	21371531	5356.965	ng/ml
6)	Benzaldehyde	5.69	14455457	5444.003	ng/ml
7)	Isovaleraldehyde	6.27	17854488	5258.118	ng/ml
8)	Valeraldehyde	6.55	17905508	5426.435	ng/ml
9)	o-Tolualdehyde	7.00	11990582	5636.154	ng/ml
10)	m,p-Tolualdehyde	7.20	25039167	11203.076	ng/ml
11)	Hexaldehyde	8.27	15466841	5333.634	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.48	11107870	5820.635	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090921.D Vial: 5
Acq On : 09-Sep-2009, 17:49 Operator: MD
Sample : 5000ng/ml TO-11A S21-09080902 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:57 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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\2009_09\09\09090921.D Vial: 5
Acq On : 09-Sep-2009, 17:49 Operator: MD
Sample : 5000ng/ml TO-11A S21-09080902 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:57 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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	1.35	46464064	5198.646	ng/ml
2)	Acetaldehyde	1.88	33977292	5236.353	ng/ml
3)	Propionaldehyde	3.27	26758092	5177.051	ng/ml
4)	Crotonaldehyde	4.25	21604348	5366.312	ng/ml
5)	Butyraldehyde	4.85	21444271	5303.711	ng/ml
6)	Benzaldehyde	5.69	14435192	5328.040	ng/ml
7)	Isovaleraldehyde	6.28	17875029	5200.288	ng/ml
8)	Valeraldehyde	6.56	17921465	5321.025	ng/ml
9)	o-Tolualdehyde	7.01	11986554	5544.716	ng/ml
10)	m,p-Tolualdehyde	7.21	25032033	10984.299	ng/ml
11)	Hexaldehyde	8.27	15380456	5215.387	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.48	11113181	5654.303	ng/ml

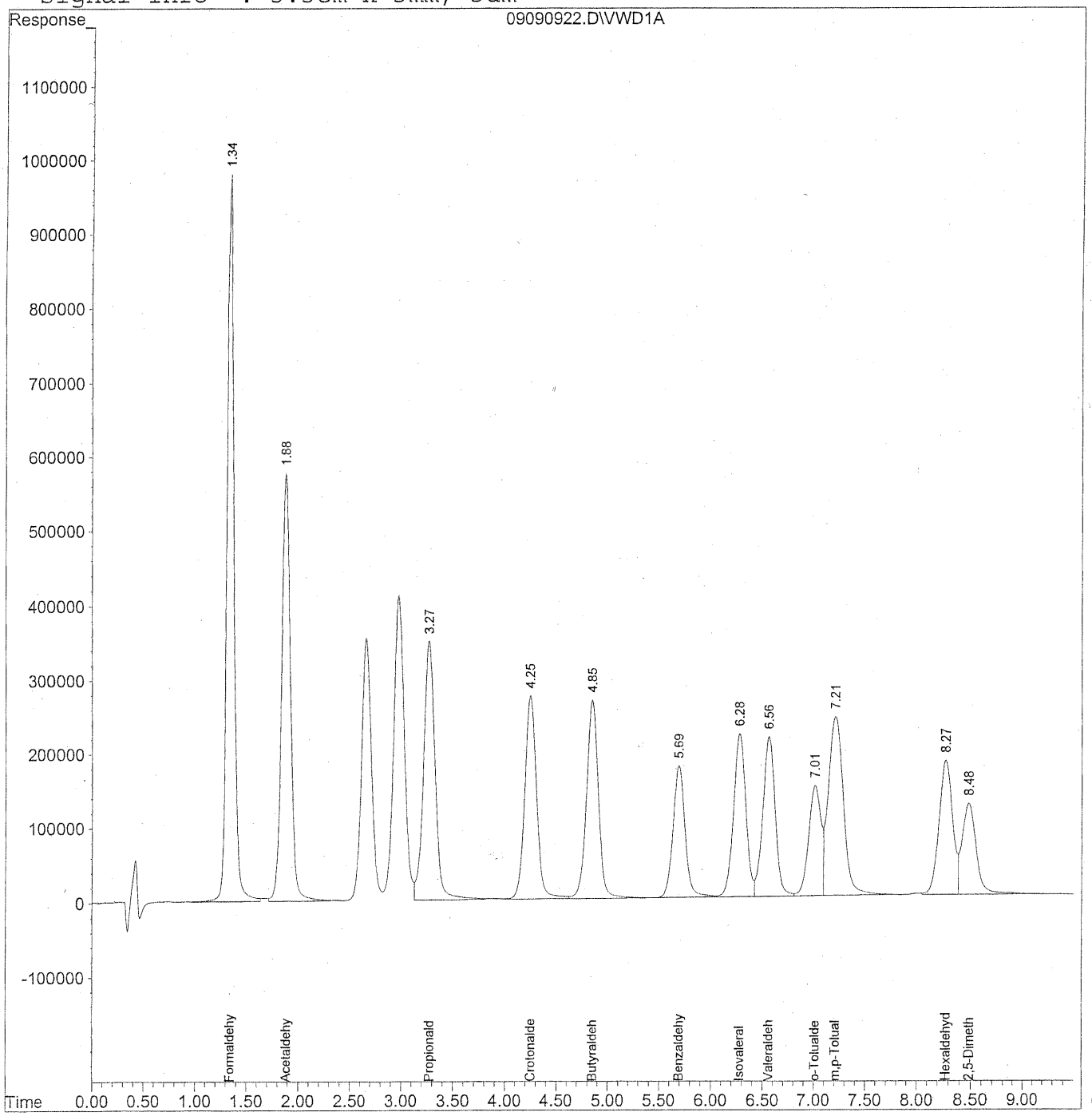
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090922.D Vial: 5
Acq On : 09-Sep-2009, 18:00 Operator: MD
Sample : 5000ng/ml TO-11A S21-09080902 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:58 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090922.D Vial: 5
Acq On : 09-Sep-2009, 18:00 Operator: MD
Sample : 5000ng/ml TO-11A S21-09080902 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:58 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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	1.35	46648983	5218.936	ng/ml
2)	Acetaldehyde	1.88	34054104	5247.811	ng/ml
3)	Propionaldehyde	3.27	26843474	5188.585	ng/ml
4)	Crotonaldehyde	4.25	21717189	5391.323	ng/ml
5)	Butyraldehyde	4.85	21538832	5325.502	ng/ml
6)	Benzaldehyde	5.69	14515721	5358.432	ng/ml
7)	Isovaleraldehyde	6.28	17932725	5216.554	ng/ml
8)	Valeraldehyde	6.56	17988106	5340.390	ng/ml
9)	o-Tolualdehyde	7.01	12035186	5567.385	ng/ml
10)	m,p-Tolualdehyde	7.21	25134428	11029.519	ng/ml
11)	Hexaldehyde	8.28	15437631	5237.332	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.49	11198210	5697.308	ng/ml

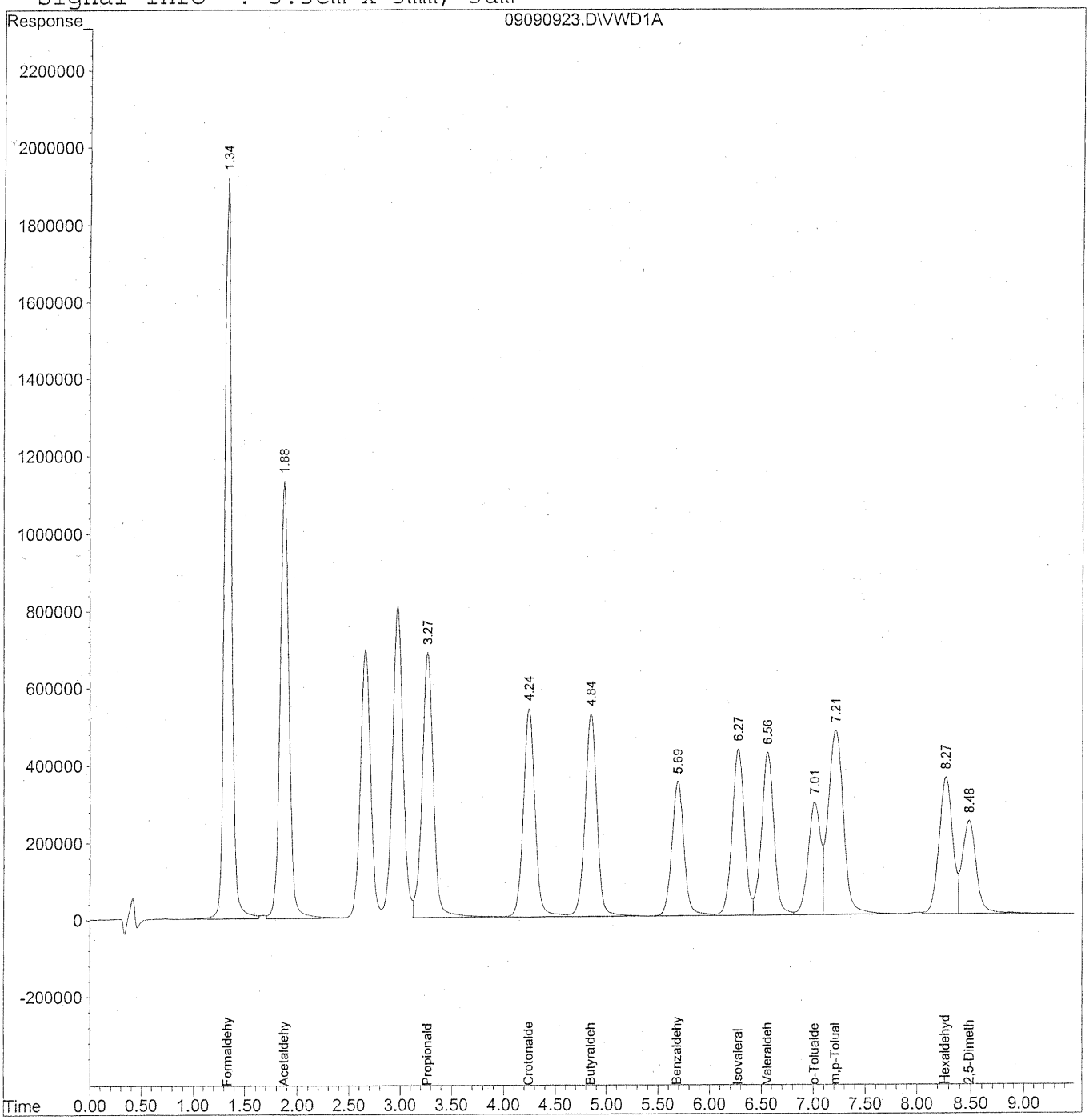
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090923.D Vial: 4
Acq On : 09-Sep-2009, 18:11 Operator: MD
Sample : 10000ng/ml TO-11A S21-09080901 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:58 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090923.D Vial: 4
Acq On : 09-Sep-2009, 18:11 Operator: MD
Sample : 10000ng/ml TO-11A S21-09080901 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:58 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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	1.34	91542792	10238.895	ng/ml
2)	Acetaldehyde	1.88	67198566	10353.832	ng/ml
3)	Propionaldehyde	3.27	52731710	10187.405	ng/ml
4)	Crotonaldehyde	4.25	42623472	10576.073	ng/ml
5)	Butyraldehyde	4.85	42304249	10456.015	ng/ml
6)	Benzaldehyde	5.69	28602353	10555.419	ng/ml
7)	Isovaleraldehyde	6.28	35277028	10259.685	ng/ml
8)	Valeraldehyde	6.56	35412579	10510.859	ng/ml
9)	o-Tolualdehyde	7.01	23892692	11049.929	ng/ml
10)	m,p-Tolualdehyde	7.21	49431359	21686.301	ng/ml
11)	Hexaldehyde	8.27	30345892	10294.528	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.48	21989696	11182.144	ng/ml

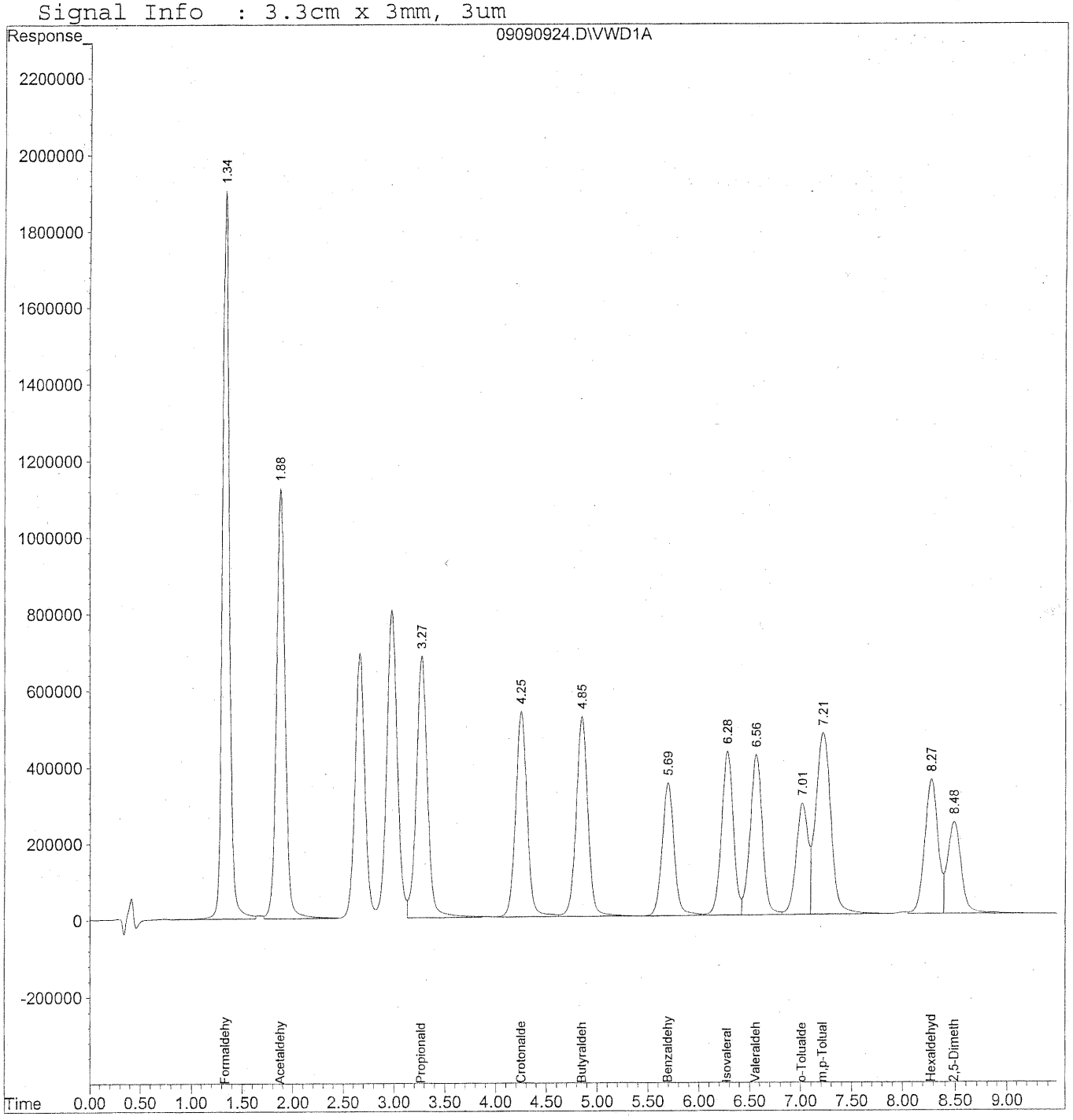
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090924.D Vial: 4
Acq On : 09-Sep-2009, 18:23 Operator: MD
Sample : 10000ng/ml TO-11A S21-09080902 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:59 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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\2009_09\09\09090924.D Vial: 4
Acq On : 09-Sep-2009, 18:23 Operator: MD
Sample : 10000ng/ml TO-11A S21-09080902 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:59 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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	1.34	91301664	10216.742	ng/ml
2)	Acetaldehyde	1.88	67004053	10305.740	ng/ml
3)	Propionaldehyde	3.27	52551284	10108.517	ng/ml
4)	Crotonaldehyde	4.25	42531897	10476.390	ng/ml
5)	Butyraldehyde	4.85	42207282	10413.662	ng/ml
6)	Benzaldehyde	5.69	28552063	10464.403	ng/ml
7)	Isovaleraldehyde	6.28	35194712	10224.544	ng/ml
8)	Valeraldehyde	6.56	35338059	10393.485	ng/ml
9)	o-Tolualdehyde	7.01	23813504	10965.300	ng/ml
10)	m,p-Tolualdehyde	7.21	49315533	21467.660	ng/ml
11)	Hexaldehyde	8.28	30246038	10213.789	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.49	21823086	10931.999	ng/ml

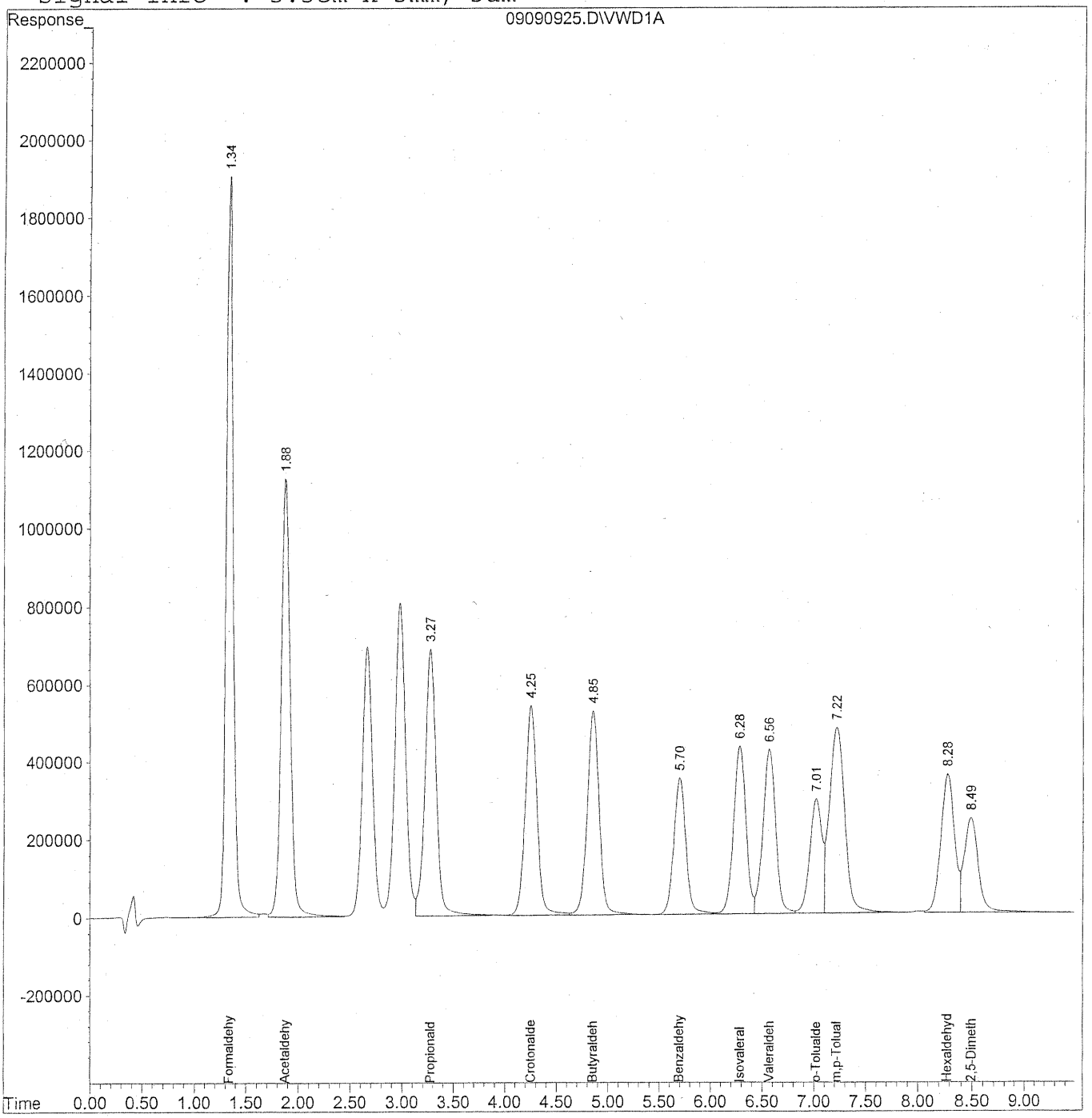
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090925.D Vial: 4
Acq On : 09-Sep-2009, 18:34 Operator: MD
Sample : 10000ng/ml TO-11A S21-09080902 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:59 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090925.D Vial: 4
Acq On : 09-Sep-2009, 18:34 Operator: MD
Sample : 10000ng/ml TO-11A S21-09080902 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 8:59 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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	1.34	91595894	10251.972	ng/ml
2)	Acetaldehyde	1.88	67244158	10345.249	ng/ml
3)	Propionaldehyde	3.28	52752024	10150.066	ng/ml
4)	Crotonaldehyde	4.25	42676337	10513.945	ng/ml
5)	Butyraldehyde	4.86	42347195	10450.266	ng/ml
6)	Benzaldehyde	5.70	28631645	10495.182	ng/ml
7)	Isovaleraldehyde	6.28	35288997	10253.979	ng/ml
8)	Valeraldehyde	6.57	35418570	10419.068	ng/ml
9)	o-Tolualdehyde	7.02	23869930	10994.623	ng/ml
10)	m,p-Tolualdehyde	7.22	49446486	21529.189	ng/ml
11)	Hexaldehyde	8.28	30343150	10249.463	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.49	22018475	11037.553	ng/ml

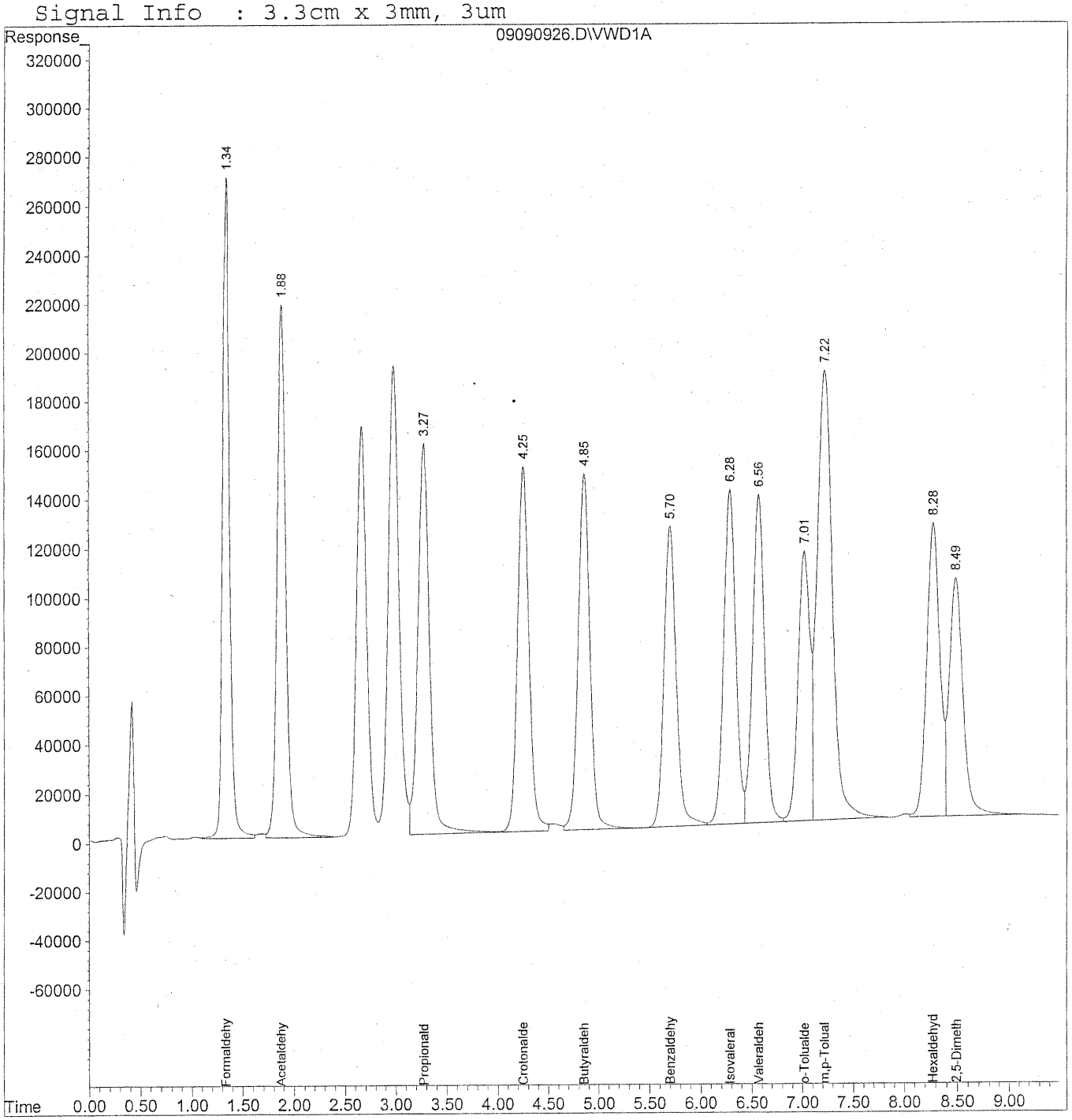
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090926.D Vial: 3
Acq On : 09-Sep-2009, 18:46 Operator: MD
Sample : ~1500ng/ml TO-11A ICV S21-07270907 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 9:30 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\09\09090926.D Vial: 3
Acq On : 09-Sep-2009, 18:46 Operator: MD
Sample : ~1500ng/ml TO-11A ICV S21-07270907 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 10 9:30 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
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	1.34	12986438	1453.521	ng/ml
2)	Acetaldehyde	1.88	13048264	2007.424	ng/ml
3)	Propionaldehyde	3.28	12411611	2388.130	ng/ml
4)	Crotonaldehyde	4.26	11686650	2879.178	ng/ml
5)	Butyraldehyde	4.86	11660734	2877.588	ng/ml
6)	Benzaldehyde	5.70	10075461	3693.249	ng/ml
7)	Isovaleraldehyde	6.28	11105935	3227.069	ng/ml
8)	Valeraldehyde	6.57	11151355	3280.390	ng/ml
9)	o-Tolualdehyde	7.02	8894551	4053.169	ng/ml
10)	m,p-Tolualdehyde	7.22	19279847	8394.519	ng/ml
11)	Hexaldehyde	8.28	10194419	3443.522	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.49	8824280	4423.488	ng/ml

CONTINUING CALIBRATION STANDARDS

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Printed : 09/15/09

Instrument : LC#02 | Date Acquired : 09/11/09

Detector : UV-VIS 360 | Sample Amount : 3ul

Analyst : MD | Client & PAI Job# : EH & E P0903011A

HC 9/16/09

SAMPLE RESULT SUMMARY

Sample Information	MDL	1500ng/ml TO 11A S21-09090903	% Diff	ACN blank lot CY331	MB-3 front 1.0ml lot 5855/5994	MB-3 back 1.0ml lot 5855/5994	P0903011-001 back 1.0ml	P0903011-002 back 1.0ml	P0903011-003 back 1.0ml
Dilution	1.0			1.0	1.0	1.0	1.0	1.0	1.0
Sample Volume (L)	NA			NA	NA	NA	106.10	100.40	105.60
Final Vol.(ml)	1.0			1.0	1.0	1.0	1.0	1.0	1.0

	ng/sample	ng/sample		ng/sample	ng/sample	ng/sample	ng/sample	ng/sample	ng/sample
Formaldehyde	100.00	1519.1	1.3%	ND	ND	ND	ND	ND	ND
Acetaldehyde	100.00	1511.4	0.8%	ND	ND	ND	605.606 BT	556.803 BT	ND
Propionaldehyde	100.00	1462.6	2.5%	ND	ND	ND	ND	ND	ND
Crotonaldehyde	100.00	1523.8	1.6%	ND	ND	ND	ND	ND	ND
Butyraldehyde	100.00	1543.7	2.9%	ND	ND	ND	ND	ND	ND
Benzaldehyde	100.00	1520.8	1.4%	ND	ND	ND	ND	ND	ND
Isovaleraldehyde	100.00	1500.8	0.1%	ND	ND	ND	ND	ND	ND
Valeraldehyde	100.00	1467.9	2.1%	ND	ND	ND	ND	ND	ND
o-Tolualdehyde	100.00	1498.1	0.1%	ND	ND	ND	ND	ND	ND
m,p-Tolualdehyde	200.00	3051.0	1.7%	ND	ND	ND	ND	ND	ND
Hexaldehyde	100.00	1516.3	1.1%	ND	ND	ND	ND	ND	ND
2,5-Dimethylbenzaldehyde	100.00	1651.2	10.1%	ND	ND	ND	ND	ND	ND

	ug/m3		ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Formaldehyde			NA	NA	NA	ND	ND	ND
Acetaldehyde			NA	NA	NA	5.708	5.546	ND
Propionaldehyde			NA	NA	NA	ND	ND	ND
Crotonaldehyde			NA	NA	NA	ND	ND	ND
Butyraldehyde			NA	NA	NA	ND	ND	ND
Benzaldehyde			NA	NA	NA	ND	ND	ND
Isovaleraldehyde			NA	NA	NA	ND	ND	ND
Valeraldehyde			NA	NA	NA	ND	ND	ND
o-Tolualdehyde			NA	NA	NA	ND	ND	ND
m,p-Tolualdehyde			NA	NA	NA	ND	ND	ND
Hexaldehyde			NA	NA	NA	ND	ND	ND
2,5-Dimethylbenzaldehyde			NA	NA	NA	ND	ND	ND

	ppb		ppb	ppb	ppb	ppb	ppb	ppb
Formaldehyde			NA	NA	NA	ND	ND	ND
Acetaldehyde			NA	NA	NA	3.169	3.079	ND
Propionaldehyde			NA	NA	NA	ND	ND	ND
Crotonaldehyde			NA	NA	NA	ND	ND	ND
Butyraldehyde			NA	NA	NA	ND	ND	ND
Benzaldehyde			NA	NA	NA	ND	ND	ND
Isovaleraldehyde			NA	NA	NA	ND	ND	ND
Valeraldehyde			NA	NA	NA	ND	ND	ND
o-Tolualdehyde			NA	NA	NA	ND	ND	ND
m,p-Tolualdehyde			NA	NA	NA	ND	ND	ND
Hexaldehyde			NA	NA	NA	ND	ND	ND
2,5-Dimethylbenzaldehyde			NA	NA	NA	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Printed : 09/15/09

Instrument : LC#02 | Date Acquired : 09/11/09

Detector : UV-VIS 360 | Sample Amount : 3ul

Analyst : MD | Client & PAI Job# : EH & E P0903011A

SAMPLE RESULT SUMMARY

Sample Information	MDL	P0903011-004 back 1.0ml	P0903011-005 back 1.0ml	P0903011-006 back 1.0ml	P0903011-007 back 1.0ml	P0903011-008 back 1.0ml	P0903011-009 back 1.0ml	P0903011-010 back 1.0ml
Dilution	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Sample Volume (L)	NA	107.60	108.70	NA	101.00	101.00	100.50	99.90
Final Vol.(ml)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

	ng/sample	ng/sample	ng/sample	ng/sample	ng/sample	ng/sample	ng/sample	ng/sample
Formaldehyde	100.00	ND	ND	ND	ND	ND	ND	ND
Acetaldehyde	100.00	737.179 BT	510.126 BT	ND	424.294 BT	525.947 BT	ND	496.119 BT
Propionaldehyde	100.00	ND	ND	ND	ND	ND	ND	ND
Crotonaldehyde	100.00	ND	ND	ND	ND	ND	ND	ND
Butyraldehyde	100.00	ND	ND	ND	ND	ND	ND	ND
Benzaldehyde	100.00	ND	ND	ND	ND	ND	ND	ND
Isovaleraldehyde	100.00	ND	ND	ND	ND	ND	ND	ND
Valeraldehyde	100.00	ND	ND	ND	ND	ND	ND	ND
o-Tolualdehyde	100.00	ND	ND	ND	ND	ND	ND	ND
m,p-Tolualdehyde	200.00	ND	ND	ND	ND	ND	ND	ND
Hexaldehyde	100.00	ND	ND	ND	ND	ND	ND	ND
2,5-Dimethylbenzaldehyde	100.00	ND	ND	ND	ND	ND	ND	ND

	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Formaldehyde		ND	ND	ND	ND	ND	ND	ND
Acetaldehyde		6.851	4.693	ND	4.201	5.207	ND	4.966
Propionaldehyde		ND	ND	ND	ND	ND	ND	ND
Crotonaldehyde		ND	ND	ND	ND	ND	ND	ND
Butyraldehyde		ND	ND	ND	ND	ND	ND	ND
Benzaldehyde		ND	ND	ND	ND	ND	ND	ND
Isovaleraldehyde		ND	ND	ND	ND	ND	ND	ND
Valeraldehyde		ND	ND	ND	ND	ND	ND	ND
o-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
m,p-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
Hexaldehyde		ND	ND	ND	ND	ND	ND	ND
2,5-Dimethylbenzaldehyde		ND	ND	ND	ND	ND	ND	ND

	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Formaldehyde		ND	ND	ND	ND	ND	ND	ND
Acetaldehyde		3.804	2.606	ND	2.333	2.892	ND	2.758
Propionaldehyde		ND	ND	ND	ND	ND	ND	ND
Crotonaldehyde		ND	ND	ND	ND	ND	ND	ND
Butyraldehyde		ND	ND	ND	ND	ND	ND	ND
Benzaldehyde		ND	ND	ND	ND	ND	ND	ND
Isovaleraldehyde		ND	ND	ND	ND	ND	ND	ND
Valeraldehyde		ND	ND	ND	ND	ND	ND	ND
o-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
m,p-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
Hexaldehyde		ND	ND	ND	ND	ND	ND	ND
2,5-Dimethylbenzaldehyde		ND	ND	ND	ND	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Instrument : LC#02
Detector : UV-VIS 360
Analyst : MD

Printed : 09/15/09
Date Acquired : 09/11/09
Sample Amount : 3ul
Client & PAI Job# : EH & E P0903011A

Sample Information	MDL	MID CCV 1500ng/ml	% Diff	P0903011-011 back 1.0ml	P0903011-012 back 1.0ml	1500ng/ml end std	% Diff
Dilution	1.0	1.0		1.0	1.0	1.0	
Sample Volume (L)	NA	NA		94.60	NA	100.00	
Final Vol.(ml)	1.0	1.0		1.0	1.0	1.0	

	ng/sample	ng/sample		ng/sample	ng/sample	ng/sample	
Formaldehyde	100.00	1514.488	1.0%	ND	ND	1540.061	2.7%
Acetaldehyde	100.00	1504.073	0.3%	326.505 BT	ND	1518.862	1.3%
Propionaldehyde	100.00	1473.586	1.8%	ND	ND	1496.117	0.3%
Crotonaldehyde	100.00	1511.234	0.7%	ND	ND	1540.134	2.7%
Butyraldehyde	100.00	1517.517	1.2%	ND	ND	1563.096	4.2%
Benzaldehyde	100.00	1499.787	0.0%	ND	ND	1534.304	2.3%
Isovaleraldehyde	100.00	1518.879	1.3%	ND	ND	1519.093	1.3%
Valeraldehyde	100.00	1435.592	4.3%	ND	ND	1463.664	2.4%
o-Tolualdehyde	100.00	1530.165	2.0%	ND	ND	1500.102	0.0%
m,p-Tolualdehyde	200.00	3137.852	4.6%	ND	ND	3022.935	0.8%
Hexaldehyde	100.00	1509.538	0.6%	ND	ND	1416.173	5.6%
2,5-Dimethylbenzaldehyde	100.00	1620.784	8.1%	ND	ND	1415.204	5.7%

	ug/m3	ug/m3	
Formaldehyde		ND	ND
Acetaldehyde		3.451	ND
Propionaldehyde		ND	ND
Crotonaldehyde		ND	ND
Butyraldehyde		ND	ND
Benzaldehyde		ND	ND
Isovaleraldehyde		ND	ND
Valeraldehyde		ND	ND
o-Tolualdehyde		ND	ND
m,p-Tolualdehyde		ND	ND
Hexaldehyde		ND	ND
2,5-Dimethylbenzaldehyde		ND	ND

	ppb	ppb	
Formaldehyde		ND	ND
Acetaldehyde		1.917	ND
Propionaldehyde		ND	ND
Crotonaldehyde		ND	ND
Butyraldehyde		ND	ND
Benzaldehyde		ND	ND
Isovaleraldehyde		ND	ND
Valeraldehyde		ND	ND
o-Tolualdehyde		ND	ND
m,p-Tolualdehyde		ND	ND
Hexaldehyde		ND	ND
2,5-Dimethylbenzaldehyde		ND	ND

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Printed : 09/15/09
Instrument : LC#02
Date Acquired : 09/14/09
Detector : UV-VIS 360
Sample Amount : 3ul
Analyst : MD
Client & PAI Job# : EH&E P0903011B

SAMPLE RESULT SUMMARY

Sample Information	MDL	1500ng/ml TO 11A S21-09090903	% Diff	ACN blank lot CY331	MB-4 front 1.0ml lot 5855/5994	MB-4 back 1.0ml lot 5855/5994	P0903011-001 front 1.0ml	P0903011-002 front 1.0ml	P0903011-003 front 1.0ml
Dilution	1.0			1.0	1.0	1.0	1.0	1.0	1.0
Sample Volume (L)	NA			NA	NA	NA	106.10	100.40	105.60
Final Vol.(ml)	1.0			1.0	1.0	1.0	1.0	1.0	1.0
	ng/sample	ng/sample		ng/sample	ng/sample	ng/sample	ng/sample	ng/sample	ng/sample
Formaldehyde	100.00	1508.5	0.6%	ND	ND	ND	~~18498.194~~	~~17973.707~~	449.007
Acetaldehyde	100.00	1504.5	0.3%	ND	ND	ND	3236.171	3077.350	148.214
Propionaldehyde	100.00	1471.3	1.9%	ND	ND	ND	500.517	453.018	ND
Crotonaldehyde	100.00	1490.6	0.6%	ND	ND	ND	ND	ND	ND
Butyraldehyde	100.00	1507.5	0.5%	ND	ND	ND	398.629	343.894	ND
Benzaldehyde	100.00	1443.8	3.7%	ND	ND	ND	883.740	841.610	153.405
Isovaleraldehyde	100.00	1476.5	1.6%	ND	ND	ND	259.489	245.339	ND
Valeraldehyde	100.00	1445.0	3.7%	ND	ND	ND	1224.277	1122.785	ND
o-Tolualdehyde	100.00	1471.5	1.9%	ND	ND	ND	ND	ND	ND
m,p-Tolualdehyde	200.00	2986.7	0.4%	ND	ND	ND	ND	ND	ND
Hexaldehyde	100.00	1450.2	3.3%	ND	ND	ND	5356.390	4922.541	ND
2,5-Dimethylbenzaldehyde	100.00	1571.4	4.8%	ND	ND	ND	ND	ND	ND
	ug/m3			ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Formaldehyde				NA	NA	NA	~~174.347~~	~~179.021~~	4.252
Acetaldehyde				NA	NA	NA	30.501	30.651	1.404
Propionaldehyde				NA	NA	NA	4.717	4.512	ND
Crotonaldehyde				NA	NA	NA	ND	ND	ND
Butyraldehyde				NA	NA	NA	3.757	3.425	ND
Benzaldehyde				NA	NA	NA	8.329	8.383	1.453
Isovaleraldehyde				NA	NA	NA	2.446	2.444	ND
Valeraldehyde				NA	NA	NA	11.539	11.183	ND
o-Tolualdehyde				NA	NA	NA	ND	ND	ND
m,p-Tolualdehyde				NA	NA	NA	ND	ND	ND
Hexaldehyde				NA	NA	NA	50.484	49.029	ND
2,5-Dimethylbenzaldehyde				NA	NA	NA	ND	ND	ND
	ppb			ppb	ppb	ppb	ppb	ppb	ppb
Formaldehyde				NA	NA	NA	~~142.009~~	~~145.816~~	3.463
Acetaldehyde				NA	NA	NA	16.937	17.020	0.779
Propionaldehyde				NA	NA	NA	1.987	1.900	ND
Crotonaldehyde				NA	NA	NA	ND	ND	ND
Butyraldehyde				NA	NA	NA	1.274	1.162	ND
Benzaldehyde				NA	NA	NA	1.920	1.932	0.335
Isovaleraldehyde				NA	NA	NA	0.695	0.694	ND
Valeraldehyde				NA	NA	NA	3.277	3.176	ND
o-Tolualdehyde				NA	NA	NA	ND	ND	ND
m,p-Tolualdehyde				NA	NA	NA	ND	ND	ND
Hexaldehyde				NA	NA	NA	12.329	11.973	ND
2,5-Dimethylbenzaldehyde				NA	NA	NA	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Printed : 09/16/09
Instrument : LC#02 — Date Acquired : 09/14/09
Detector : UV-VIS 360 — Sample Amount : 3ul
Analyst : MD — Client & PAI Job# : EH&E P0903011B

Sample Information	MDL	P0903011-004 front 1.0ml	P0903011-005 front 1.0ml	P0903011-006 front 1.0ml	P0903011-007 front 1.0ml	P0903011-008 front 1.0ml	P0903011-009 front 1.0ml	P0903011-010 front 1.0ml
Dilution	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Sample Volume (L)	NA	107.60	108.70	NA	101.00	101.00	100.50	99.90
Final Vol.(ml)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

	ng/sample	ng/sample	ng/sample	ng/sample	ng/sample	ng/sample	ng/sample	ng/sample
Formaldehyde	100.00	~~12573.362~~	~~19873.687~~	ND	7479.743	7068.577	ND	6520.346
Acetaldehyde	100.00	3631.127	3846.875	ND	3446.729	3264.704	ND	3256.489
Propionaldehyde	100.00	464.862	469.642	ND	278.499	267.703	ND	293.514
Crotonaldehyde	100.00	ND	ND	ND	ND	ND	ND	ND
Butyraldehyde	100.00	356.462	428.674	ND	378.343	356.487	ND	346.894
Benzaldehyde	100.00	770.883	955.093	ND	720.456	712.145	ND	658.093
Isovaleraldehyde	100.00	222.624	283.061	ND	181.915	186.299	ND	164.437
Valeraldehyde	100.00	1087.289	1318.401	ND	1138.531	1025.530	ND	1036.488
o-Tolualdehyde	100.00	ND	ND	ND	ND	ND	ND	ND
m,p-Tolualdehyde	200.00	ND	ND	ND	ND	ND	ND	ND
Hexaldehyde	100.00	4514.073	5656.628	ND	4752.849	4594.947	ND	4428.928
2,5-Dimethylbenzaldehyde	100.00	ND	ND	ND	ND	ND	ND	ND

	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Formaldehyde		~~116.853~~	~~182.831~~	ND	74.057	69.986	ND	65.269
Acetaldehyde		33.747	35.390	ND	34.126	32.324	ND	32.597
Propionaldehyde		4.320	4.321	ND	2.757	2.651	ND	2.938
Crotonaldehyde		ND	ND	ND	ND	ND	ND	ND
Butyraldehyde		3.313	3.944	ND	3.746	3.530	ND	3.472
Benzaldehyde		7.164	8.787	ND	7.133	7.051	ND	6.588
Isovaleraldehyde		2.069	2.604	ND	1.801	1.845	ND	1.646
Valeraldehyde		10.105	12.129	ND	11.273	10.154	ND	10.375
o-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
m,p-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
Hexaldehyde		41.952	52.039	ND	47.058	45.495	ND	44.334
2,5-Dimethylbenzaldehyde		ND	ND	ND	ND	ND	ND	ND

	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Formaldehyde		~~95.179~~	~~148.919~~	ND	60.321	57.005	ND	53.163
Acetaldehyde		18.739	19.651	ND	18.949	17.949	ND	18.101
Propionaldehyde		1.819	1.820	ND	1.161	1.116	ND	1.237
Crotonaldehyde		ND	ND	ND	ND	ND	ND	ND
Butyraldehyde		1.124	1.338	ND	1.271	1.197	ND	1.178
Benzaldehyde		1.651	2.025	ND	1.644	1.625	ND	1.518
Isovaleraldehyde		0.588	0.740	ND	0.512	0.524	ND	0.467
Valeraldehyde		2.870	3.444	ND	3.201	2.884	ND	2.946
o-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
m,p-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
Hexaldehyde		10.245	12.708	ND	11.492	11.110	ND	10.827
2,5-Dimethylbenzaldehyde		ND	ND	ND	ND	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Printed : 09/15/09
Instrument : LC#02 Date Acquired : 09/14/09
Detector : UV-VIS 360 Sample Amount : 3ul
Analyst : MD Client & PAI Job# : EH&E P0903011B

SAMPLE RESULT SUMMARY

Sample Information	MDL	MID CCV 1500ng/ml	% Diff	P0903011-011 front 1.0ml	P0903011-012 front 1.0ml	P0903011-001 front 10x dil	P0903011-002 front 10x dil	P0903011-004 front 10x dil
Dilution	1.0	1.0		1.0	1.0	10.0	10.0	10.0
Sample Volume (L)	NA	NA		94.60	NA	106.10	100.40	107.60
Final Vol.(ml)	1.0	1.0		1.0	1.0	1.0	1.0	1.0
	ng/sample	ng/sample		ng/sample	ng/sample	ng/sample	ng/sample	ng/sample
Formaldehyde	100.00	1500.399	0.0%	4852.086	ND	18181.550	17721.790	12515.910
Acetaldehyde	100.00	1479.928	1.3%	2548.848	ND	3160.350	3074.900	3637.530
Propionaldehyde	100.00	1478.548	1.4%	276.562	ND	ND	ND	ND
Crotonaldehyde	100.00	1515.551	1.0%	ND	ND	ND	ND	ND
Butyraldehyde	100.00	1528.199	1.9%	288.629	ND	ND	ND	ND
Benzaldehyde	100.00	1455.618	3.0%	572.429	ND	ND	ND	ND
Isovaleraldehyde	100.00	1500.394	0.0%	110.854	ND	ND	ND	ND
Valeraldehyde	100.00	1413.841	5.7%	865.875	ND	1558.700	5587.780	1047.800
o-Tolualdehyde	100.00	1478.736	1.4%	ND	ND	ND	ND	ND
m,p-Tolualdehyde	200.00	3012.134	0.4%	ND	ND	ND	ND	ND
Hexaldehyde	100.00	1457.290	2.8%	3796.915	ND	7727.050	5265.820	4322.790
2,5-Dimethylbenzaldehyde	100.00	1475.209	1.7%	ND	ND	ND	ND	ND
	ug/m3			ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Formaldehyde				51.291	ND	171.362	176.512	116.319
Acetaldehyde				26.943	ND	29.787	30.626	33.806
Propionaldehyde				2.923	ND	ND	ND	ND
Crotonaldehyde				ND	ND	ND	ND	ND
Butyraldehyde				3.051	ND	ND	ND	ND
Benzaldehyde				6.051	ND	ND	ND	ND
Isovaleraldehyde				1.172	ND	ND	ND	ND
Valeraldehyde				9.158	ND	14.691	55.655	9.738
o-Tolualdehyde				ND	ND	ND	ND	ND
m,p-Tolualdehyde				ND	ND	ND	ND	ND
Hexaldehyde				40.137	ND	72.828	52.448	40.175
2,5-Dimethylbenzaldehyde				ND	ND	ND	ND	ND
	ppb			ppb	ppb	ppb	ppb	ppb
Formaldehyde				41.777	ND	139.578	143.772	94.744
Acetaldehyde				14.961	ND	16.540	17.006	18.772
Propionaldehyde				1.231	ND	ND	ND	ND
Crotonaldehyde				ND	ND	ND	ND	ND
Butyraldehyde				1.035	ND	ND	ND	ND
Benzaldehyde				1.395	ND	ND	ND	ND
Isovaleraldehyde				0.333	ND	ND	ND	ND
Valeraldehyde				2.599	ND	4.172	15.805	2.765
o-Tolualdehyde				ND	ND	ND	ND	ND
m,p-Tolualdehyde				ND	ND	ND	ND	ND
Hexaldehyde				9.802	ND	17.785	12.808	9.811
2,5-Dimethylbenzaldehyde				ND	ND	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Printed : 09/15/09
Instrument : LC#02 — Date Acquired : 01/00/00
Detector : UV-VIS 360 — Sample Amount : 3ul
Analyst : MD — Client & PAI Job# : EH&E P0903011B

SAMPLE RESULT SUMMARY

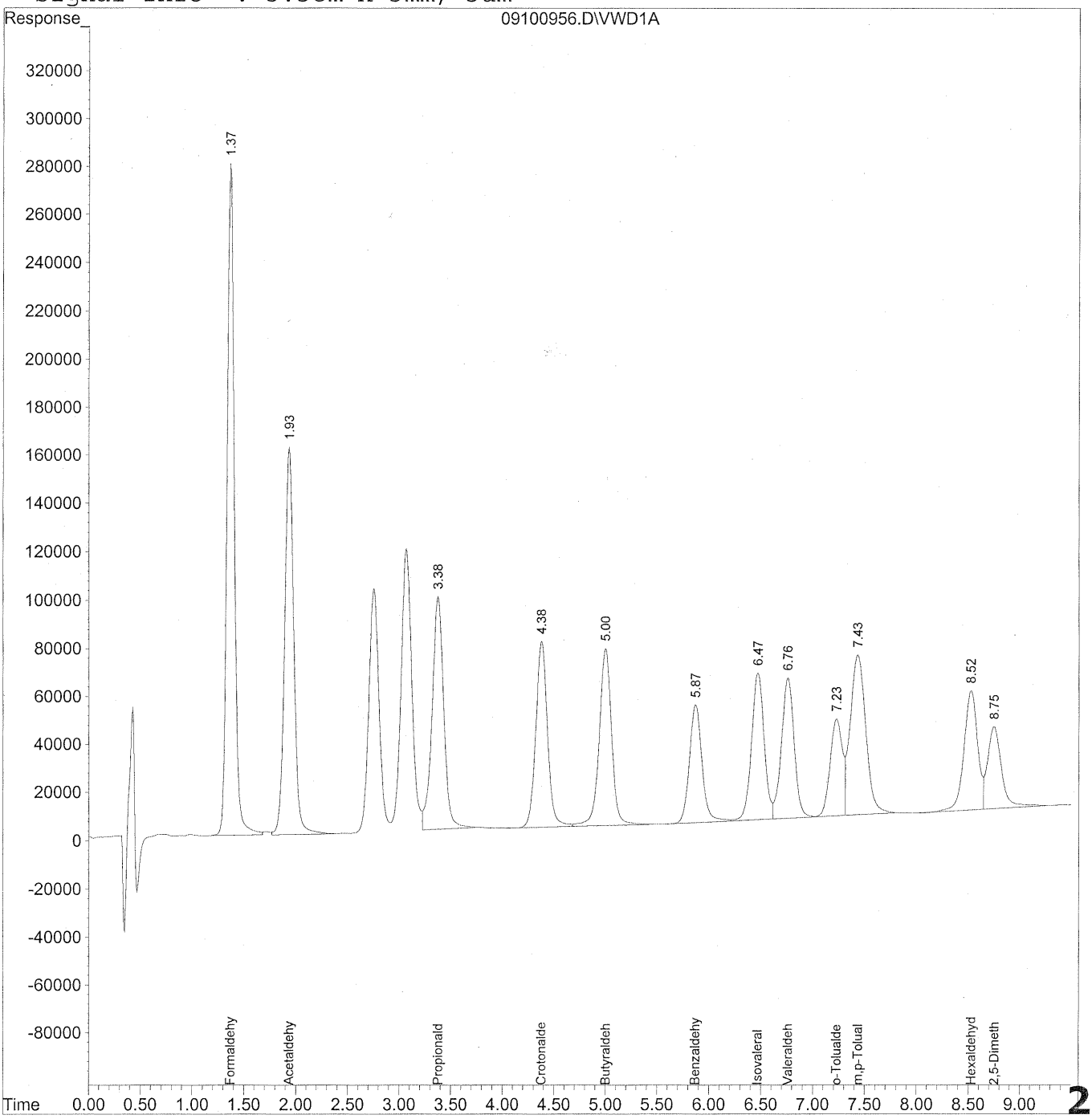
Sample Information	MDL	P0903011-005 front 10x dil	1500ng/ml TO-11A S21-09090903	% Diff
Dilution	1.0	10.0	1.0	
Sample Volume (L)	NA	108.70	NA	
Final Vol.(ml)	1.0	1.0	1.0	
	ng/sample	ng/sample	ng/sample	
Formaldehyde	100.00	19690.410	1520.396	1.4%
Acetaldehyde	100.00	3873.270	1506.146	0.4%
Propionaldehyde	100.00	ND	1472.946	1.8%
Crotonaldehyde	100.00	ND	1503.616	0.2%
Butyraldehyde	100.00	ND	1504.944	0.3%
Benzaldehyde	100.00	ND	1497.303	0.2%
Isovaleraldehyde	100.00	ND	1486.248	0.9%
Valeraldehyde	100.00	1389.940	1453.648	3.1%
o-Tolualdehyde	100.00	ND	1475.677	1.6%
m,p-Tolualdehyde	200.00	ND	3034.037	1.1%
Hexaldehyde	100.00	6282.100	1489.569	0.7%
2,5-Dimethylbenzaldehyde	100.00	ND	1669.001	11.3%
	ug/m3	ug/m3		
Formaldehyde		181.145		
Acetaldehyde		35.633		
Propionaldehyde		ND		
Crotonaldehyde		ND		
Butyraldehyde		ND		
Benzaldehyde		ND		
Isovaleraldehyde		ND		
Valeraldehyde		12.787		
o-Tolualdehyde		ND		
m,p-Tolualdehyde		ND		
Hexaldehyde		57.793		
2,5-Dimethylbenzaldehyde		ND		
	ppb	ppb		
Formaldehyde		147.546		
Acetaldehyde		19.786		
Propionaldehyde		ND		
Crotonaldehyde		ND		
Butyraldehyde		ND		
Benzaldehyde		ND		
Isovaleraldehyde		ND		
Valeraldehyde		3.631		
o-Tolualdehyde		ND		
m,p-Tolualdehyde		ND		
Hexaldehyde		14.114		
2,5-Dimethylbenzaldehyde		ND		

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100956.D Vial: 10
Acq On : 11-Sep-2009, 12:41 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 13:11 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
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\2009_09\10\09100956.D Vial: 10
Acq On : 11-Sep-2009, 12:41 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 11 13:11 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Thu Sep 10 12:03:26 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

9/15/09 9/15/09

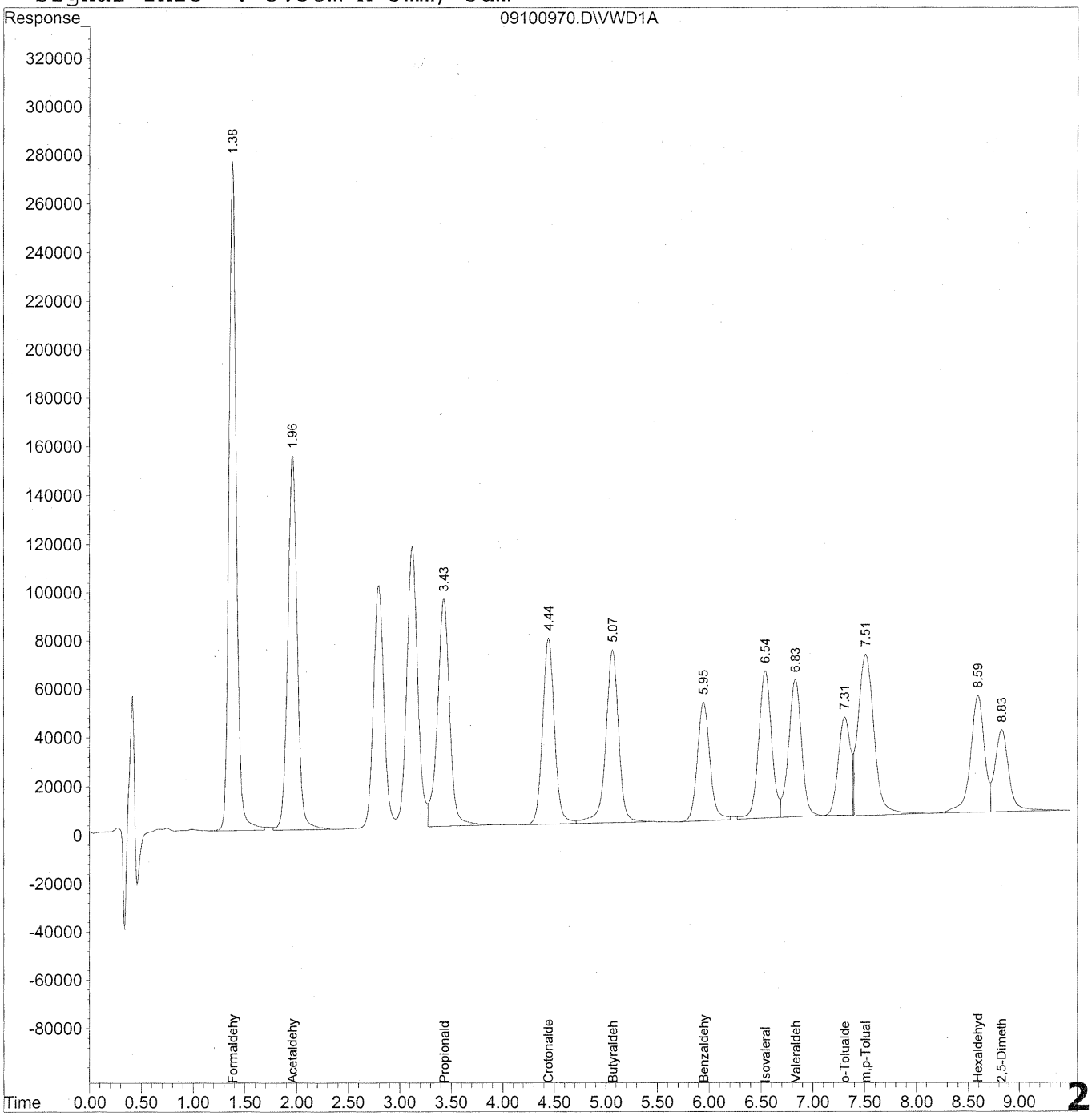
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.37	13573576	1519.073	ng/ml
2)	Acetaldehyde	1.94	9825181	1511.381	ng/ml
3)	Propionaldehyde	3.38	7602438	1462.619	ng/ml
4)	Crotonaldehyde	4.38	6185797	1523.756	ng/ml
5)	Butyraldehyde	5.00	6256357	1543.724	ng/ml
6)	Benzaldehyde	5.87	4149415	1520.836	ng/ml
7)	Isovaleraldehyde	6.47	5165303	1500.762	ng/ml
8)	Valeraldehyde	6.76	4990293	1467.889	ng/ml
9)	o-Tolualdehyde	7.23	3287743	1498.132	ng/ml
10)	m,p-Tolualdehyde	7.44	7007829	3050.966	ng/ml
11)	Hexaldehyde	8.53	4489221	1516.258	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.75	3294954	1651.199	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100970.D Vial: 10
Acq On : 11-Sep-2009, 15:29 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:59 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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\2009_09\10\09100970.D Vial: 10
Acq On : 11-Sep-2009, 15:29 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:59 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

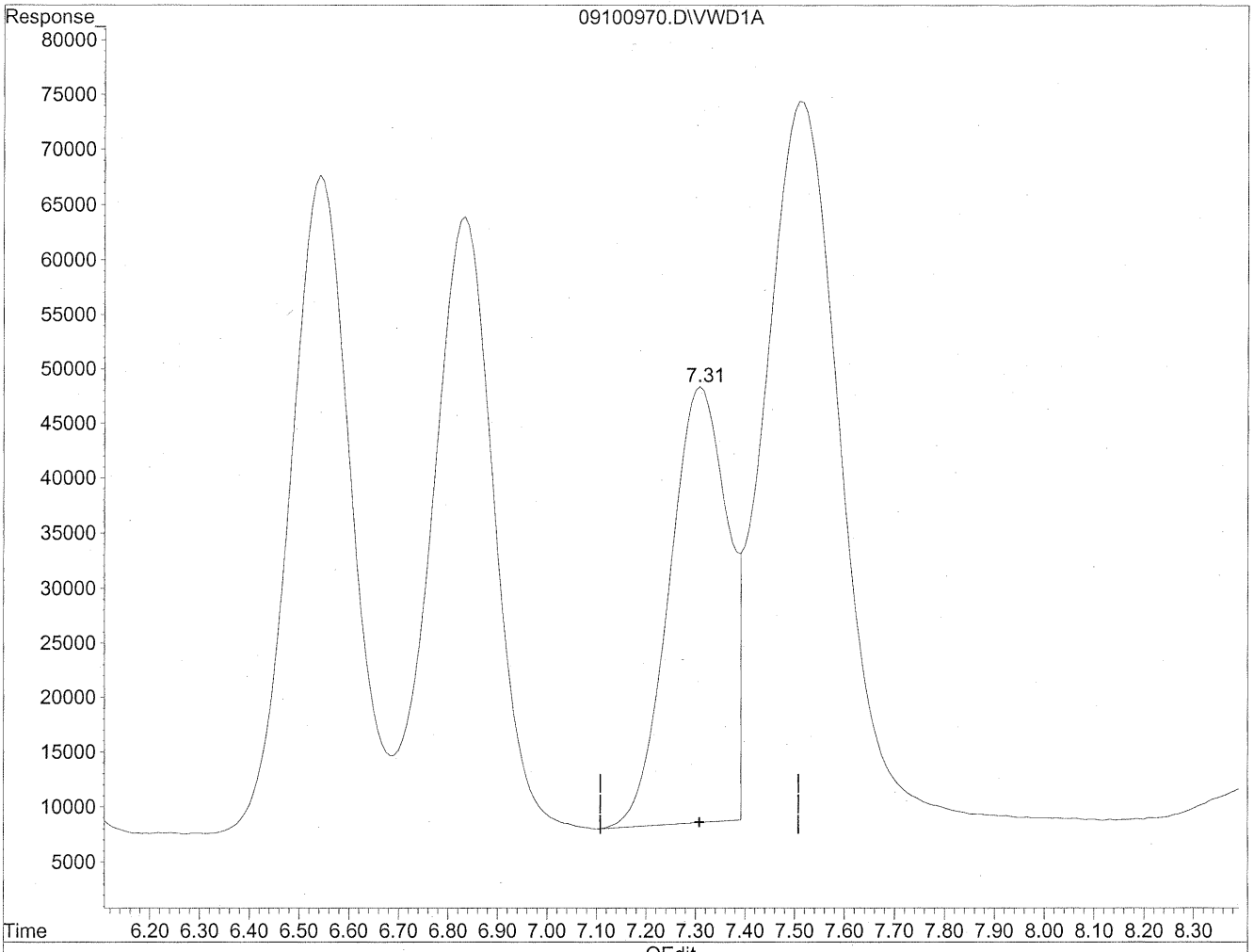
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.39	13532606	1514.488	ng/ml
2)	Acetaldehyde	1.97	9777675	1504.073	ng/ml
3)	Propionaldehyde	3.43	7659441	1473.586	ng/ml
4)	Crotonaldehyde	4.45	6134961	1511.234	ng/ml
5)	Butyraldehyde	5.07	6150143	1517.517	ng/ml
6)	Benzaldehyde	5.95	4091984	1499.787	ng/ml
7)	Isovaleraldehyde	6.55	5227661	1518.879	ng/ml
8)	Valeraldehyde	6.84	4880494	1435.592	ng/ml
9)	o-Tolualdehyde	7.31	3358041	1530.165	ng/mlm
10)	m,p-Tolualdehyde	7.51	7207400	3137.852	ng/mlm
11)	Hexaldehyde	8.60	4469326	1509.538	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.83	3234262	1620.784	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100970.D Vial: 10
Acq On : 11-Sep-2009, 15:29 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

7.31min 1466.800ng/ml

response 3218983

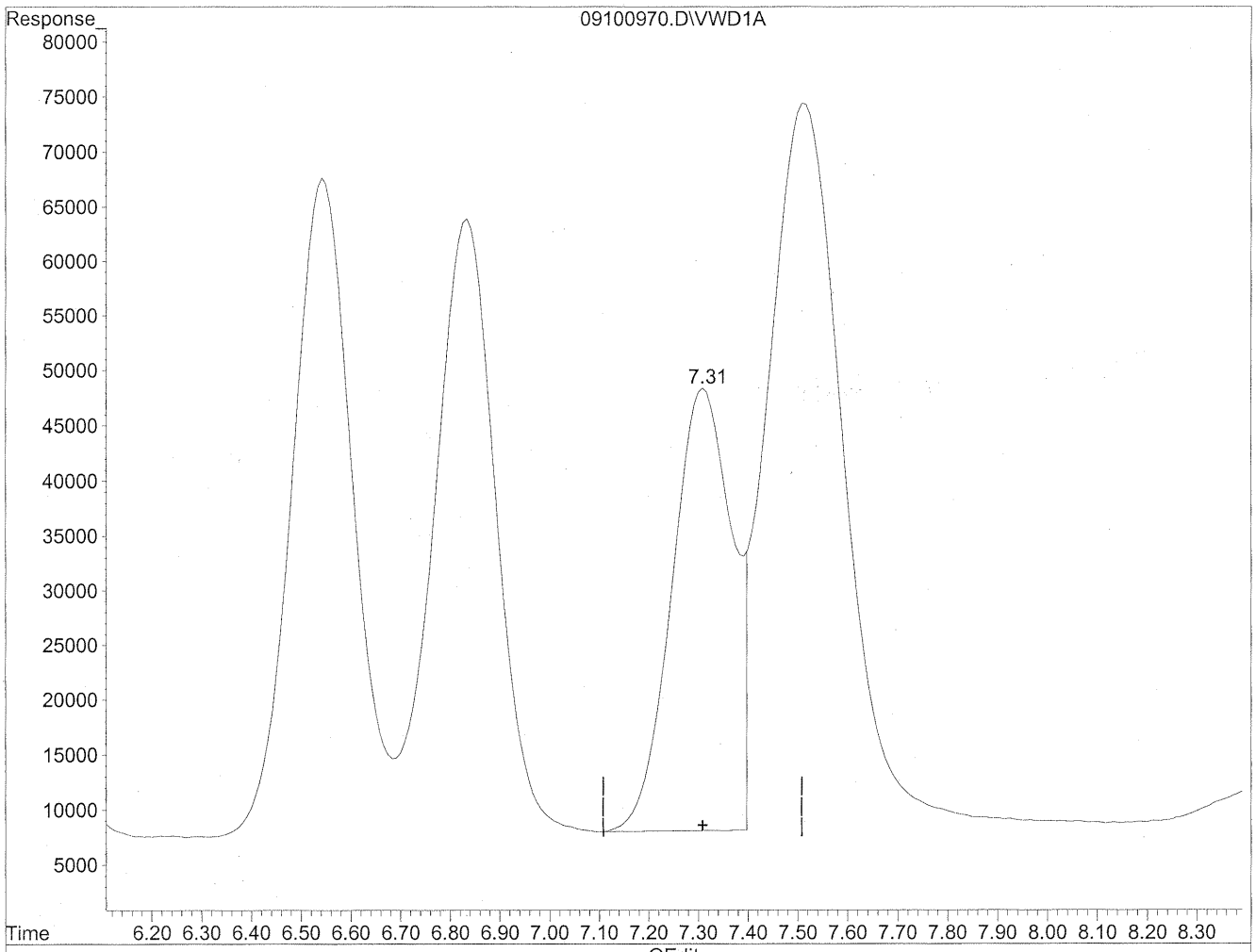
269

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100970.D Vial: 10
Acq On : 11-Sep-2009, 15:29 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(9) o-Tolualdehyde

7.31min 1530.165ng/ml m

response 3358041

tlc 9/15/09

9/15/09 pc

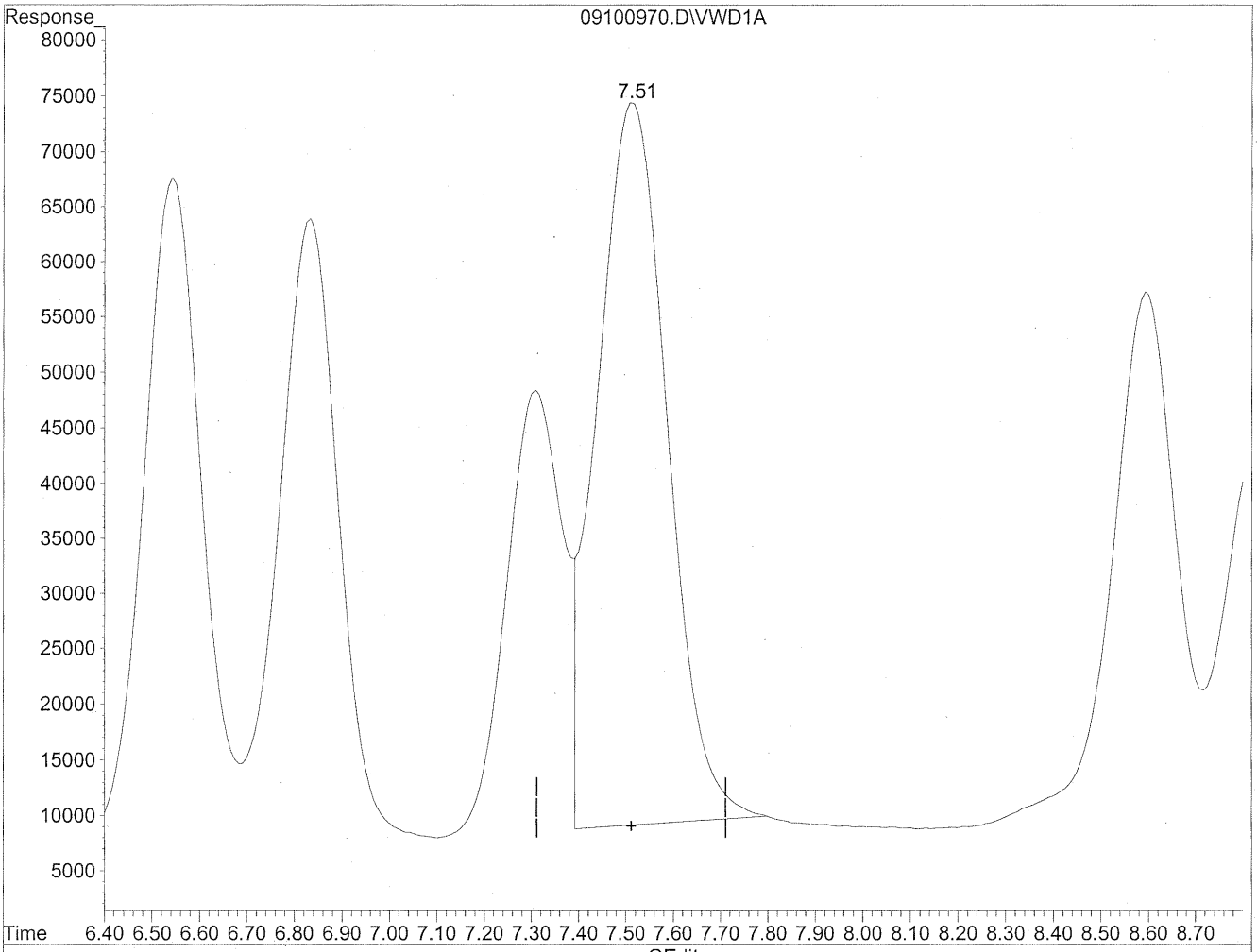
270

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100970.D Vial: 10
Acq On : 11-Sep-2009, 15:29 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

7.52min 2960.017ng/ml

response 6798926

271

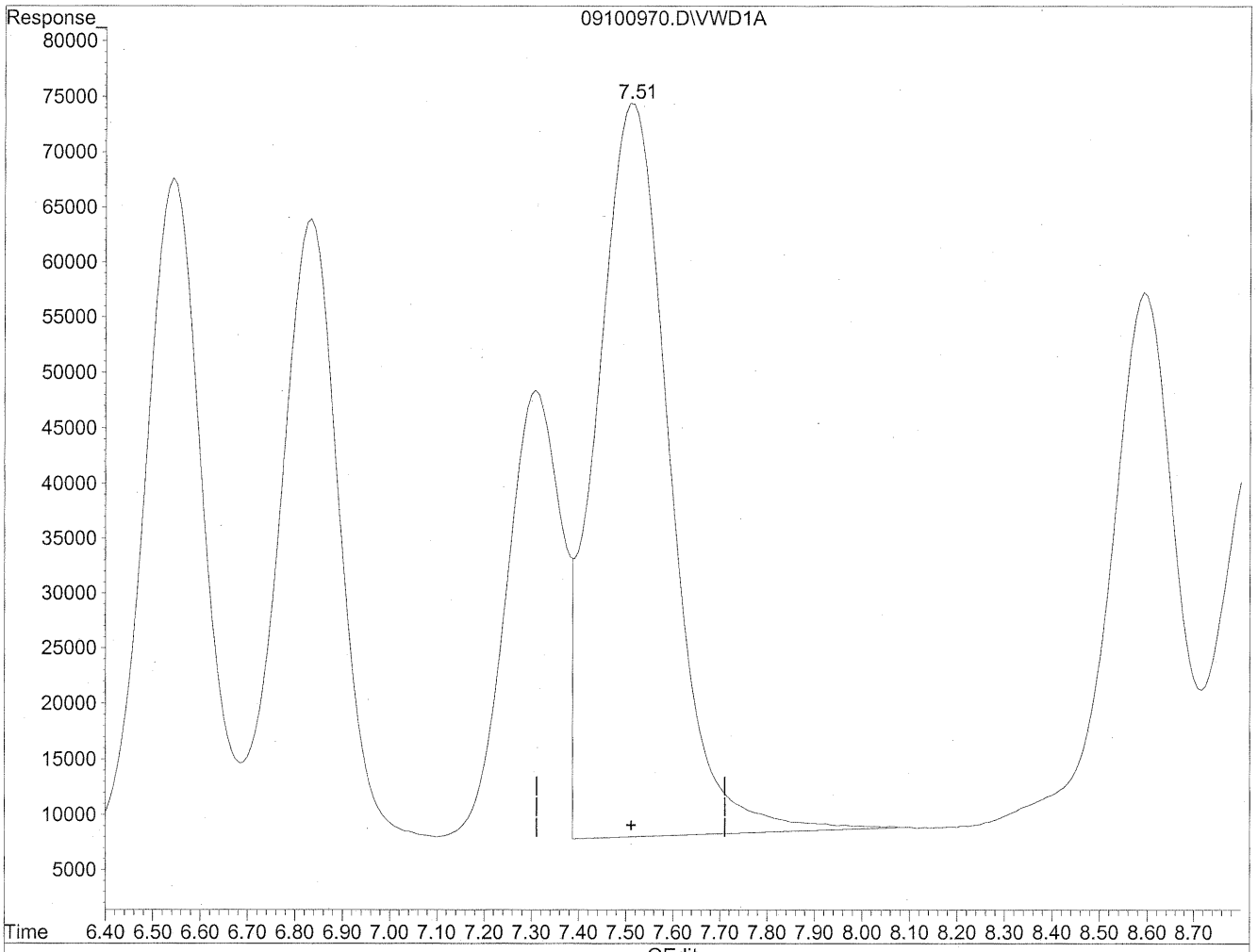
(+) = Expected Retention Time

09100970.D TO110909.M Tue Sep 15 08:59:08 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100970.D Vial: 10
Acq On : 11-Sep-2009, 15:29 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 8:58 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Multiple Level Calibration



(10) m,p-Tolualdehyde

7.51min 3137.852ng/ml m

response 7207400

9/15/09

9/15/09

272

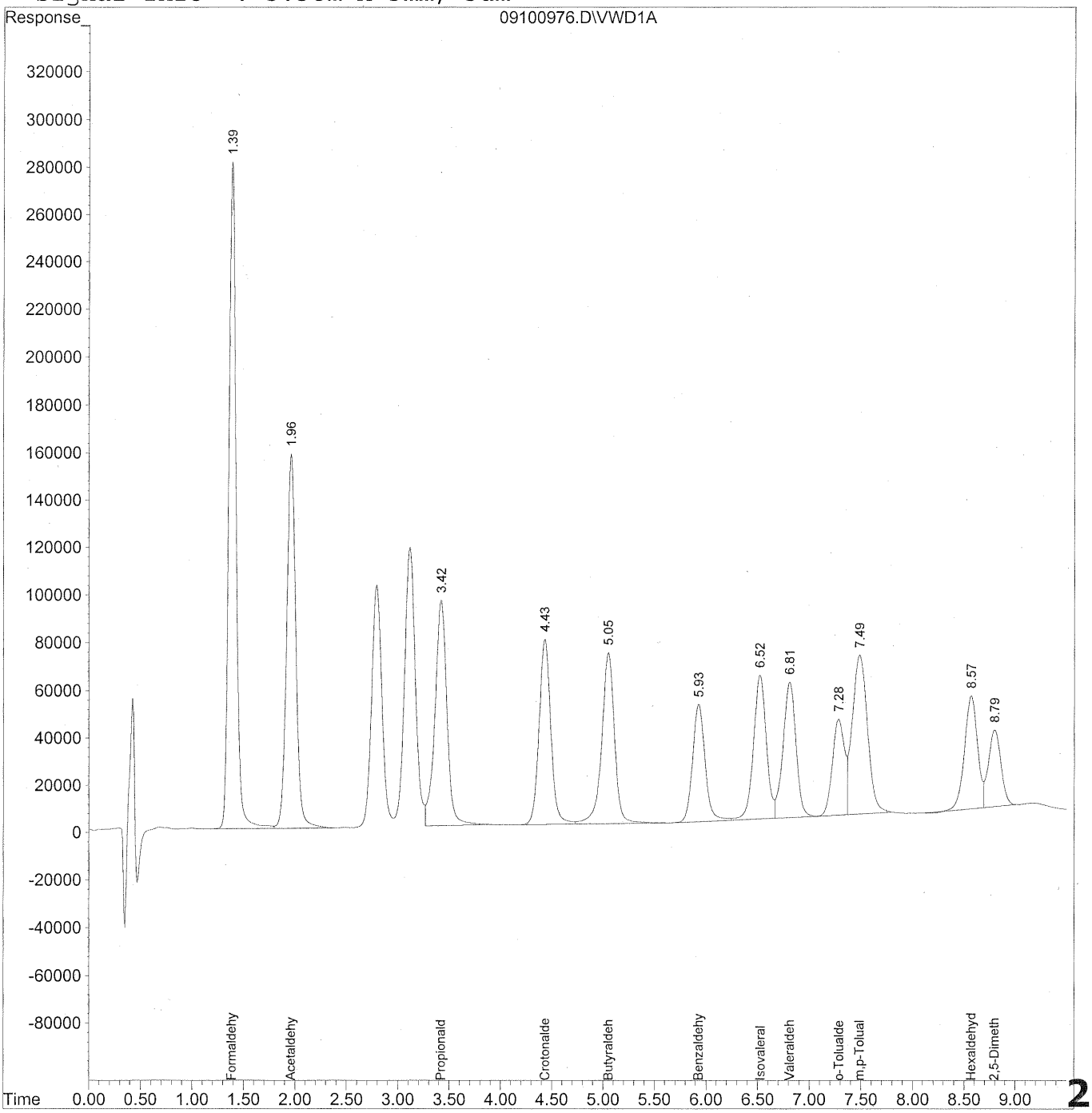
(+) = Expected Retention Time

09100970.D TO110909.M Tue Sep 15 08:59:15 2009

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100976.D Vial: 10
Acq On : 11-Sep-2009, 16:38 Operator: MD
Sample : 1500ng/ml end std Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:00 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\10\09100976.D Vial: 10
Acq On : 11-Sep-2009, 16:38 Operator: MD
Sample : 1500ng/ml end std Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:00 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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	1.39	13761107	1540.061	ng/ml
2)	Acetaldehyde	1.96	9873812	1518.862	ng/ml
3)	Propionaldehyde	3.42	7776551	1496.117	ng/ml
4)	Crotonaldehyde	4.43	6252281	1540.134	ng/ml
5)	Butyraldehyde	5.05	6334866	1563.096	ng/ml
6)	Benzaldehyde	5.93	4186161	1534.304	ng/ml
7)	Isovaleraldehyde	6.52	5228395	1519.093	ng/ml
8)	Valeraldehyde	6.81	4975930	1463.664	ng/ml
9)	o-Tolualdehyde	7.29	3292066	1500.102	ng/ml
10)	m,p-Tolualdehyde	7.49	6943445	3022.935	ng/ml
11)	Hexaldehyde	8.57	4192897	1416.173	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.80	2824028	1415.204	ng/ml

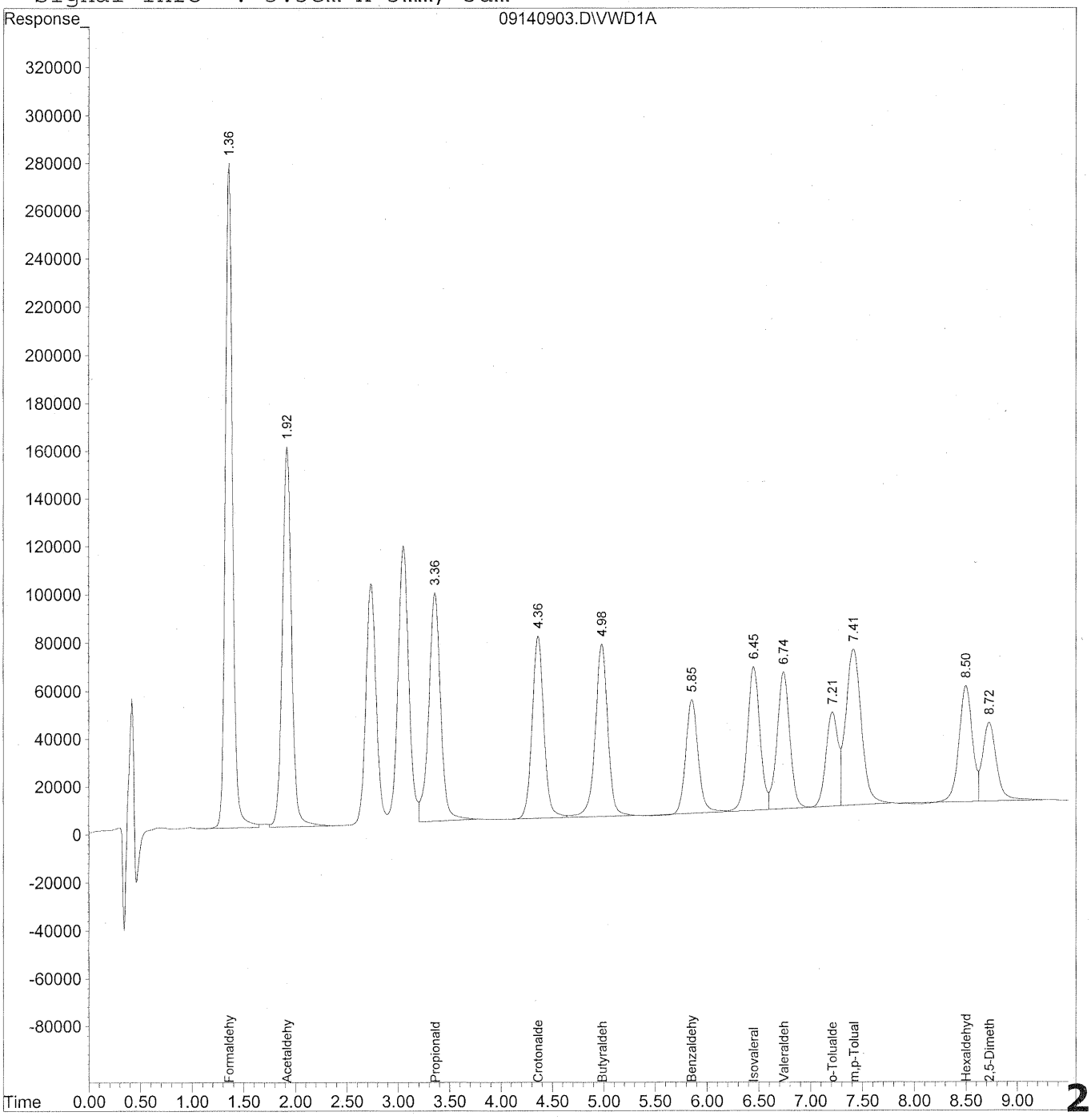
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140903.D Vial: 10
Acq On : 14-Sep-2009, 09:29 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:38 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140903.D Vial: 10
Acq On : 14-Sep-2009, 09:29 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:38 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 08:58:18 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

mk 9/15/09

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

tlk 9/15/09

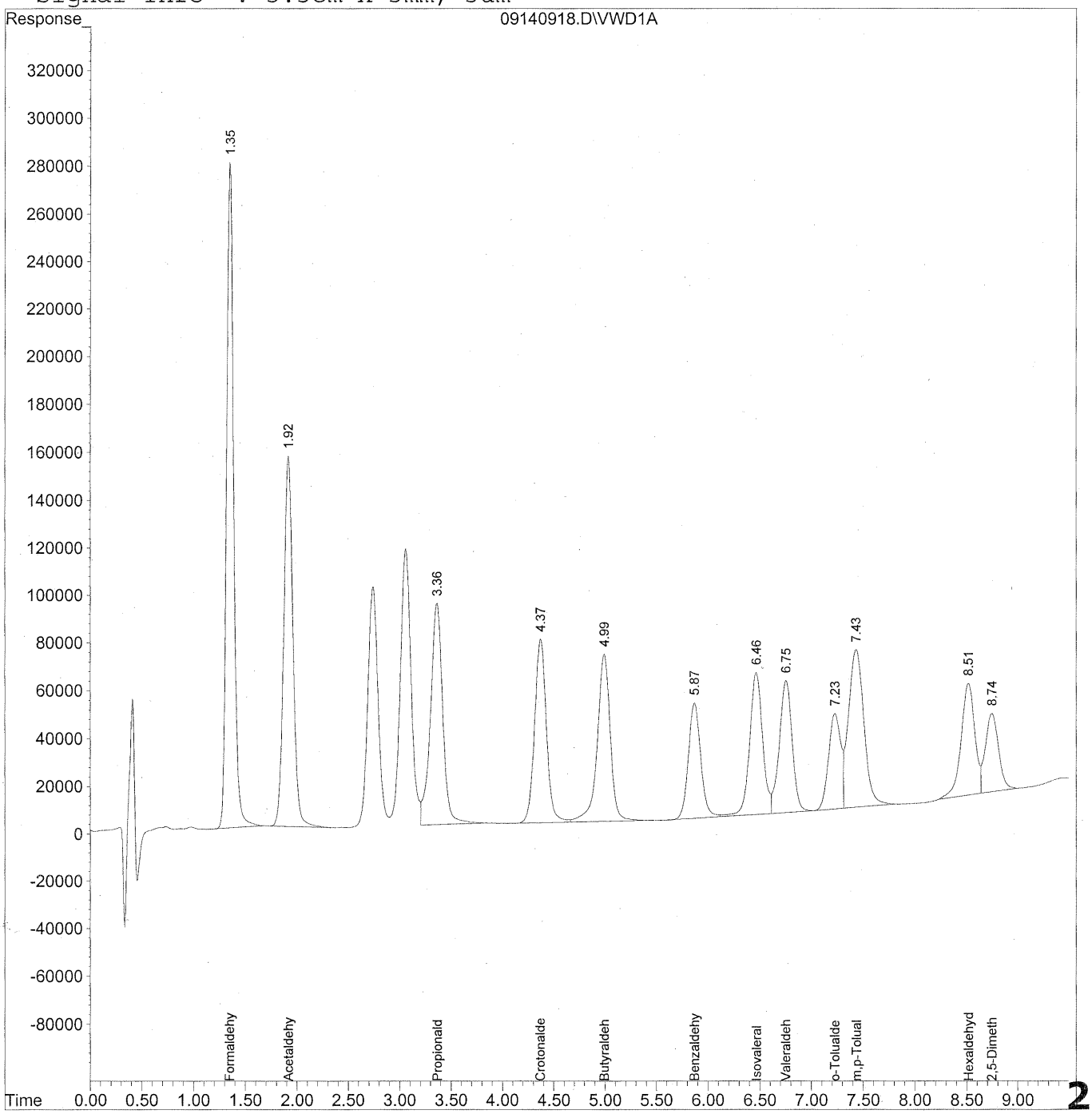
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.36	13479064	1508.496	ng/ml
2)	Acetaldehyde	1.92	9780219	1504.465	ng/ml
3)	Propionaldehyde	3.36	7647564	1471.301	ng/ml
4)	Crotonaldehyde	4.36	6051232	1490.609	ng/ml
5)	Butyraldehyde	4.98	6109739	1507.547	ng/ml
6)	Benzaldehyde	5.86	3939313	1443.830	ng/ml
7)	Isovaleraldehyde	6.45	5081884	1476.524	ng/ml
8)	Valeraldehyde	6.74	4912506	1445.008	ng/ml
9)	o-Tolualdehyde	7.21	3229406	1471.549	ng/ml
10)	m,p-Tolualdehyde	7.42	6860178	2986.684	ng/ml
11)	Hexaldehyde	8.50	4293764	1450.241	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.73	3135766	1571.425	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140918.D Vial: 10
Acq On : 14-Sep-2009, 12:32 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:56 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140918.D Vial: 10
Acq On : 14-Sep-2009, 12:32 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:56 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

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

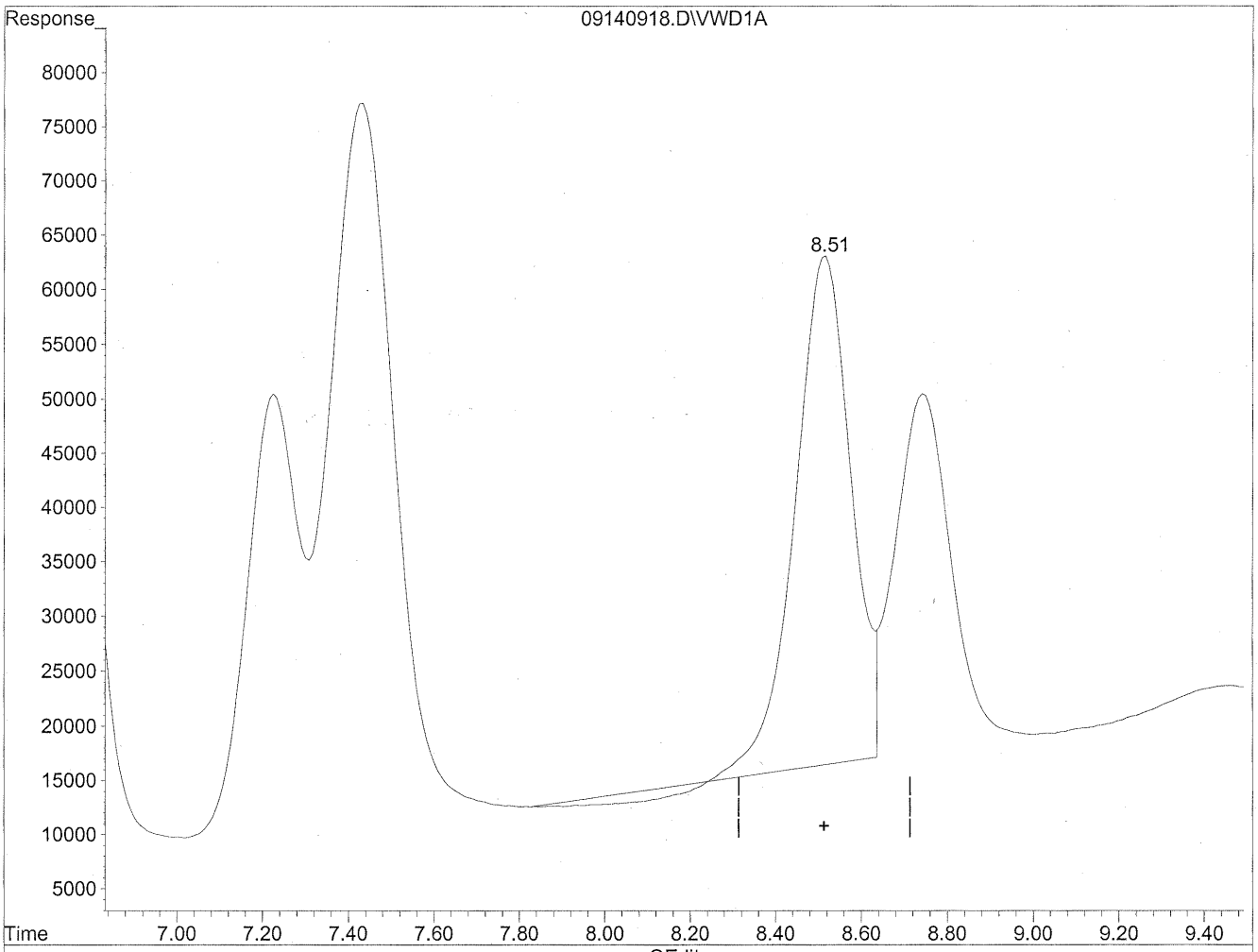
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.36	13406713	1500.399	ng/ml
2)	Acetaldehyde	1.92	9620714	1479.928	ng/ml
3)	Propionaldehyde	3.37	7685232	1478.548	ng/ml
4)	Crotonaldehyde	4.37	6152486	1515.551	ng/ml
5)	Butyraldehyde	4.99	6193434	1528.199	ng/ml
6)	Benzaldehyde	5.87	3971476	1455.618	ng/ml
7)	Isovaleraldehyde	6.47	5164039	1500.394	ng/ml
8)	Valeraldehyde	6.76	4806551	1413.841	ng/ml
9)	o-Tolualdehyde	7.23	3245178	1478.736	ng/ml
10)	m,p-Tolualdehyde	7.43	6918635	3012.134	ng/ml
11)	Hexaldehyde	8.51	4314633	1457.290	ng/mlm
12)	2,5-Dimethylbenzaldehyde	8.75	2943768	1475.209	ng/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140918.D Vial: 10
Acq On : 14-Sep-2009, 12:32 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:56 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.52min 1374.762ng/ml

response 4070292

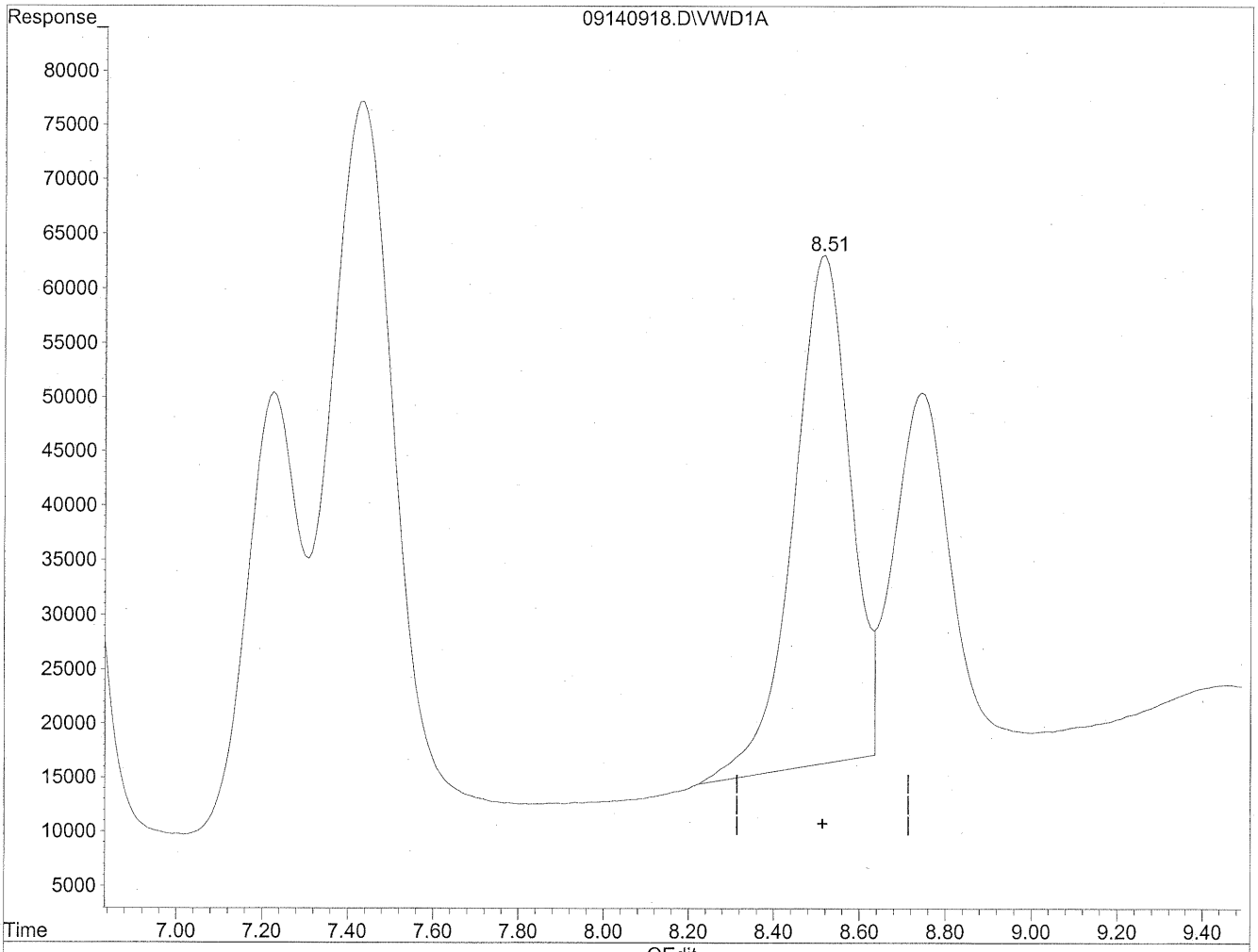
(+) = Expected Retention Time

09140918.D TO110909.M Tue Sep 15 09:56:18 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140918.D Vial: 10
Acq On : 14-Sep-2009, 12:32 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 9:56 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.51min 1457.290ng/ml m

response 4314633

9/15/09 BL

tec 9/15/09

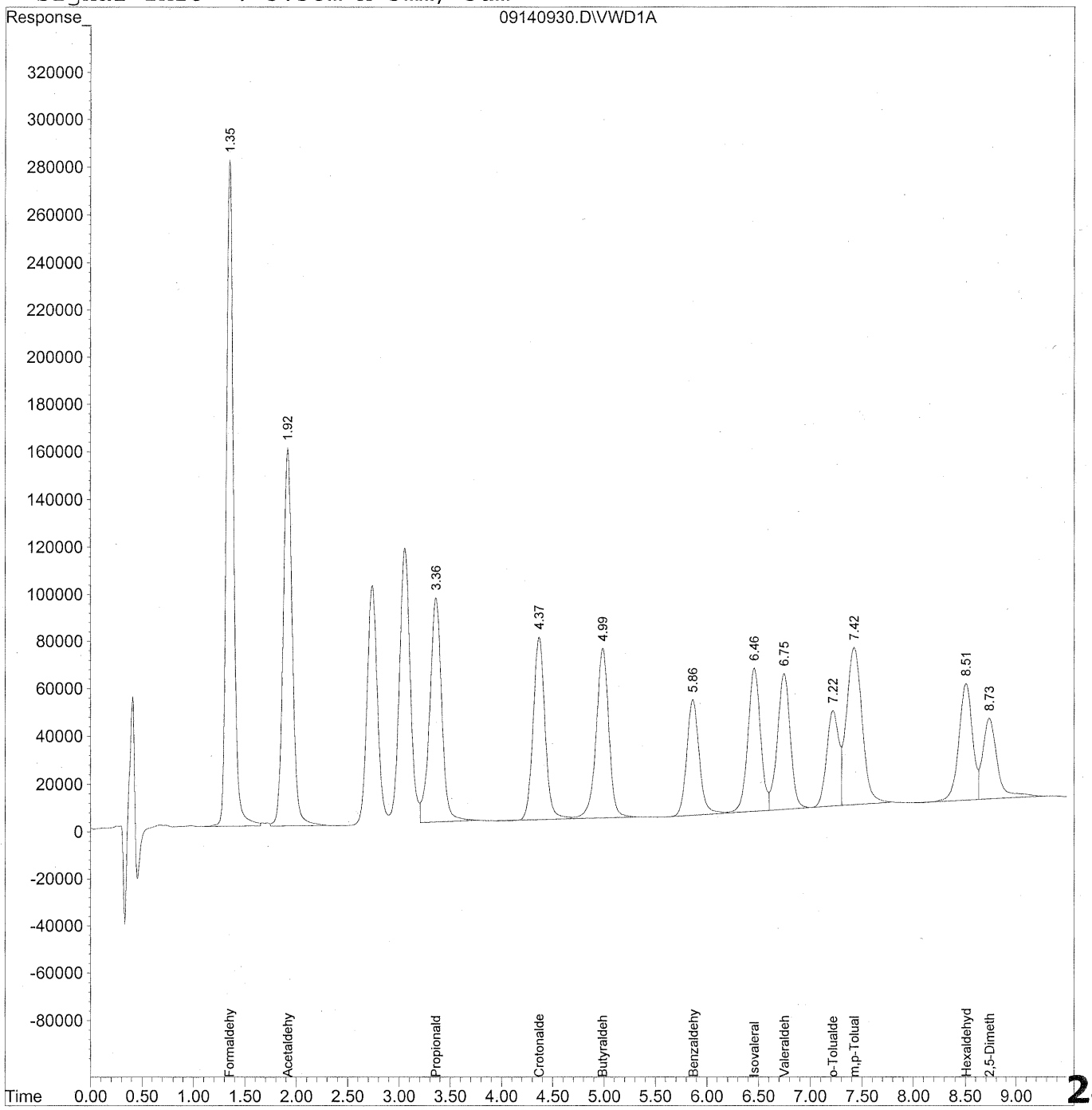
(+) = Expected Retention Time

09140918.D TO110909.M Tue Sep 15 09:56:24 2009

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140930.D Vial: 10
Acq On : 14-Sep-2009, 15:17 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:19 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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



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Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\14\09140930.D Vial: 10
Acq On : 14-Sep-2009, 15:17 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 15 10:19 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Tue Sep 15 09:56:03 2009
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	1.36	13585395	1520.396	ng/ml
2)	Acetaldehyde	1.92	9791152	1506.146	ng/ml
3)	Propionaldehyde	3.36	7656115	1472.946	ng/ml
4)	Crotonaldehyde	4.37	6104037	1503.616	ng/ml
5)	Butyraldehyde	4.99	6099188	1504.944	ng/ml
6)	Benzaldehyde	5.87	4085207	1497.303	ng/ml
7)	Isovaleraldehyde	6.46	5115349	1486.248	ng/ml
8)	Valeraldehyde	6.75	4941879	1453.648	ng/ml
9)	o-Tolualdehyde	7.22	3238465	1475.677	ng/ml
10)	m,p-Tolualdehyde	7.43	6968944	3034.037	ng/ml
11)	Hexaldehyde	8.51	4410203	1489.569	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.74	3330478	1669.001	ng/ml

RUN LOGS

Injection Log

Directory: j:\lc02\data\to11a\2009_09\09

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
		09090901.d	1.			
		09090902.d	1.			
	102	09090903.d	1.	TO11 STD TEST		09-Sep-09, 12:4
	102	09090904.d	1.	TO11 STD TEST		09-Sep-09, 12:5
	10	09090905.d	1.	TO11 STD TEST		09-Sep-09, 26:1
	10	09090906.d	1.	TO11 STD TEST		09-Sep-09, 26:3
	10	09090907.d	1.	ACN BLANK Lot CY331		09-Sep-09, 27:0
	9	09090908.d	1.	50ng/ml TO-11A S21-09080905		09-Sep-09, 27:2
	9	09090909.d	1.	50ng/ml TO-11A S21-09080905		09-Sep-09, 27:3
0	9	09090910.d	1.	50ng/ml TO-11A S21-09080905		09-Sep-09, 27:4
1	8	09090911.d	1.	100ng/ml TO-11A S21-09080904		09-Sep-09, 27:5
2	8	09090912.d	1.	100ng/ml TO-11A S21-09080904		09-Sep-09, 28:0
3	8	09090913.d	1.	100ng/ml TO-11A S21-09080904		09-Sep-09, 28:1
4	7	09090914.d	1.	500ng/ml TO-11A S21-09080903		09-Sep-09, 28:2
5	7	09090915.d	1.	500ng/ml TO-11A S21-09080903		09-Sep-09, 28:4
6	7	09090916.d	1.	500ng/ml TO-11A S21-09080903		09-Sep-09, 28:5
7	6	09090917.d	1.	1500ng/ml TO-11A S21-09090903		09-Sep-09, 29:0
8	6	09090918.d	1.	1500ng/ml TO-11A S21-09090903		09-Sep-09, 29:1
9	6	09090919.d	1.	1500ng/ml TO-11A S21-09090903		09-Sep-09, 29:2
0	5	09090920.d	1.	5000ng/ml TO-11A S21-09080902		09-Sep-09, 29:3
1	5	09090921.d	1.	5000ng/ml TO-11A S21-09080902		09-Sep-09, 29:4
2	5	09090922.d	1.	5000ng/ml TO-11A S21-09080902		09-Sep-09, 30:0
3	4	09090923.d	1.	10000ng/ml TO-11A S21-09080901		09-Sep-09, 30:1
4	4	09090924.d	1.	10000ng/ml TO-11A S21-09080902		09-Sep-09, 30:2
5	4	09090925.d	1.	10000ng/ml TO-11A S21-09080902		09-Sep-09, 30:3
6	3	09090926.d	1.	~1500ng/ml TO-11A ICV S21-07270907		09-Sep-09, 30:4
7	3	09090927.d	1.	~1500ng/ml TO-11A ICV S21-07270907	> injected ICV 3x by mistake (MK) 9/10/09	09-Sep-09, 30:5
8	3	09090928.d	1.	~1500ng/ml TO-11A ICV S21-07270907		09-Sep-09, 31:0

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Injection Log

Directory: j:\lc02\data\to11a\2009_09\10

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	5	09100901.d	1.	prime		10-Sep-09, 23:2
2	5	09100902.d	1.	prime		10-Sep-09, 23:3
3	5	09100903.d	1.	1500ng/ml TO-11A S21-09090903		10-Sep-09, 23:4
4	10	09100904.d	1.	ACN blank lot CY331		10-Sep-09, 23:5
5	9	09100905.d	1.	MB front 1.0ml lot 5855/5994		10-Sep-09, 12:0
6	8	09100906.d	1.	MB back 1.0ml lot 5855/5994		10-Sep-09, 12:2
7	7	09100907.d	1.	P0903083-001 back 1.0ml		10-Sep-09, 12:3
8	6	09100908.d	1.	P0903083-002 back 1.0ml		10-Sep-09, 12:4
9	5	09100909.d	1.	P0903083-003 back 1.0ml		10-Sep-09, 12:5
10	4	09100910.d	1.	P0903083-004 back 1.0ml		10-Sep-09, 25:0
11	3	09100911.d	1.	P0903083-005 back 1.0ml		10-Sep-09, 25:1
12	2	09100912.d	1.	P0903083-006 back 1.0ml		10-Sep-09, 25:2
13	101	09100913.d	1.	P0903083-001 front 1.0ml		10-Sep-09, 25:4
14	102	09100914.d	1.	P0903083-002 front 1.0ml		10-Sep-09, 25:5
15	103	09100915.d	1.	P0903083-003 front 1.0ml		10-Sep-09, 26:0
16	104	09100916.d	1.	P0903083-004 front 1.0ml		10-Sep-09, 26:1
17	10	09100917.d	1.	MID CCV 1500ng/ml		10-Sep-09, 26:2
18	105	09100918.d	1.	P0903083-005 front 1.0ml		10-Sep-09, 26:4
19	106	09100919.d	1.	P0903083-006 front 1.0ml		10-Sep-09, 26:5
20	11	09100920.d	1.	ACN blank		10-Sep-09, 27:0
21	11	09100921.d	1.	ACN blank		10-Sep-09, 27:1
22	10	09100922.d	1.	MID CCV 1500ng/ml		10-Sep-09, 27:2
23	105	09100923.d	1.	P0903083-005 front 1.0ml		10-Sep-09, 27:3
24	106	09100924.d	1.	P0903083-006 front 1.0ml		10-Sep-09, 27:5
25	107	09100925.d	1.	P0903085-001 back 1.0ml		10-Sep-09, 28:0
26	108	09100926.d	1.	P0903085-002 back 1.0ml		10-Sep-09, 28:1
27	109	09100927.d	1.	P0903085-003 back 1.0ml		10-Sep-09, 28:2
28	110	09100928.d	1.	P0903085-004 back 1.0ml		10-Sep-09, 28:4
29	111	09100929.d	1.	P0903085-005 back 1.0ml		10-Sep-09, 28:5
30	112	09100930.d	1.	P0903085-006 back 1.0ml		10-Sep-09, 29:0
31	113	09100931.d	1.	P0903085-001 front 1.0ml		10-Sep-09, 29:1
32	114	09100932.d	1.	P0903085-002 front 1.0ml		11-Sep-09, 19:5
33	10	09100933.d	1.	1500ng/ml TO-11A S21-09090903		11-Sep-09, 20:0
34	10	09100934.d	1.	1500ng/ml TO-11A S21-09090903		11-Sep-09, 20:1
35	11	09100935.d	1.	ACN blank lot CY331		11-Sep-09, 20:3
36	115	09100936.d	1.	MB-2 front 1.0ml lot 5855/5994		11-Sep-09, 20:4
37	116	09100937.d	1.	MB-2 back 1.0ml lot 5855/5994		11-Sep-09, 20:5
38	117	09100938.d	1.	P0903085-003 front 1.0ml		11-Sep-09, 21:0
39	118	09100939.d	1.	P0903085-004 front 1.0ml		11-Sep-09, 21:1
40	119	09100940.d	1.	P0903085-005 front 1.0ml		11-Sep-09, 21:3
41	120	09100941.d	1.	P0903085-006 front 1.0ml		11-Sep-09, 21:4
42	121	09100942.d	1.	P0903086-001 back 1.0ml		11-Sep-09, 21:5
43	122	09100943.d	1.	P0903086-002 back 1.0ml		11-Sep-09, 22:0
44	123	09100944.d	1.	P0903086-003 back 1.0ml		11-Sep-09, 22:1
45	124	09100945.d	1.	P0903086-004 back 1.0ml		11-Sep-09, 22:3
46	125	09100946.d	1.	P0903086-005 back 1.0ml		11-Sep-09, 22:4
47	120	09100947.d	1.	P0903085-006 front 1.0ml		11-Sep-09, 22:5
48	10	09100948.d	1.	MID CCV 1500ng/ml		11-Sep-09, 23:0
49	10	09100949.d	1.	MID CCV 1500ng/ml		11-Sep-09, 23:1
50	126	09100950.d	1.	P0903086-001 front 1.0ml		11-Sep-09, 23:3
51	127	09100951.d	1.	P0903086-002 front 1.0ml		11-Sep-09, 23:4
52	128	09100952.d	1.	P0903086-003 front 1.0ml		11-Sep-09, 23:5
53	129	09100953.d	1.	P0903086-004 front 1.0ml		11-Sep-09, 12:0
54	130	09100954.d	1.	P0903086-005 front 1.0ml		11-Sep-09, 12:1
55	11	09100955.d	1.	acn blank		11-Sep-09, 12:3
56	10	09100956.d	1.	1500ng/ml TO-11A S21-09090903		11-Sep-09, 12:4
57	11	09100957.d	1.	ACN blank lot CY331		11-Sep-09, 12:5

Injection Log

Directory: j:\lc02\data\to11a\2009_09\10

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
58	131	09100958.d	1.	MB-3 front 1.0ml lot 5855/5994		11-Sep-09, 25:0
59	132	09100959.d	1.	MB-3 back 1.0ml lot 5855/5994		11-Sep-09, 25:1
60	133	09100960.d	1.	P0903011-001 back 1.0ml		11-Sep-09, 25:2
61	134	09100961.d	1.	P0903011-002 back 1.0ml		11-Sep-09, 25:4
62	135	09100962.d	1.	P0903011-003 back 1.0ml		11-Sep-09, 25:5
63	136	09100963.d	1.	P0903011-004 back 1.0ml		11-Sep-09, 26:0
64	137	09100964.d	1.	P0903011-005 back 1.0ml		11-Sep-09, 26:1
65	138	09100965.d	1.	P0903011-006 back 1.0ml		11-Sep-09, 26:2
66	139	09100966.d	1.	P0903011-007 back 1.0ml		11-Sep-09, 26:4
67	140	09100967.d	1.	P0903011-008 back 1.0ml		11-Sep-09, 26:5
68	141	09100968.d	1.	P0903011-009 back 1.0ml		11-Sep-09, 27:0
69	142	09100969.d	1.	P0903011-010 back 1.0ml		11-Sep-09, 27:1
70	10	09100970.d	1.	MID CCV 1500ng/ml		11-Sep-09, 27:2
71	143	09100971.d	1.	P0903011-011 back 1.0ml		11-Sep-09, 27:4
72	144	09100972.d	1.	P0903011-012 back 1.0ml		11-Sep-09, 27:5
73	9	09100973.d	1.	P0903086-002 front 10x dil		11-Sep-09, 28:0
74	8	09100974.d	1.	P0903086-003 front 10x dil		11-Sep-09, 28:1
75	7	09100975.d	1.	P0903086-004 front 10x dil		11-Sep-09, 28:2
76	10	09100976.d	1.	1500ng/ml end std		11-Sep-09, 28:3

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	7	09140901.d	1.	prime		14-Sep-09, 21:0
2	10	09140902.d	1.	1500ng/ml TO-11A S21-09090903		14-Sep-09, 21:1
3	10	09140903.d	1.	1500ng/ml TO-11A S21-09090903		14-Sep-09, 21:2
4	9	09140904.d	1.	ACN blank lot CY331		14-Sep-09, 21:4
5	101	09140905.d	1.	MB-4 front 1.0ml lot 5855/5994		14-Sep-09, 21:5
6	102	09140906.d	1.	MB-4 back 1.0ml lot 5855/5994		14-Sep-09, 22:0
7	103	09140907.d	1.	P0903011-001 front 1.0ml		14-Sep-09, 22:2
8	104	09140908.d	1.	P0903011-002 front 1.0ml		14-Sep-09, 22:3
9	105	09140909.d	1.	P0903011-003 front 1.0ml		14-Sep-09, 22:4
10	106	09140910.d	1.	P0903011-004 front 1.0ml		14-Sep-09, 22:5
11	107	09140911.d	1.	P0903011-005 front 1.0ml		14-Sep-09, 23:0
12	108	09140912.d	1.	P0903011-006 front 1.0ml		14-Sep-09, 23:2
13	109	09140913.d	1.	P0903011-007 front 1.0ml		14-Sep-09, 23:3
14	110	09140914.d	1.	P0903011-008 front 1.0ml		14-Sep-09, 23:4
15	111	09140915.d	1.	P0903011-009 front 1.0ml		14-Sep-09, 23:5
16	112	09140916.d	1.	P0903011-010 front 1.0ml		14-Sep-09, 12:0
17	9	09140917.d	1.	acn blank		14-Sep-09, 12:2
18	10	09140918.d	1.	MID CCV 1500ng/ml		14-Sep-09, 12:3
19	113	09140919.d	1.	P0903011-011 front 1.0ml		14-Sep-09, 12:4
20	114	09140920.d	1.	P0903011-012 front 1.0ml		14-Sep-09, 12:5
21	115	09140921.d	1.	P0902946-007 front Rerun		14-Sep-09, 25:0
22	116	09140922.d	1.	P0902946-008 front Rerun		14-Sep-09, 25:2
23	117	09140923.d	1.	P0902946-009 front Rerun		14-Sep-09, 25:3
24	118	09140924.d	1.	P0902946-010 front Rerun		14-Sep-09, 25:4
25	119	09140925.d	1.	P0902946-014 front Rerun		14-Sep-09, 25:5
26	120	09140926.d	1.	P0903011-001 front 10x dil		14-Sep-09, 26:0
27	121	09140927.d	1.	P0903011-002 front 10x dil		14-Sep-09, 26:4
28	123	09140928.d	1.	P0903011-004 front 10x dil		14-Sep-09, 26:5
29	125	09140929.d	1.	P0903011-005 front 10x dil		14-Sep-09, 27:0
30	10	09140930.d	1.	1500ng/ml TO-11A S21-09090903		14-Sep-09, 27:1
31	9	09140931.d	1.	ACN blank Lot CY331		14-Sep-09, 27:2
32	101	09140932.d	1.	MB-1 front 1.0ml lot 5855/5994		14-Sep-09, 27:4
33	102	09140933.d	1.	MB-1 back 1.0ml lot 5855/5994		14-Sep-09, 27:5
34	103	09140934.d	1.	P0903082-001 back 1.0ml		14-Sep-09, 28:0
35	104	09140935.d	1.	P0903082-002 back 1.0ml		14-Sep-09, 28:1
36	105	09140936.d	1.	P0903082-003 back 1.0ml		14-Sep-09, 28:2
37	106	09140937.d	1.	P0903082-004 back 1.0ml		14-Sep-09, 28:4
38	107	09140938.d	1.	P0903082-005 back 1.0ml		14-Sep-09, 28:5
39	108	09140939.d	1.	P0903082-006 back 1.0ml		14-Sep-09, 29:0
40	109	09140940.d	1.	P0903082-001 front 1.0ml		14-Sep-09, 29:1
41	110	09140941.d	1.	P0903082-002 front 1.0ml		14-Sep-09, 29:2
42	111	09140942.d	1.	P0903082-003 front 1.0ml		14-Sep-09, 29:4
43	112	09140943.d	1.	P0903082-004 front 1.0ml		14-Sep-09, 29:5
44	10	09140944.d	1.	MID CCV 1500ng/ml		14-Sep-09, 30:0
45	113	09140945.d	1.	P0903082-005 front 1.0ml		14-Sep-09, 30:1
46	114	09140946.d	1.	P0903082-006 front 1.0ml		14-Sep-09, 30:2
47	115	09140947.d	1.	P0903087-001 back 1.0ml		14-Sep-09, 30:4
48	116	09140948.d	1.	P0903087-002 back 1.0ml		14-Sep-09, 30:5
49	117	09140949.d	1.	P0903087-003 back 1.0ml		14-Sep-09, 31:0
50	118	09140950.d	1.	P0903087-004 back 1.0ml		14-Sep-09, 31:1
51	119	09140951.d	1.	P0903087-005 back 1.0ml		14-Sep-09, 31:2
52	120	09140952.d	1.	P0903087-006 back 1.0ml		14-Sep-09, 31:4
53	121	09140953.d	1.	P0903087-007 back 1.0ml		14-Sep-09, 31:5
54	122	09140954.d	1.	P0903087-008 back 1.0ml		14-Sep-09, 32:0
55	10	09140955.d	1.	1500ng/ml TO-11A S21-09090903		14-Sep-09, 32:1
56	9	09140956.d	1.	ACN blank lot CY331		14-Sep-09, 32:2
57	123	09140957.d	1.	MB-2 front 1.0ml lot 5855/5994		14-Sep-09, 32:4

Injection Log

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
58	124	09140958.d	1.	MB-2 back 1.0ml lot 5855/5994		14-Sep-09, 32:5
59	125	09140959.d	1.	P0903087-009 back 1.0ml		14-Sep-09, 33:0
60	126	09140960.d	1.	P0903087-010 back 1.0ml		14-Sep-09, 33:1
61	127	09140961.d	1.	P0903087-011 back 1.0ml		14-Sep-09, 33:2
62	128	09140962.d	1.	P0903087-012 back 1.0ml		14-Sep-09, 33:4
63	129	09140963.d	1.	P0903087-001 front 1.0ml		14-Sep-09, 33:5
64	130	09140964.d	1.	P0903087-002 front 1.0ml		14-Sep-09, 34:0
65	131	09140965.d	1.	P0903087-003 front 1.0ml		14-Sep-09, 34:1
66	132	09140966.d	1.	P0903087-004 front 1.0ml		14-Sep-09, 34:2
67	133	09140967.d	1.	P0903087-005 front 1.0ml		14-Sep-09, 34:4
68	134	09140968.d	1.	P0903087-006 front 1.0ml		14-Sep-09, 34:5
69	10	09140969.d	1.	MID CCV 1500ng/ml		14-Sep-09, 35:0
70	135	09140970.d	1.	P0903087-007 front 1.0ml		14-Sep-09, 35:1
71	136	09140971.d	1.	P0903087-008 front 1.0ml		14-Sep-09, 35:2
72	137	09140972.d	1.	P0903087-009 front 1.0ml		14-Sep-09, 35:4
73	138	09140973.d	1.	P0903087-010 front 1.0ml		14-Sep-09, 35:5
74	139	09140974.d	1.	P0903087-011 front 1.0ml		15-Sep-09, 12:0
75	140	09140975.d	1.	P0903087-012 front 1.0ml		15-Sep-09, 12:1
76	10	09140976.d	1.	1500ng/ml end std		15-Sep-09, 12:2
77		09140977.d	1.	Shut down		