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

LABORATORY REPORT

October 1, 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 September 4, 2009. For your reference, these analyses have been assigned our service request number P0903147.

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 212 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 T104704413-08-TX. 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: P0903147
Project: 16512

CASE NARRATIVE

The samples were received intact under chain of custody on September 4, 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.

Aldehyde Analysis

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

The sample identified as "106306" was received wet.

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: P0903147

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
P0903147-001	106302	9/3/09	00:00
P0903147-002	106303	9/3/09	00:00
P0903147-003	106304	9/3/09	00:00
P0903147-004	106305	9/3/09	00:00
P0903147-005	106306	9/3/09	00:00
P0903147-006	106307	9/3/09	00:00

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 09/03/09

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

PO#03147

TO: Columbia Analytical Lab
Attn: Debra

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	106302	AIR SORBENT TUBE	EPA TO-11 Full List Aldehydes	09/03/09 98.0 L
2	106303			100.9
3	106304			105.7
4	106305			100.9
5	106306			93.5
6	106307			0

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 tminegishi@eheinc.com

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

Relinquished by: _____ of Environmental Health & Engineering, Inc. Date: 09/03/09

Received by: _____ of (company name) CAS Date: 9/4/09 1005

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page ___ of ___ 4

50c

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: P0903147

Project: 16512

Sample(s) received on: 09/04/09 Date opened: 09/04/09 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 5 °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
P0903147-001.01	Silica Gel DNPH Tube					
P0903147-002.01	Silica Gel DNPH Tube					
P0903147-003.01	Silica Gel DNPH Tube					
P0903147-004.01	Silica Gel DNPH Tube					
P0903147-005.01	Silica Gel DNPH Tube					
P0903147-006.01	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)

RESULTS OF ANALYSIS

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **106302**
Client Project ID: **16512**

CAS Project ID: P0903147
CAS Sample ID: P0903147-001

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

Date Collected: 9/3/09
Date Received: 9/4/09
Date Analyzed: 9/16/09
Desorption Volume: 1.0 ml
Volume Sampled: 98 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**4,400**	**45**	1.0	**37**	0.83	
75-07-0	**Acetaldehyde**	**5,500**	**56**	1.0	**31**	0.57	**BT**
123-38-6	**Propionaldehyde**	**290**	**3.0**	1.0	**1.2**	0.43	
4170-30-3	Crotonaldehyde, Total	< 100	ND	1.0	ND	0.36	
123-72-8	**Butyraldehyde**	**310**	**3.1**	1.0	**1.1**	0.35	
100-52-7	**Benzaldehyde**	**660**	**6.8**	1.0	**1.6**	0.24	
590-86-3	**Isovaleraldehyde**	**140**	**1.4**	1.0	**0.41**	0.29	
110-62-3	**Valeraldehyde**	**950**	**9.7**	1.0	**2.8**	0.29	
529-20-4	o-Tolualdehyde	< 100	ND	1.0	ND	0.21	
620-23-5							
104-87-0	m,p-Tolualdehyde	< 200	ND	2.0	ND	0.42	
66-25-1	**n-Hexaldehyde**	**3,700**	**38**	1.0	**9.3**	0.25	
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	1.0	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.

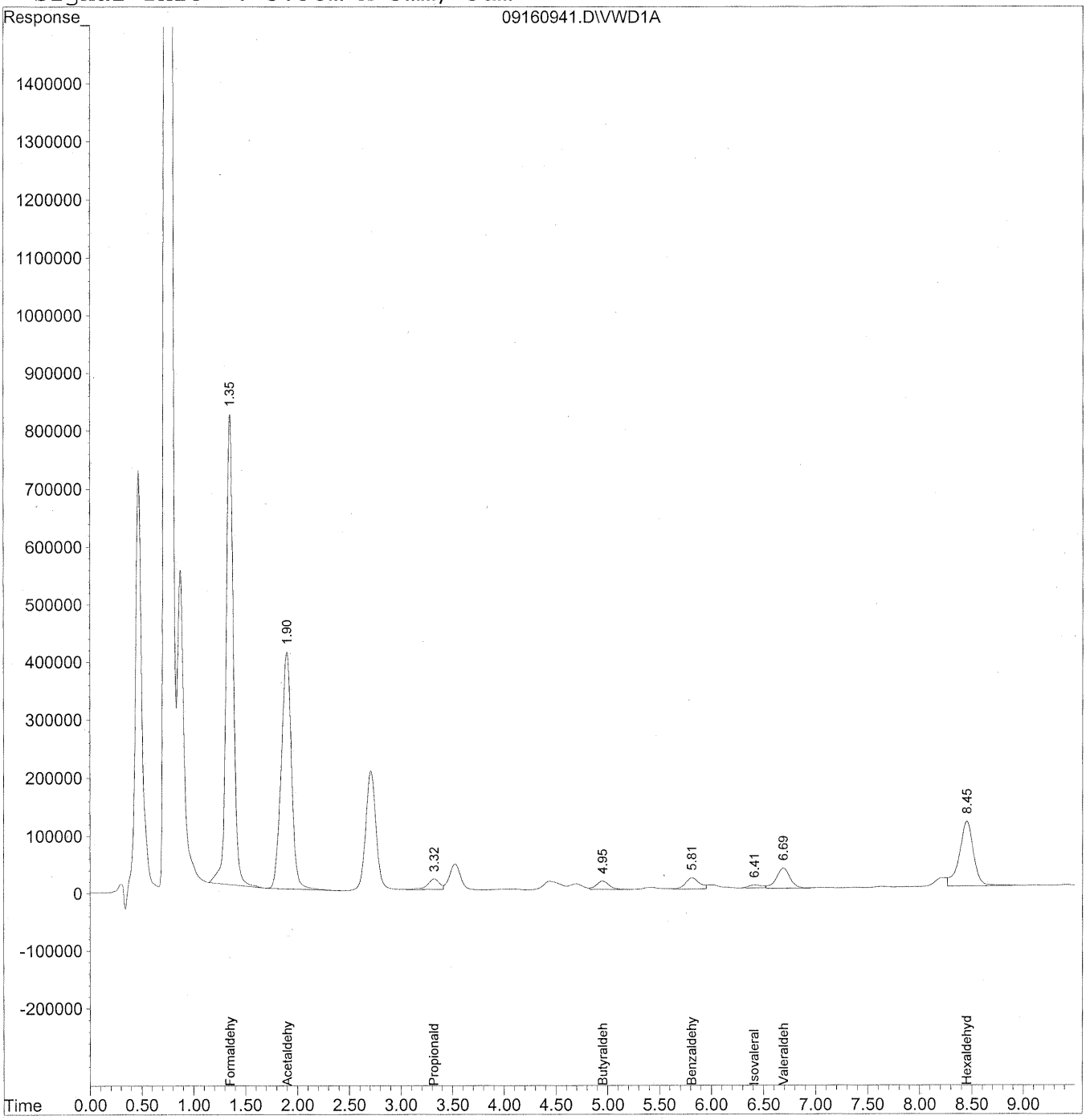
Verified By: Re Date: 9/23/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:34 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



8

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:34 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

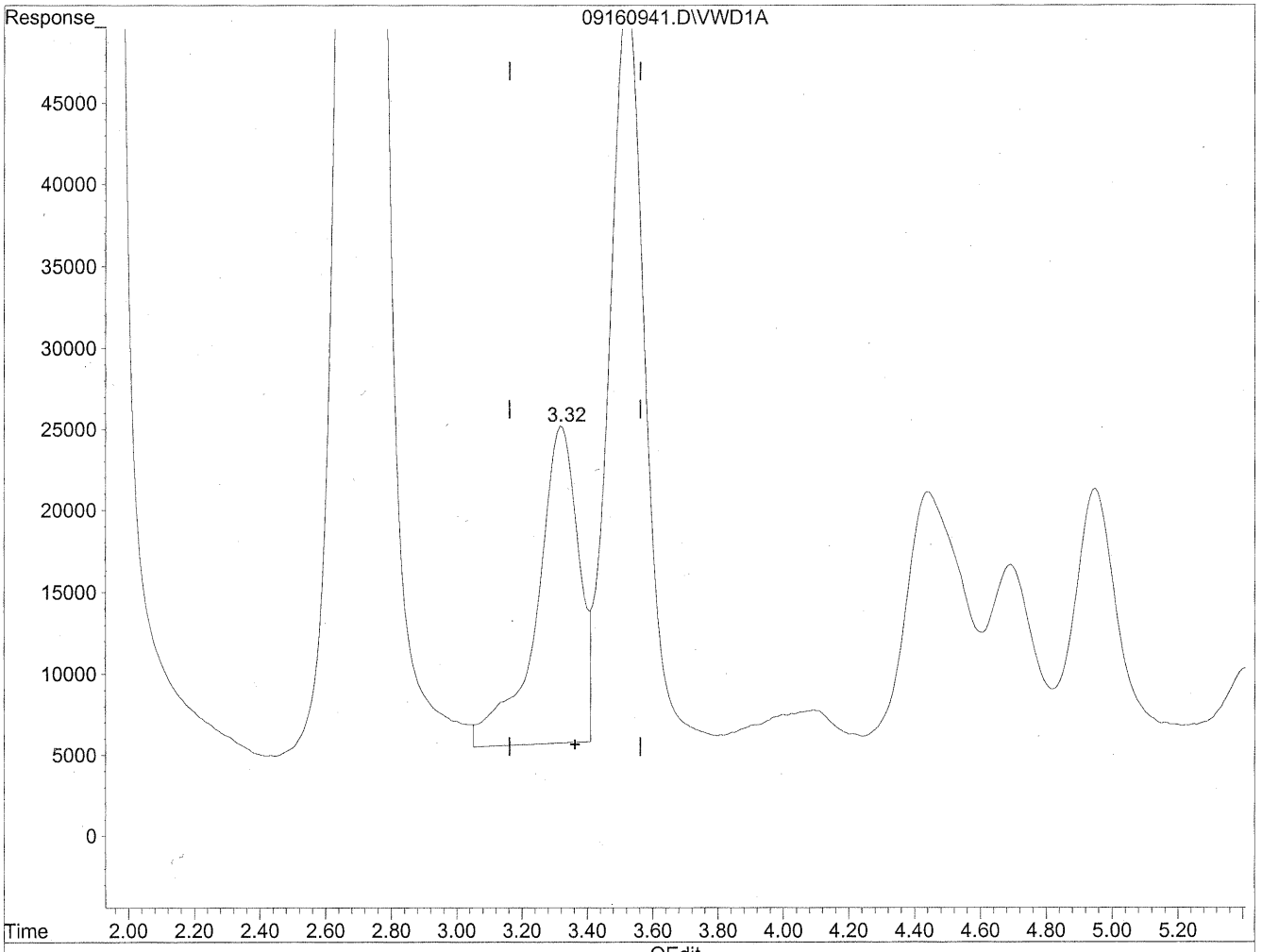
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	39710155	4444.123	ng/ml
2)	Acetaldehyde	1.90	28079377	4319.374	ng/ml
3)	Propionaldehyde	3.32	1507131	289.954	ng/mlm
4)	Crotonaldehyde	0.00	0	N.D.	ng/mld
5)	Butyraldehyde	4.95	1238850	305.680	ng/ml
6)	Benzaldehyde	5.81	1813896	664.826	ng/mlm
7)	Isovaleraldehyde	6.41	488570	141.952	ng/mlm
8)	Valeraldehyde	6.69	3235109	951.603	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	10718046	3620.075	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:33 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.32min 333.033ng/ml

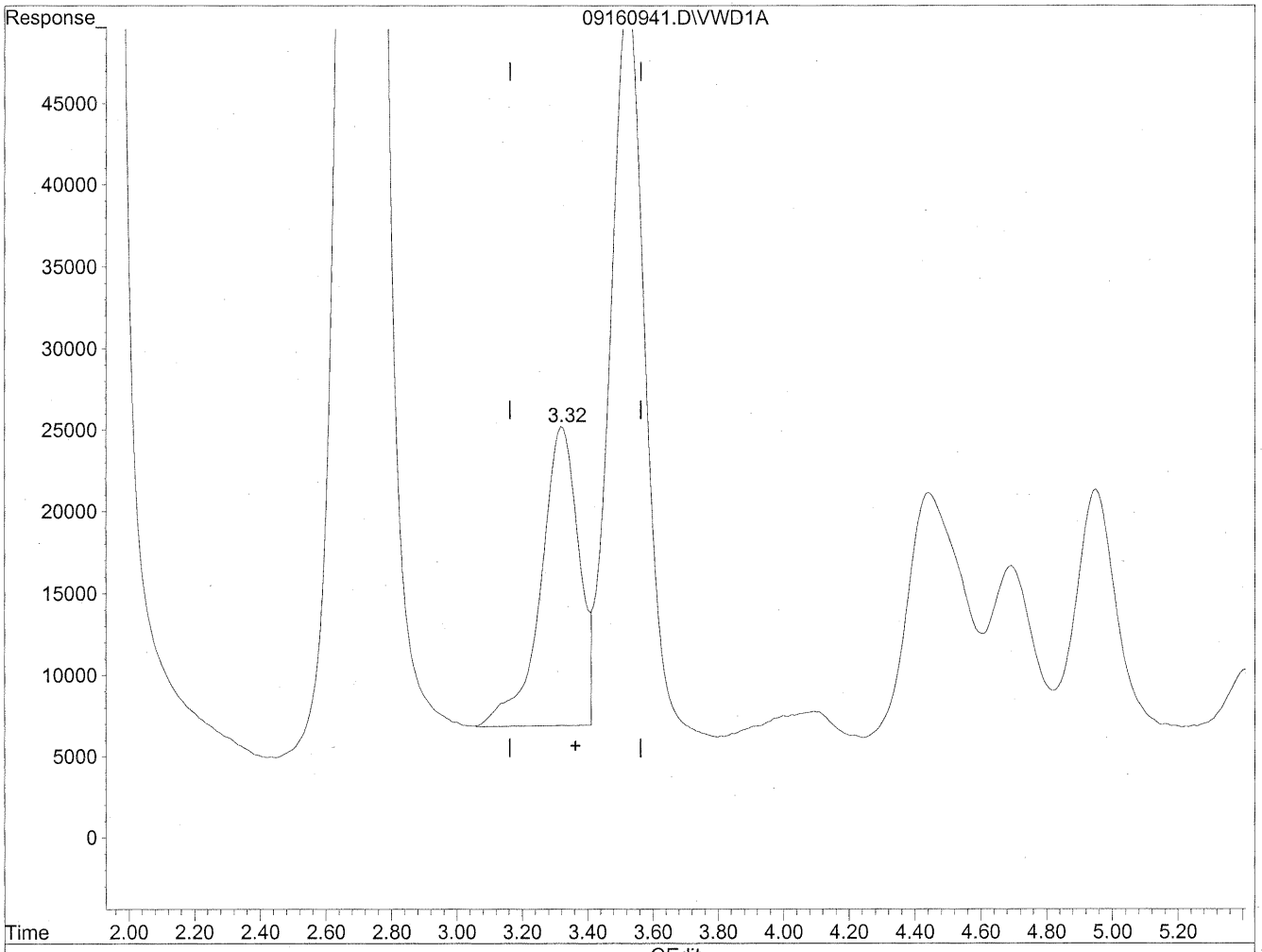
response 1731048

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:33 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.32min 289.954ng/ml m

response 1507131

9/22/09

9/22/09

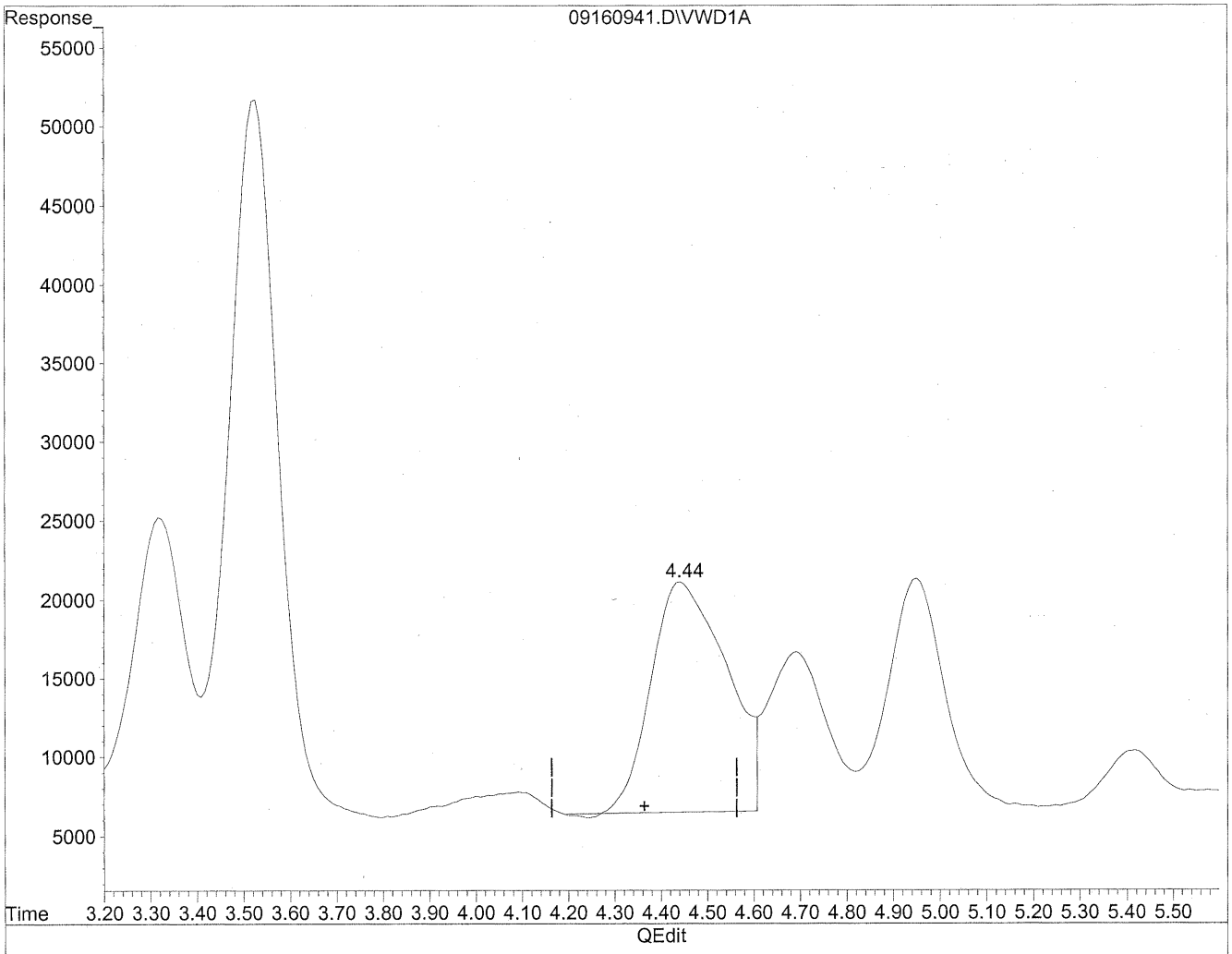
(+) = Expected Retention Time

09160941.D TO110909.M Mon Sep 21 16:33:34 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:33 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

4.44min 405.593ng/ml

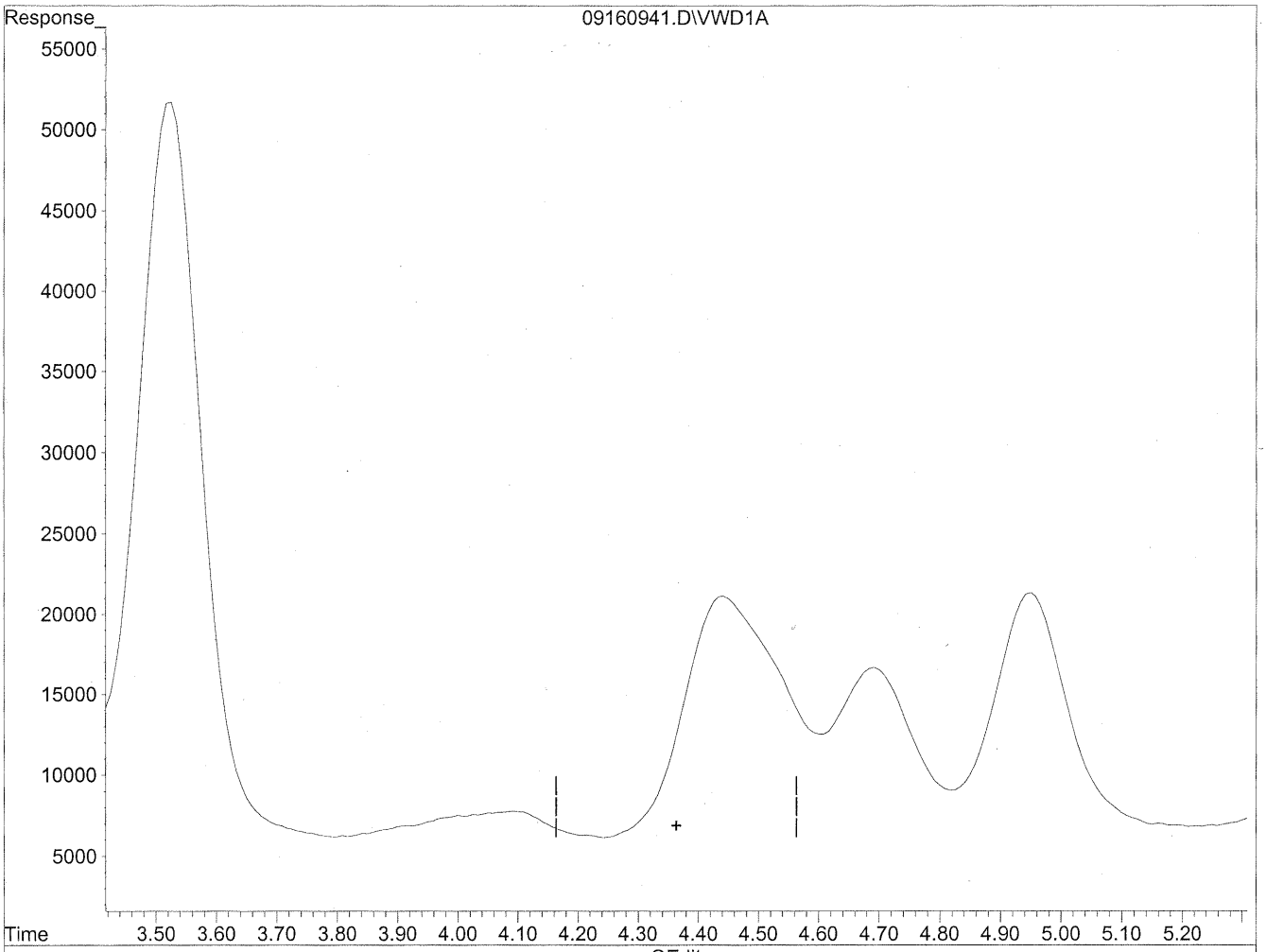
response 1646533

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:33 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

0.00min 0.000ng/ml d

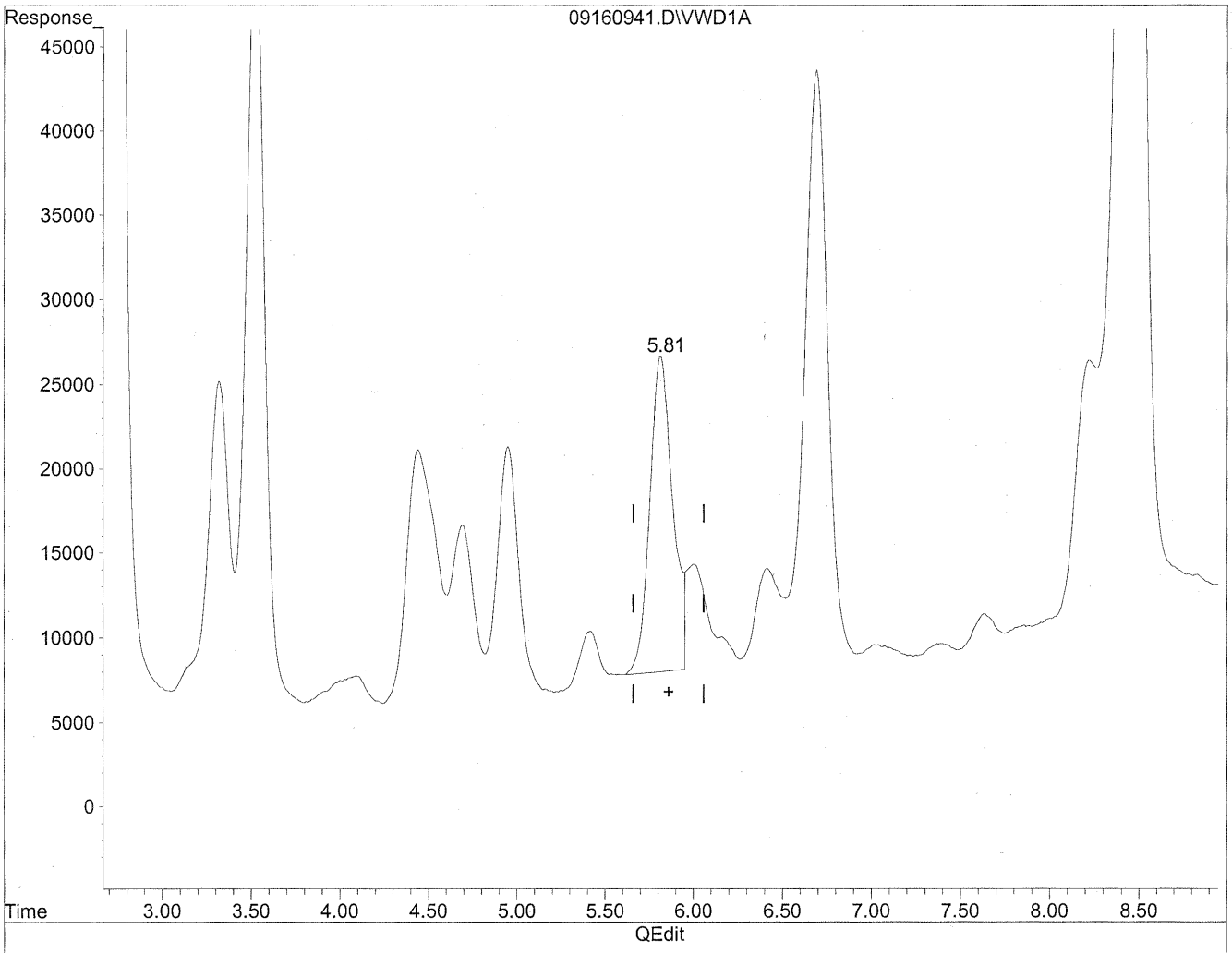
response 0

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:33 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.82min 612.024ng/ml

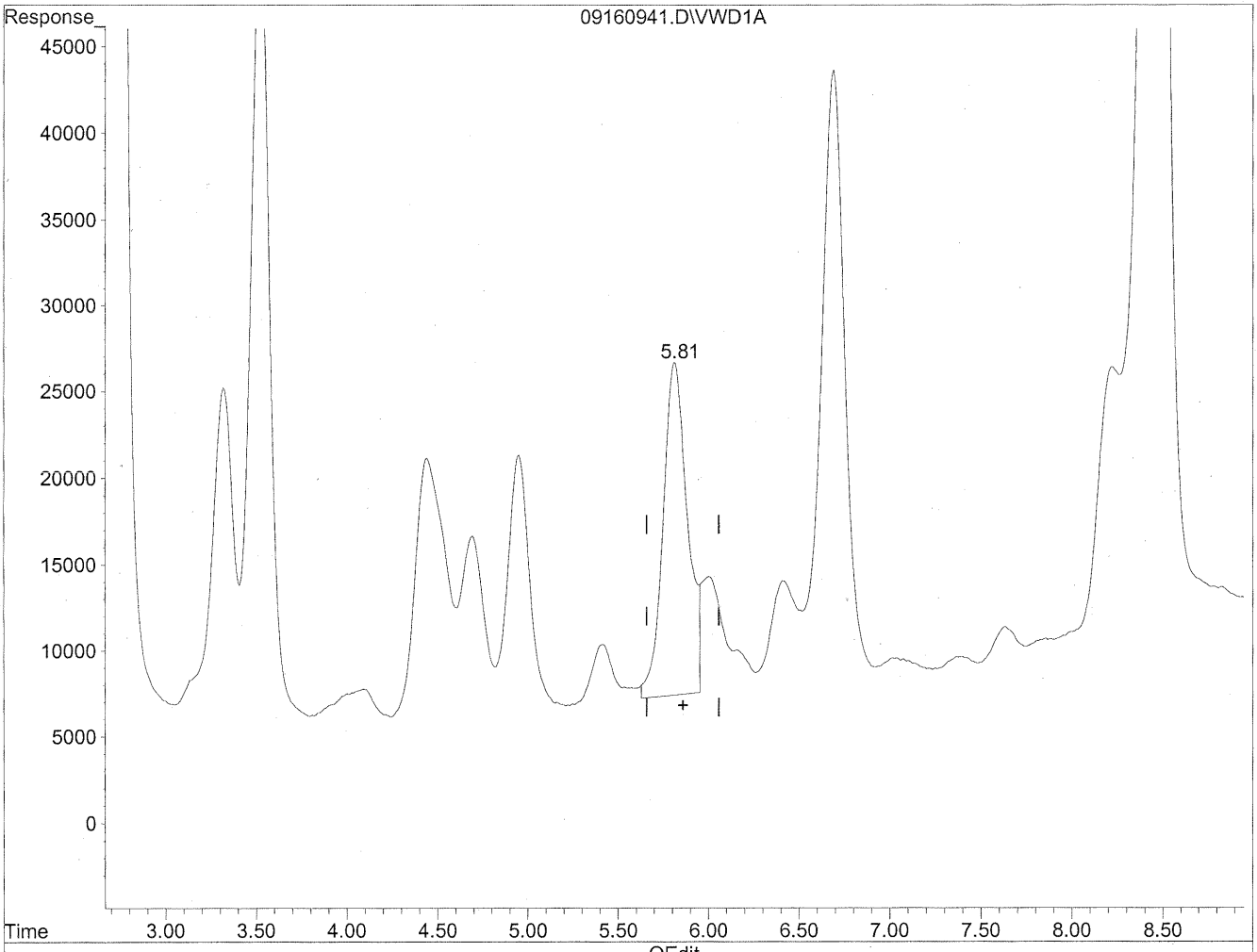
response 1669833

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:33 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(6) Benzaldehyde

5.81min 664.826ng/ml m

response 1813896

HC 9/23/09

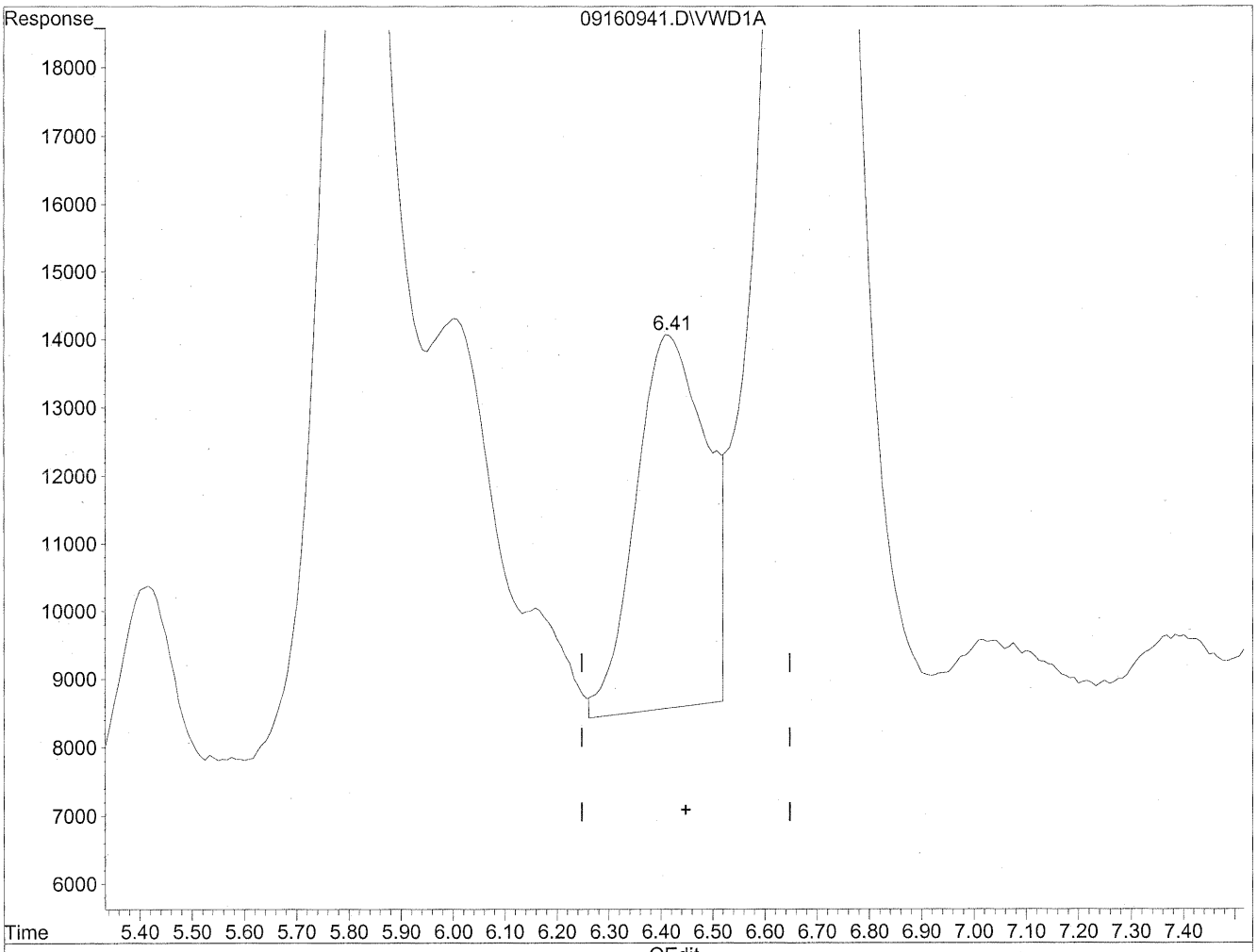
9/24/09 pc

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:33 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(7) Isovaleraldehyde

6.42min 149.329ng/ml

response 513960

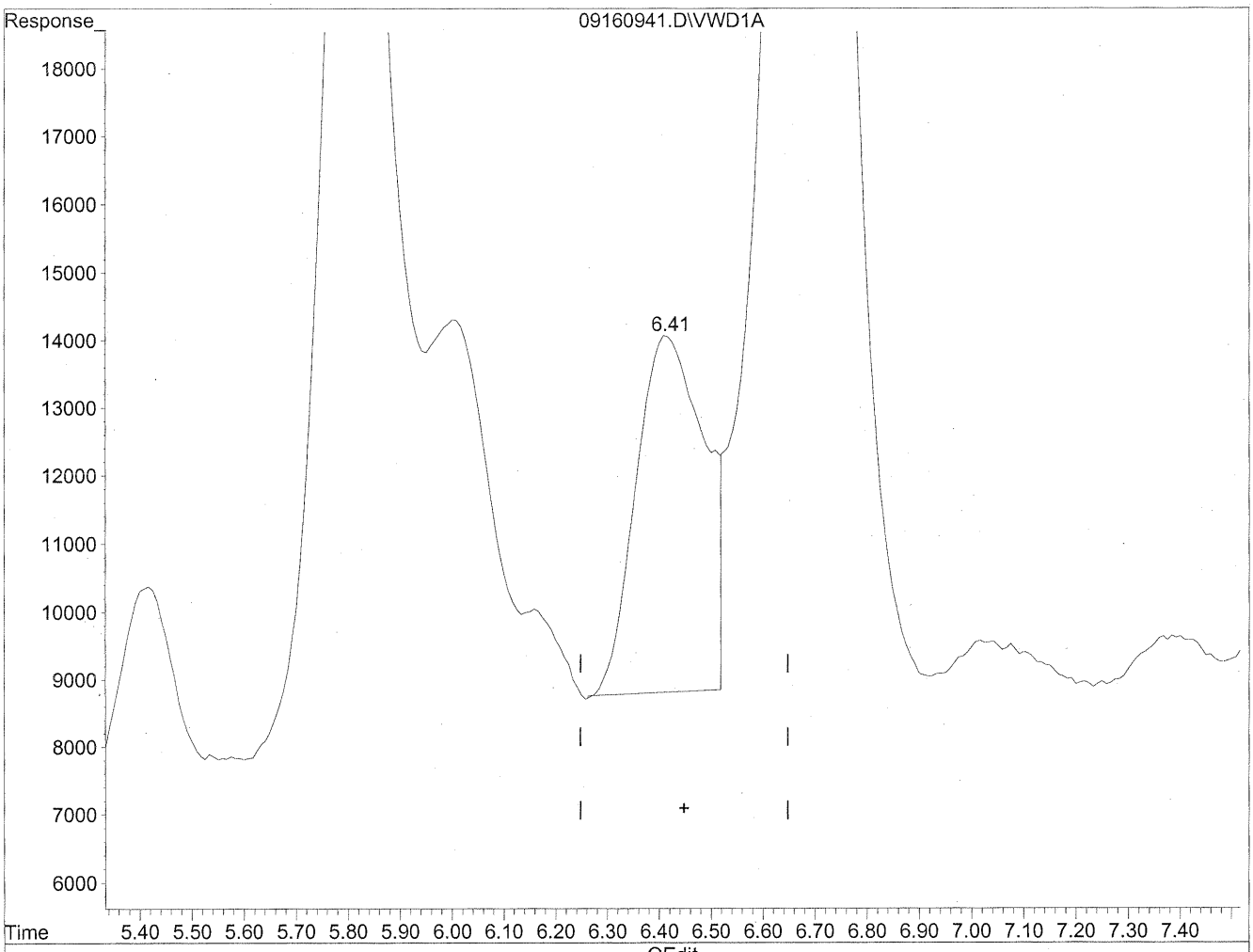
(+) = Expected Retention Time

09160941.D TO110909.M Mon Sep 21 16:34:24 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:33 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(7) Isovaleraldehyde

6.41min 141.952ng/ml m

response 488570

MC 9/22/09

9/22/09 PR

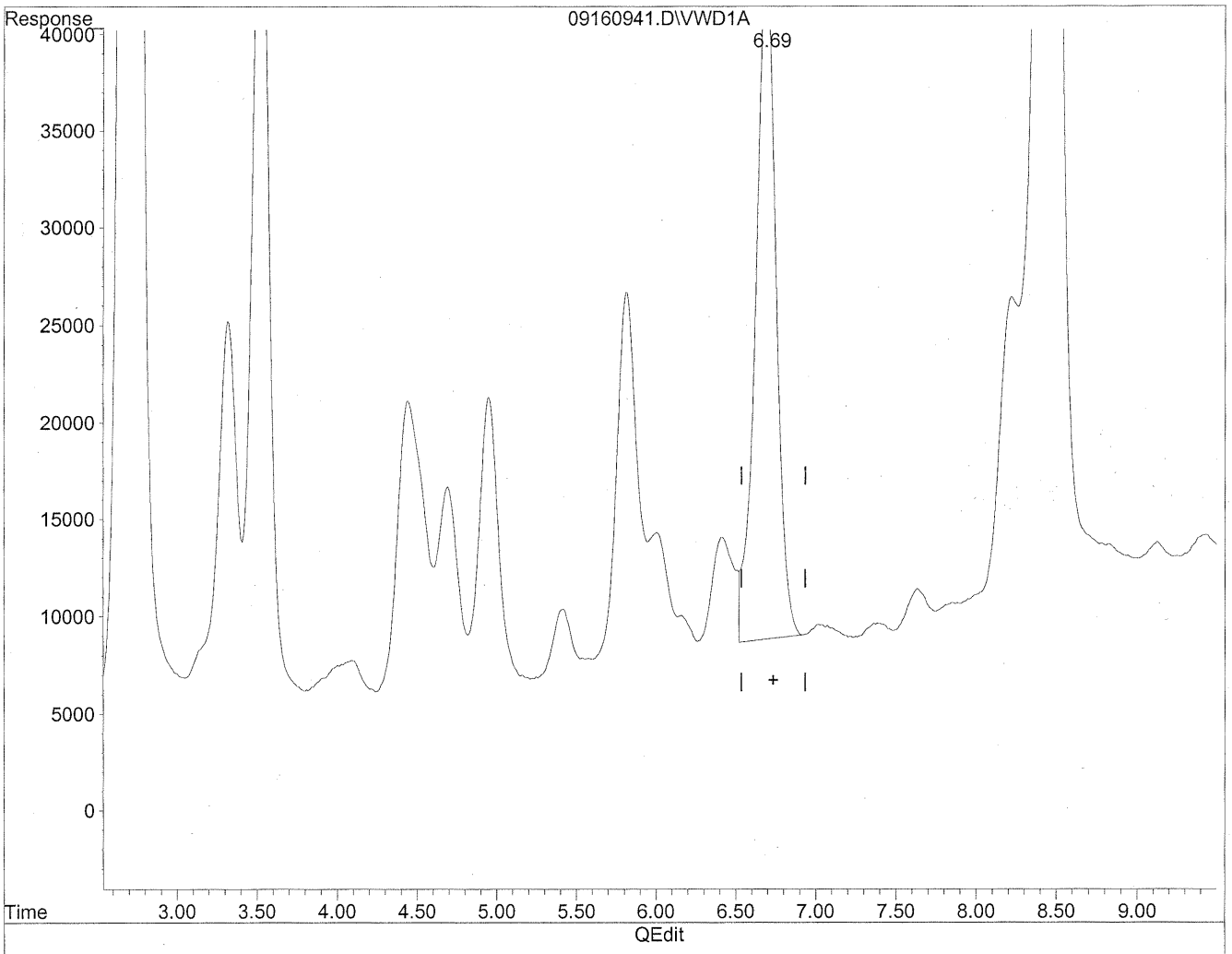
(+) = Expected Retention Time

09160941.D TO110909.M Mon Sep 21 16:34:29 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:33 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(8) Valeraldehyde

6.69min 912.873ng/ml

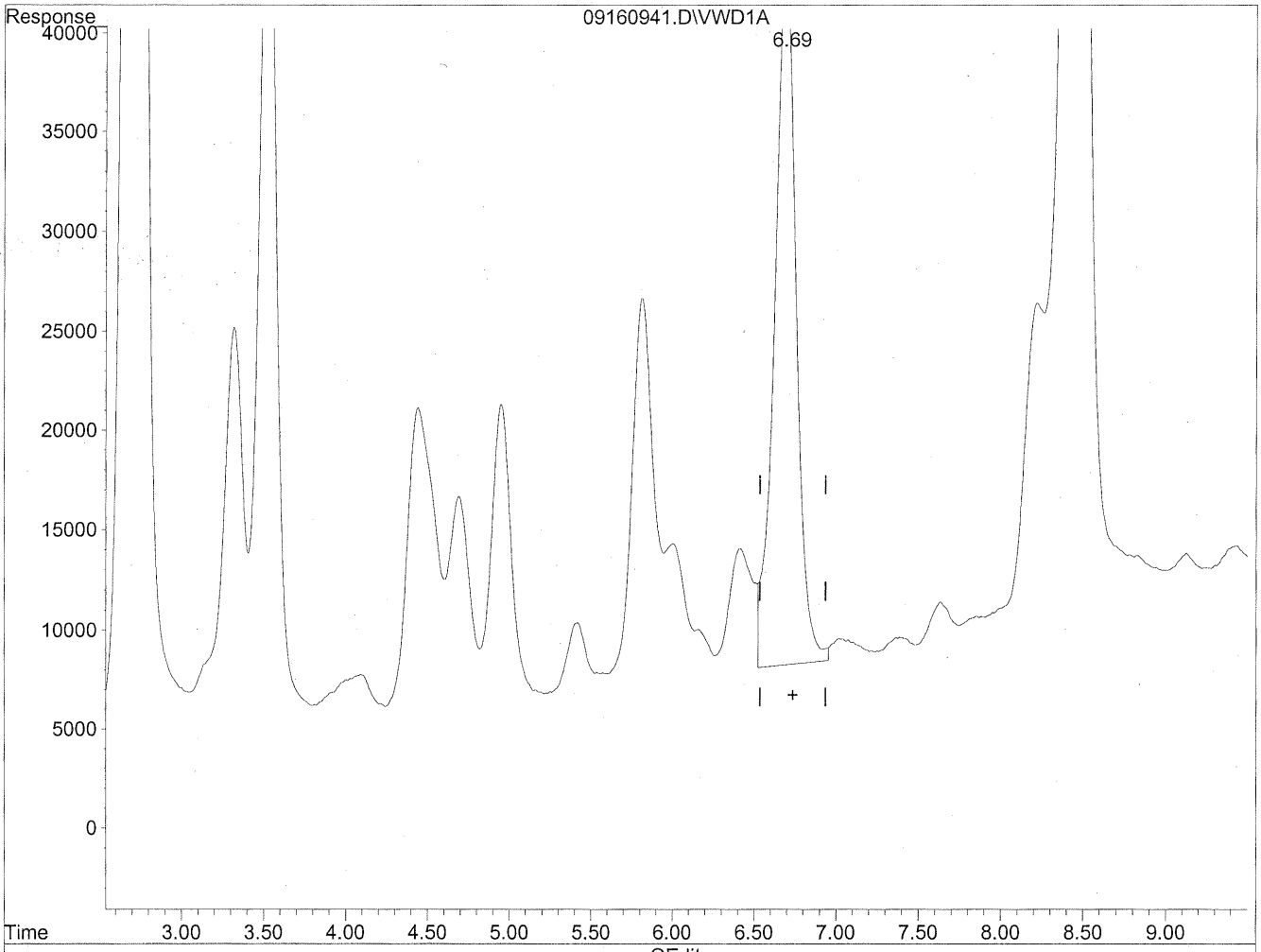
response 3103441

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160941.D Vial: 123
Acq On : 16-Sep-2009, 18:49 Operator: MD
Sample : P0903147-001 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:33 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(8) Valeraldehyde

6.69min 951.603ng/ml m

response 3235109

HC 9/22/09

9/22/09 pc

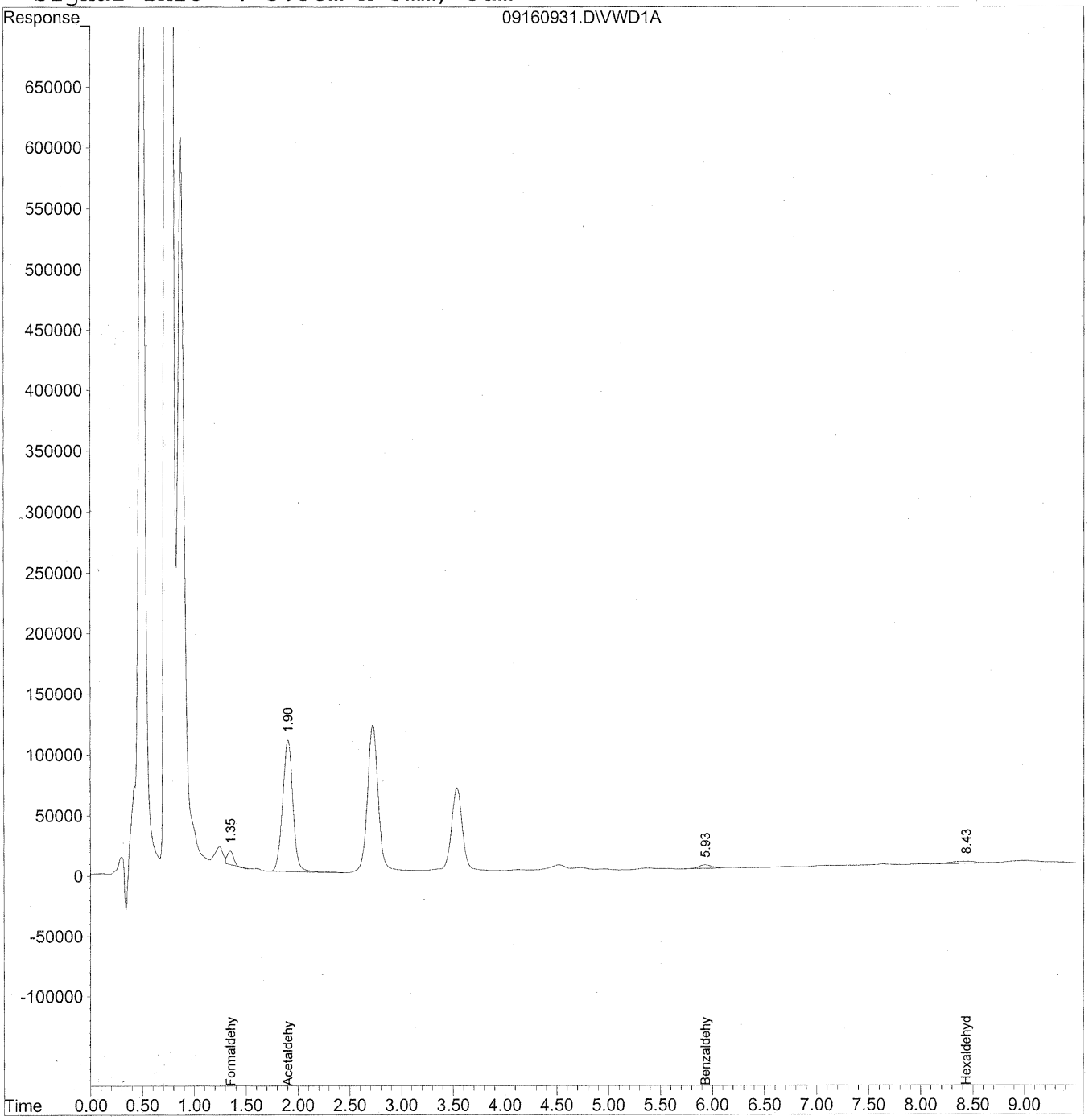
(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160931.D Vial: 115
Acq On : 16-Sep-2009, 16:50 Operator: MD
Sample : P0903147-001 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:27 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



20

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160931.D Vial: 115
Acq On : 16-Sep-2009, 16:50 Operator: MD
Sample : P0903147-001 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:27 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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

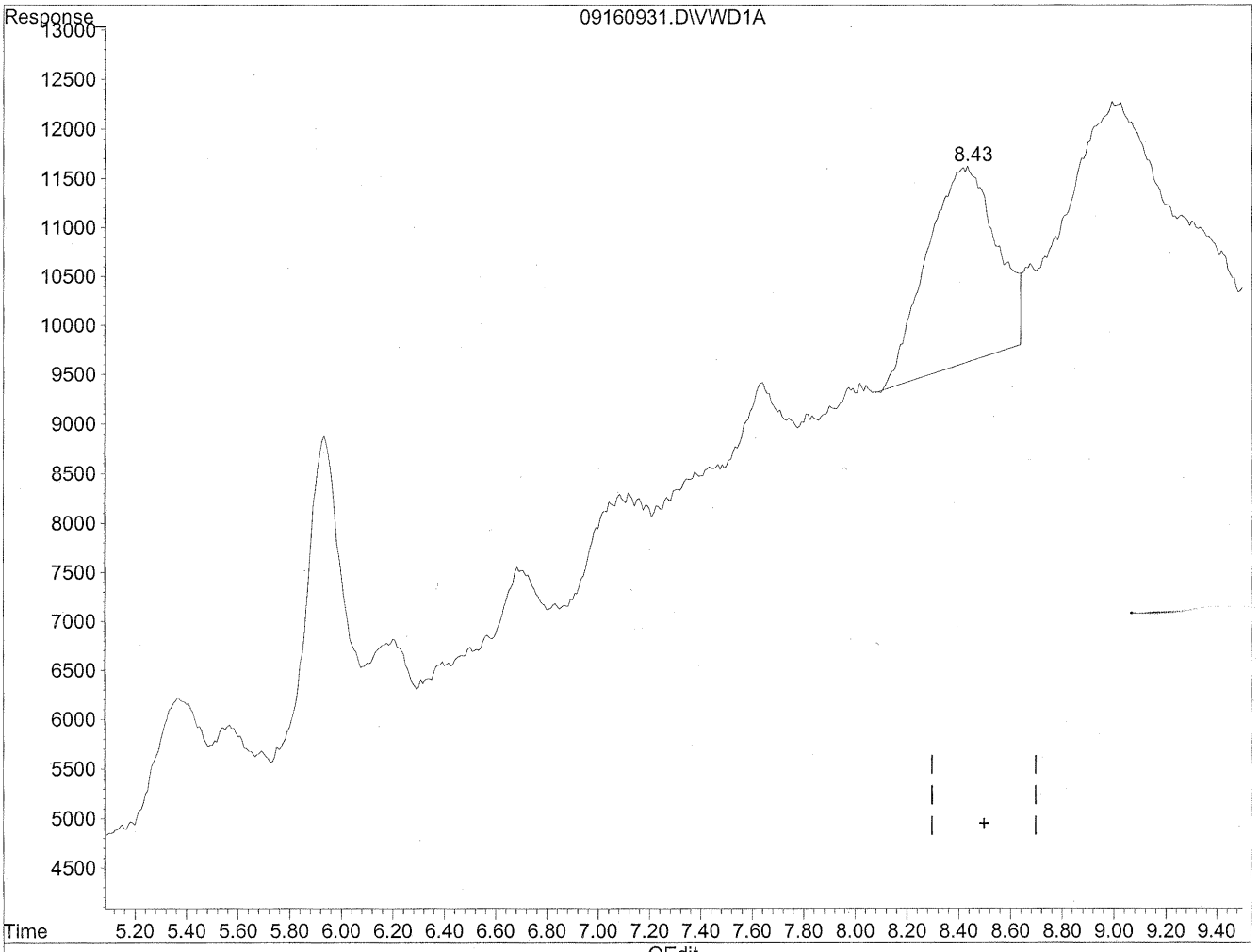
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	460809	51.571	ng/ml
2)	Acetaldehyde	1.91	7479465	1150.546	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	5.94	239754	87.874	ng/ml
7)	Isovaleraldehyde	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	8.43	310320	104.812	ng/mlm
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\16\09160931.D Vial: 115
Acq On : 16-Sep-2009, 16:50 Operator: MD
Sample : P0903147-001 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:26 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.44min 126.017ng/ml

response 373101

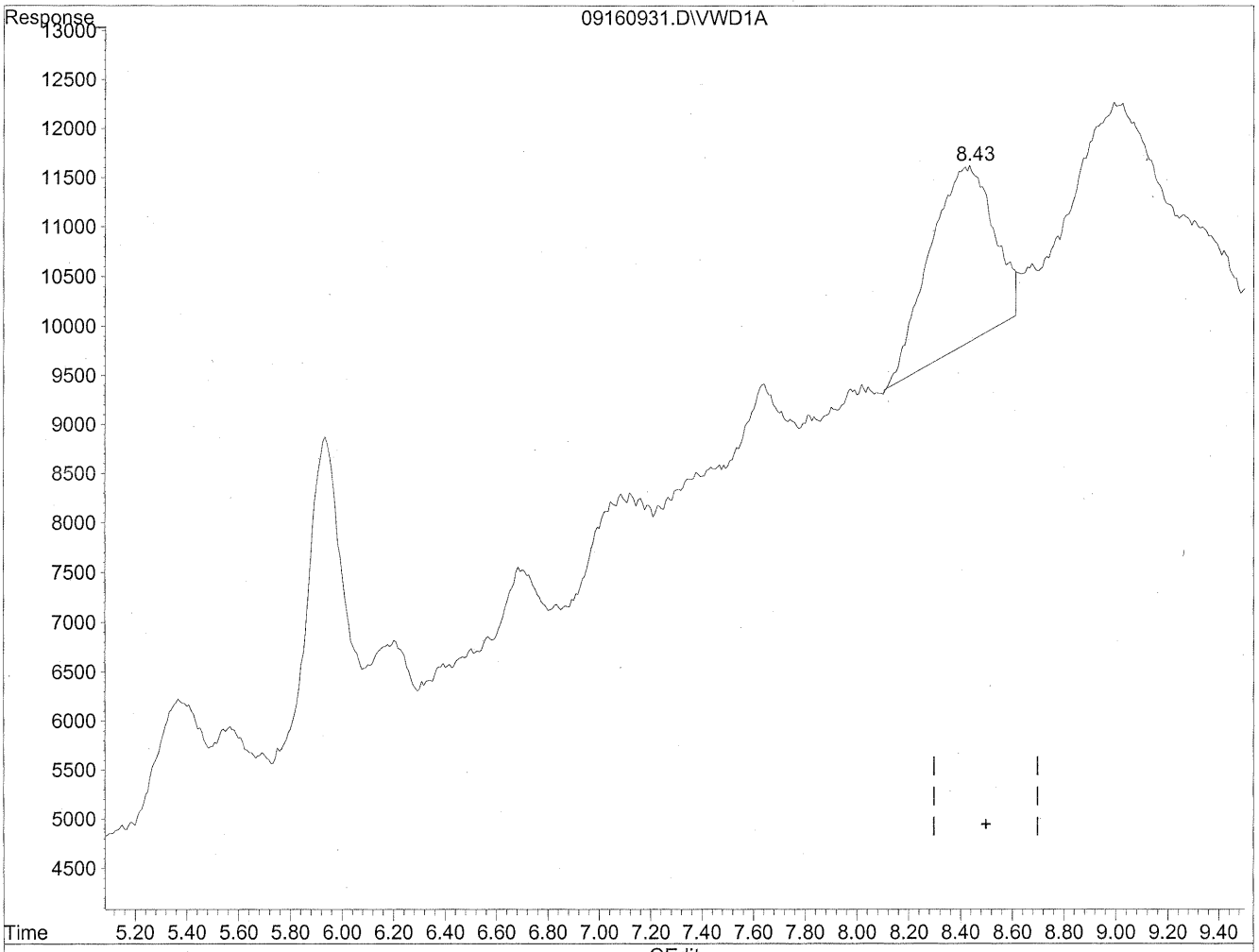
(+) = Expected Retention Time

09160931.D TO110909.M Mon Sep 21 16:27:26 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160931.D Vial: 115
Acq On : 16-Sep-2009, 16:50 Operator: MD
Sample : P0903147-001 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:26 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.43min 104.812ng/ml m

response 310320

9/22/09

9/22/09

(+) = Expected Retention Time

09160931.D TO110909.M Mon Sep 21 16:27:37 2009

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **106303**
Client Project ID: **16512**

CAS Project ID: P0903147
CAS Sample ID: P0903147-002

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

Date Collected: 9/3/09
Date Received: 9/4/09
Date Analyzed: 9/16/09
Desorption Volume: 1.0 ml
Volume Sampled: 100.9 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**4,800**	**47**	0.99	**38**	0.81	
75-07-0	**Acetaldehyde**	**6,500**	**64**	0.99	**36**	0.55	**BT**
123-38-6	**Propionaldehyde**	**360**	**3.5**	0.99	**1.5**	0.42	
4170-30-3	Crotonaldehyde, Total	< 100	ND	0.99	ND	0.35	
123-72-8	**Butyraldehyde**	**330**	**3.3**	0.99	**1.1**	0.34	
100-52-7	**Benzaldehyde**	**730**	**7.2**	0.99	**1.7**	0.23	
590-86-3	**Isovaleraldehyde**	**140**	**1.4**	0.99	**0.39**	0.28	
110-62-3	**Valeraldehyde**	**1,100**	**11**	0.99	**3.1**	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**	**4,100**	**40**	0.99	**9.8**	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.

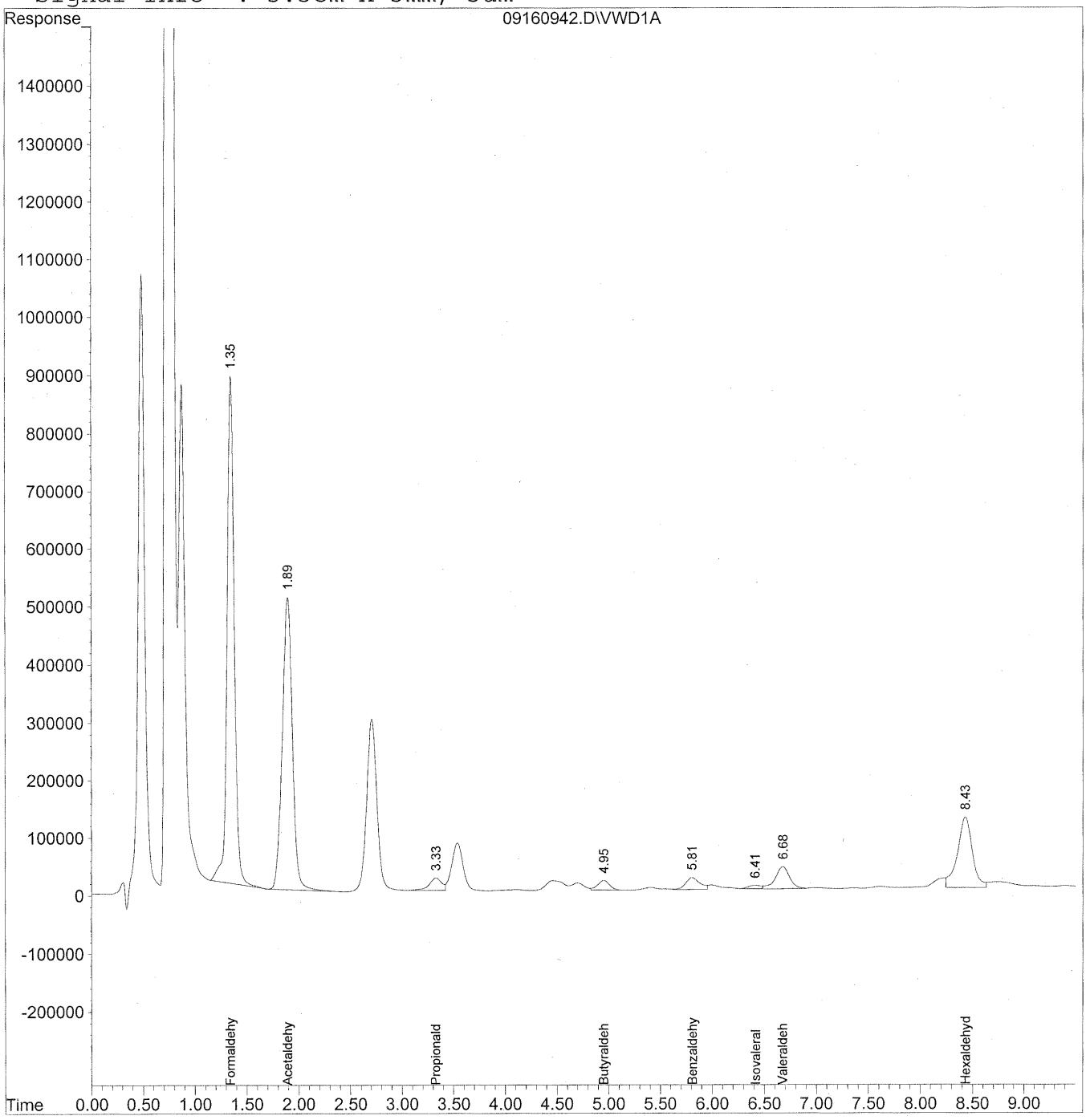
Verified By: Re Date: 9/23/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



25

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

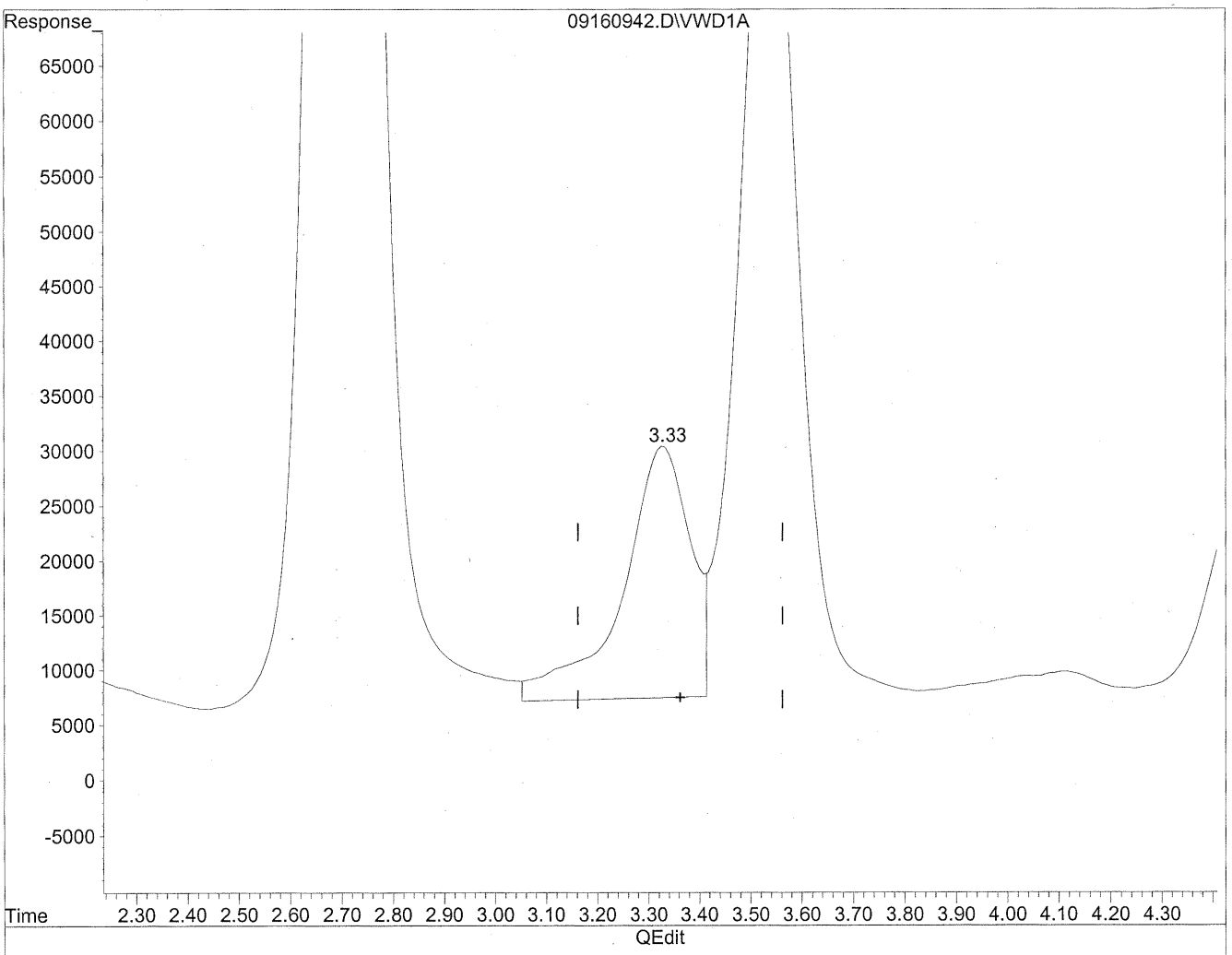
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	42460433	4751.918	ng/ml
2)	Acetaldehyde	1.90	34286640	5274.221	ng/ml
3)	Propionaldehyde	3.33	1850534	356.021	ng/mlm
4)	Crotonaldehyde	0.00	0	N.D.	ng/mld
5)	Butyraldehyde	4.96	1340811	330.838	ng/ml
6)	Benzaldehyde	5.81	1982197	726.511	ng/ml
7)	Isovaleraldehyde	6.41	481486	139.894	ng/mlm
8)	Valeraldehyde	6.68	3684139	1083.685	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	8.43	12036843	4065.506	ng/mlm
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/mld

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:35 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.33min 405.842ng/ml

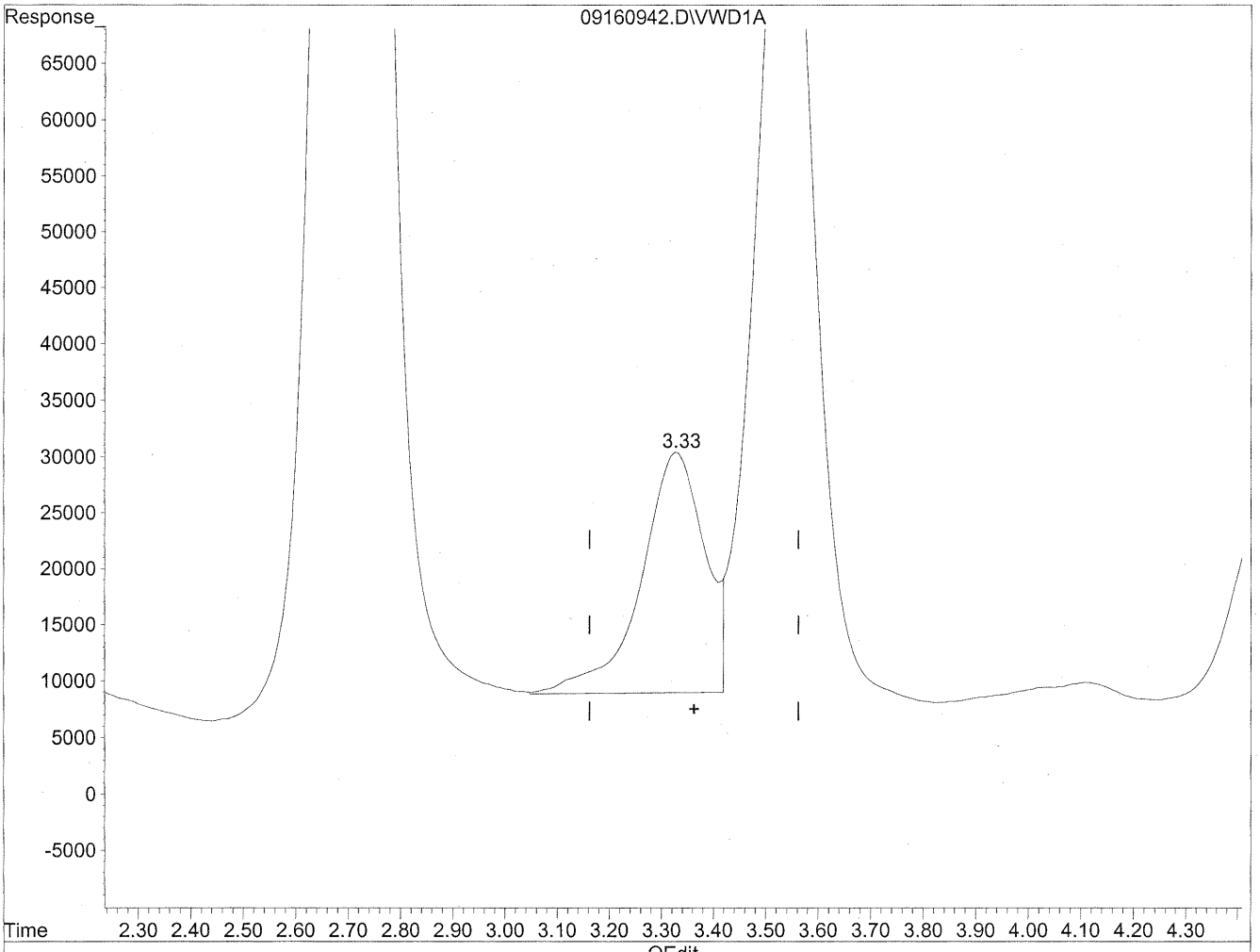
response 2109495

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:35 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.33min 356.021ng/ml m

response 1850534

MW 9/22/09

PJC

HC 9/22/09

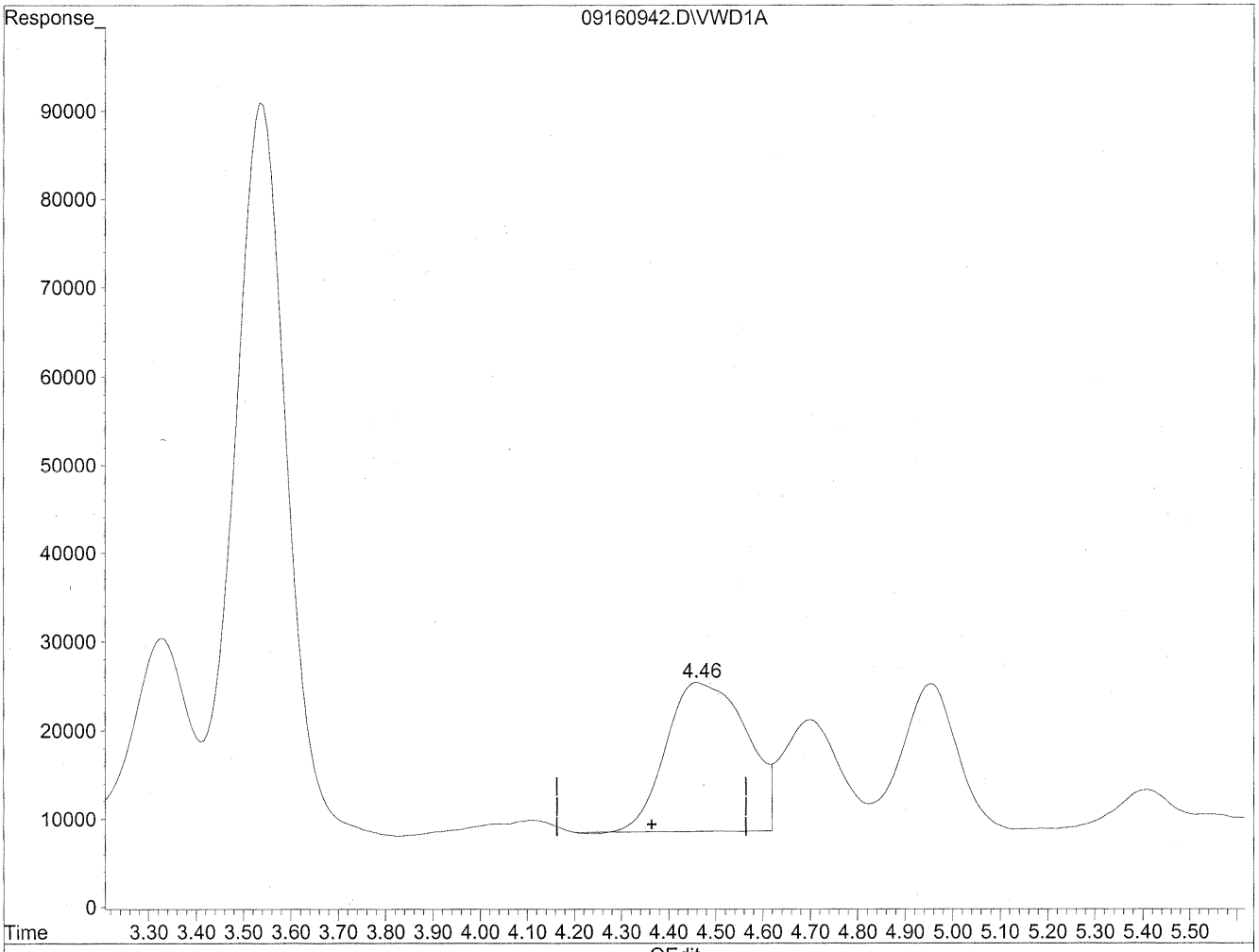
(+) = Expected Retention Time

09160942.D TO110909.M Mon Sep 21 16:35:37 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:35 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

4.46min 490.297ng/ml

response 1990396

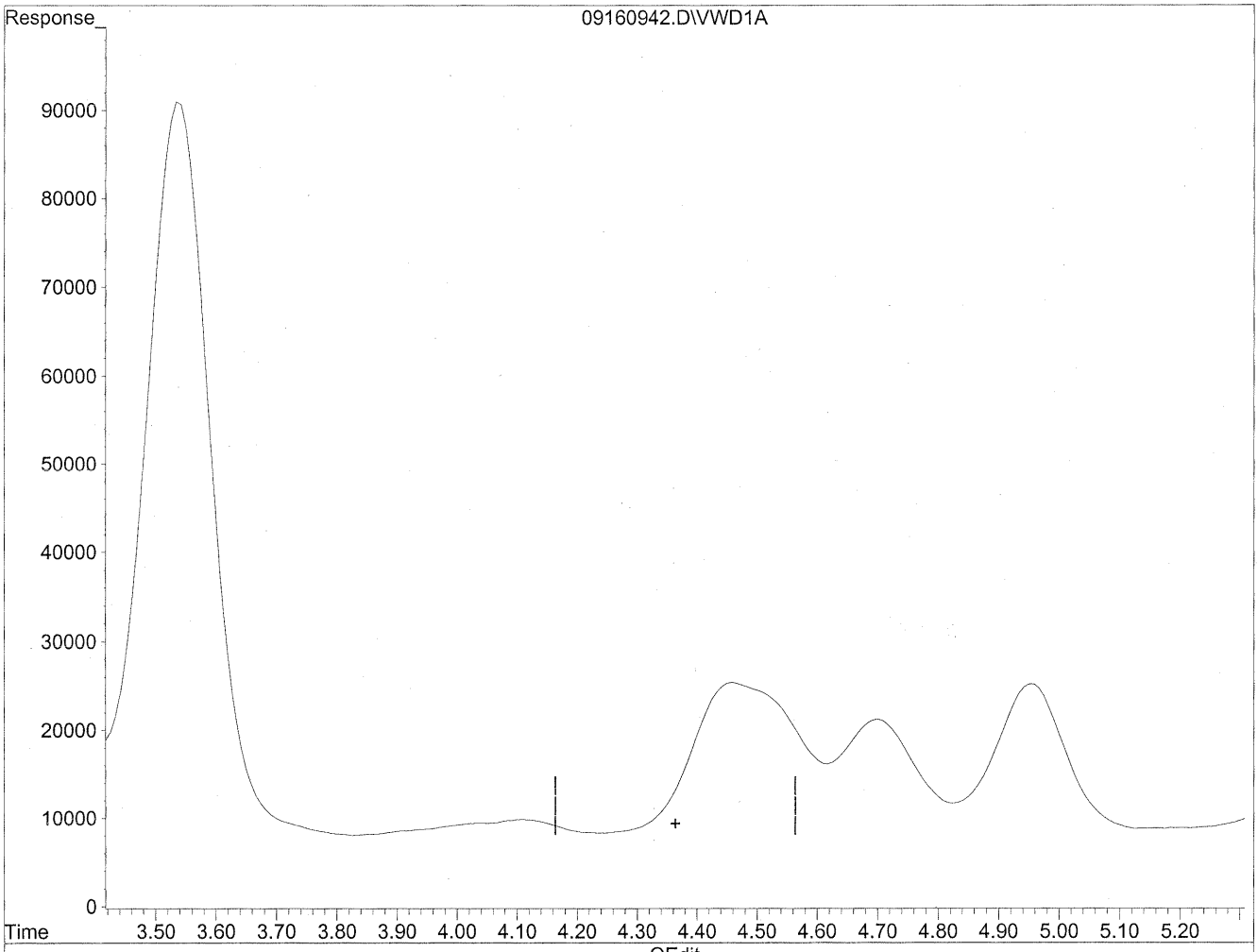
(+) = Expected Retention Time

09160942.D TO110909.M Mon Sep 21 16:35:40 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:35 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

0.00min 0.000ng/ml d

response 0

9/22/09

9/22/09 mp

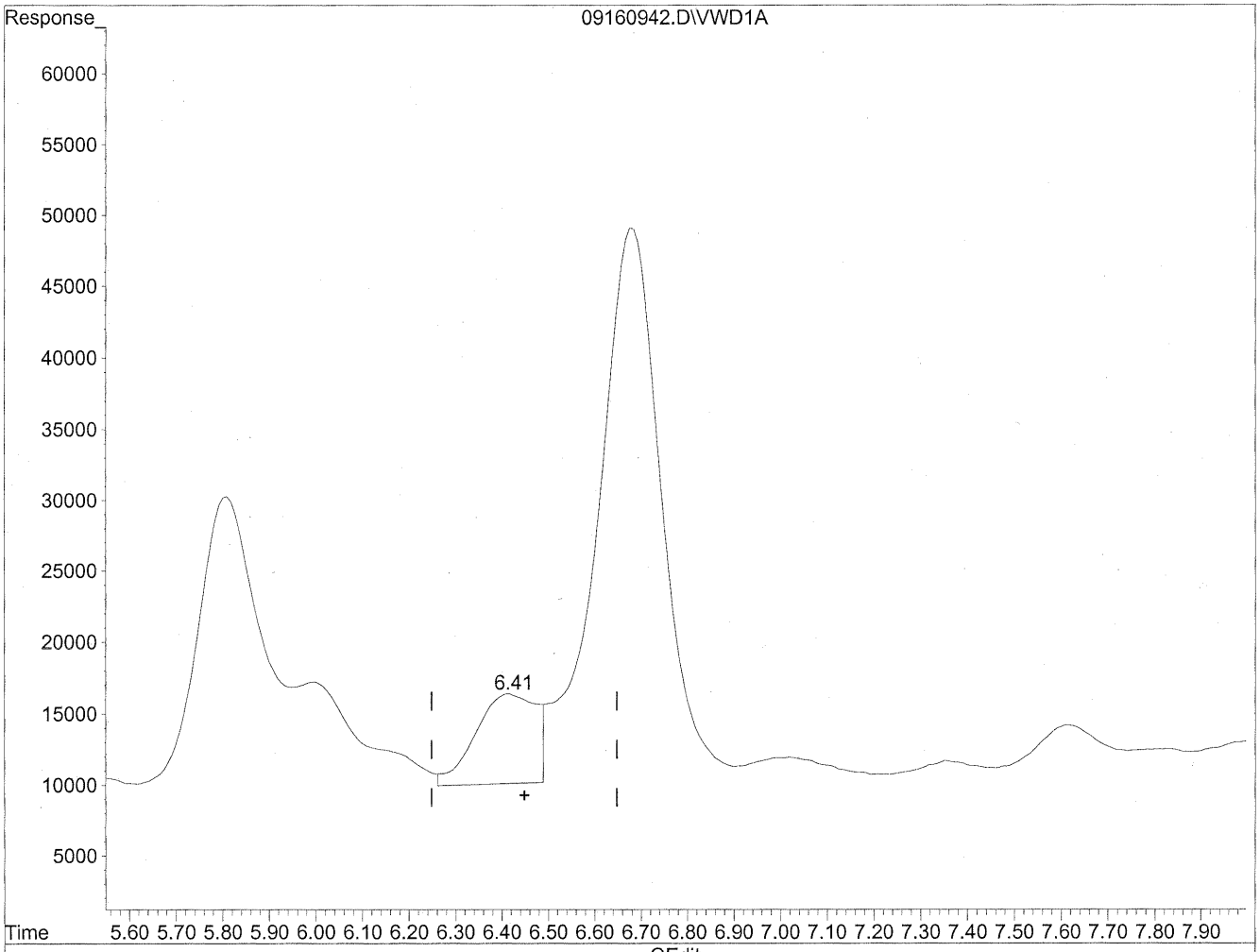
(+) = Expected Retention Time

09160942.D TO110909.M Mon Sep 21 16:35:42 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:35 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(7) Isovaleraldehyde

6.42min 163.006ng/ml

response 561031

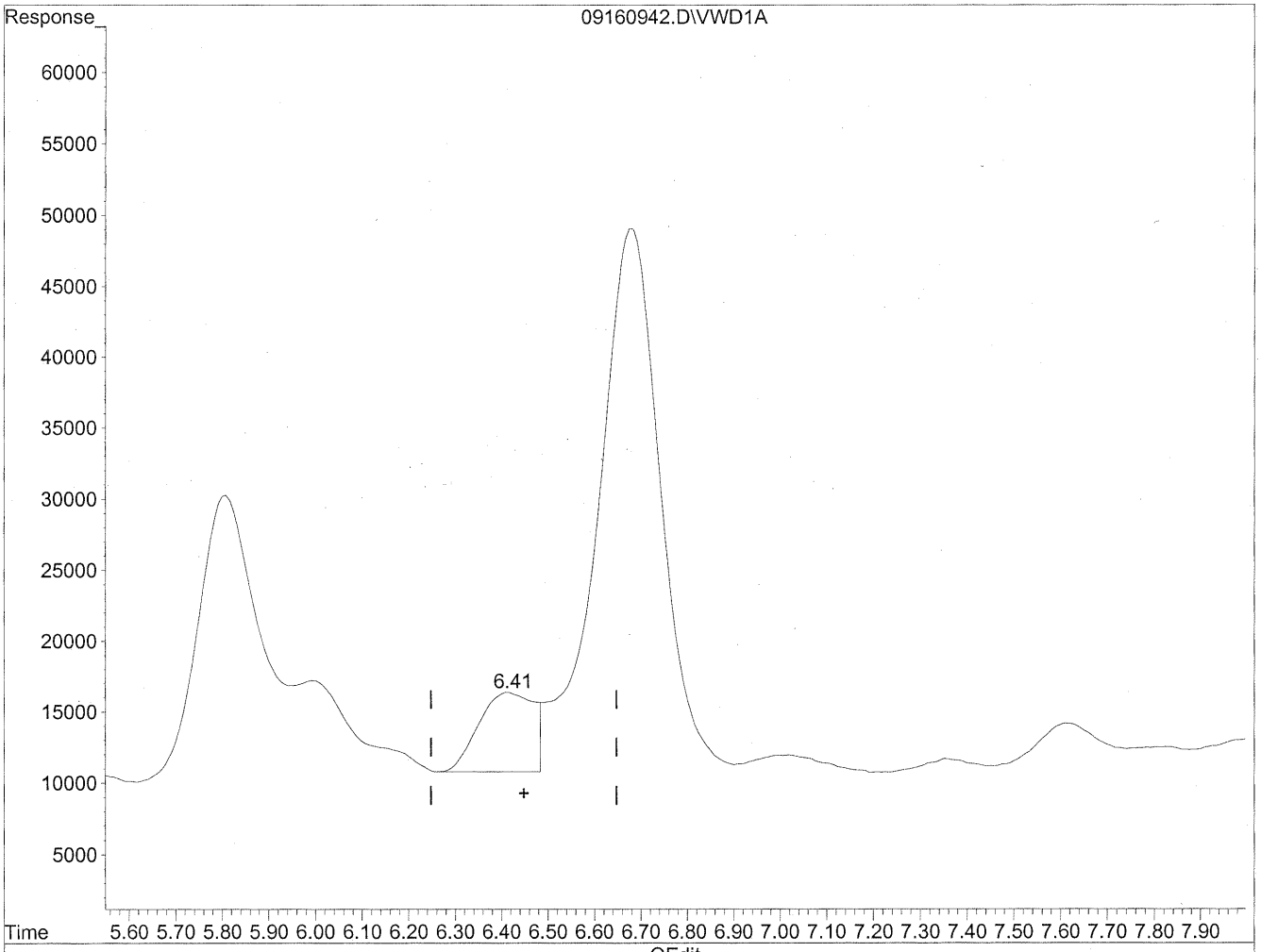
(+) = Expected Retention Time

09160942.D TO110909.M Mon Sep 21 16:36:14 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:35 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(7) Isovaleraldehyde

6.41min 139.894ng/ml m

response 481486

htc 9/22/09

9/22/09 BR

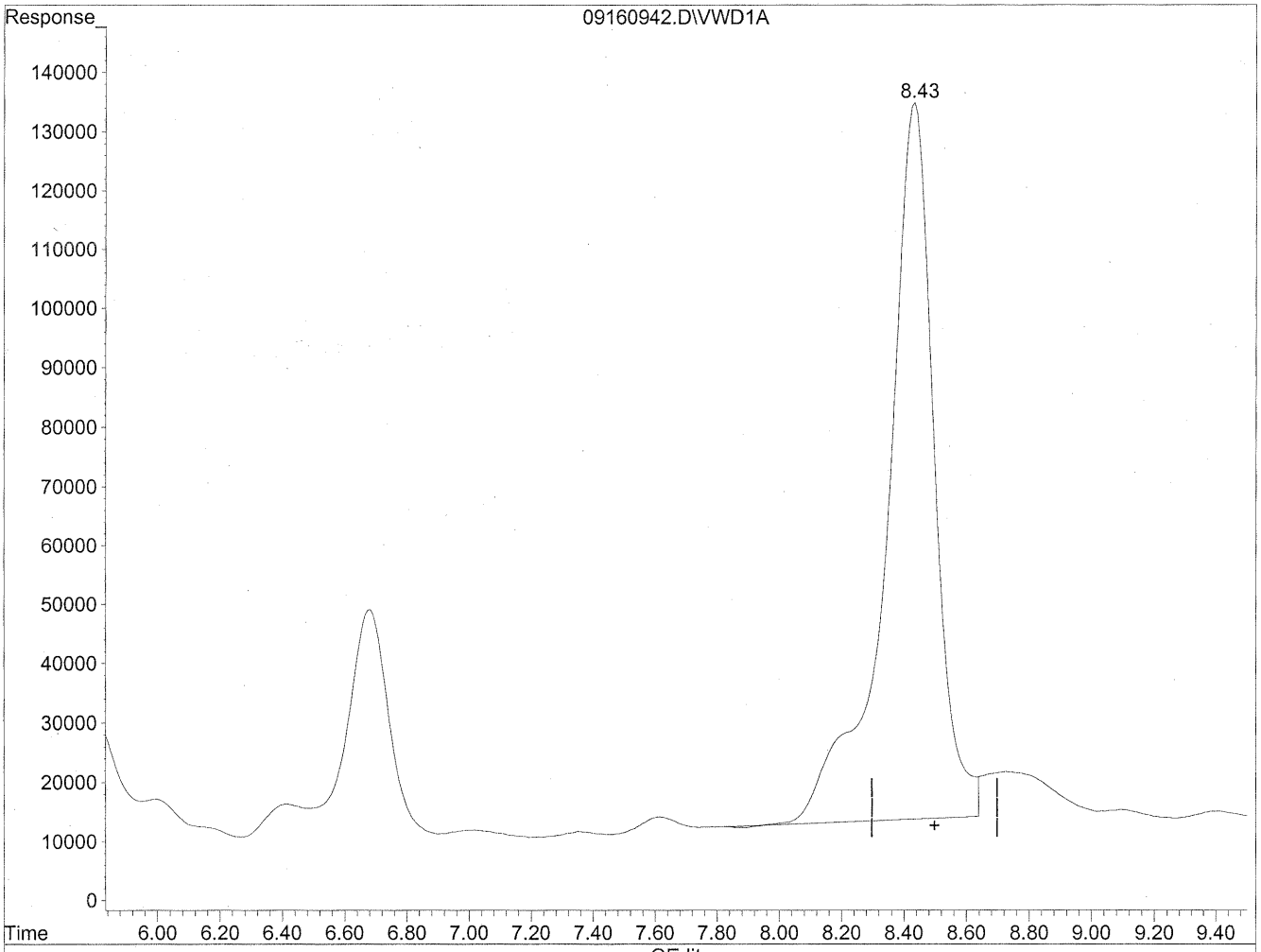
(+) = Expected Retention Time

09160942.D TO110909.M Mon Sep 21 16:36:21 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:35 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.43min 4321.036ng/ml

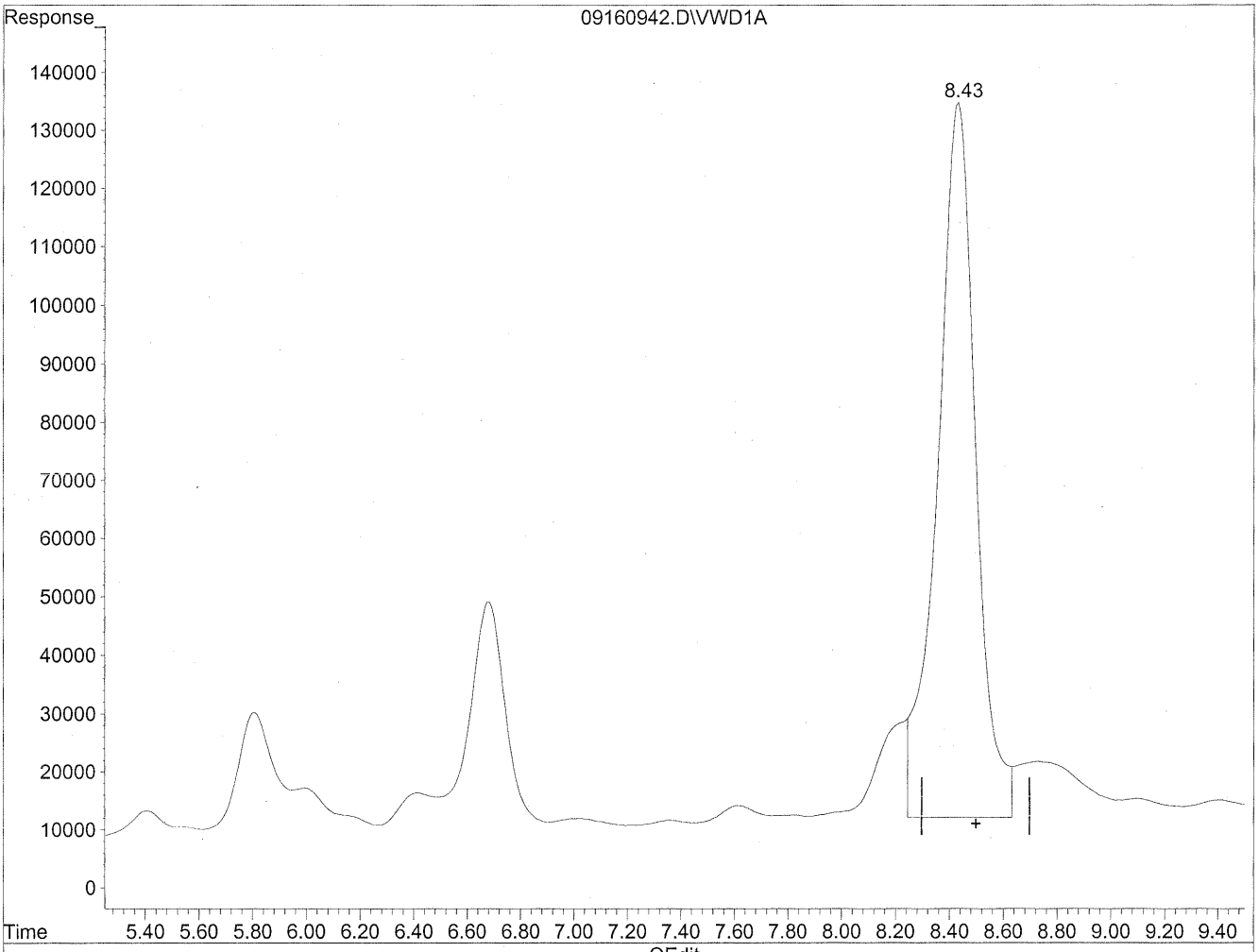
response 12793399

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:35 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.43min 4065.506ng/ml m

response 12036843

9/22/09

9/22/09

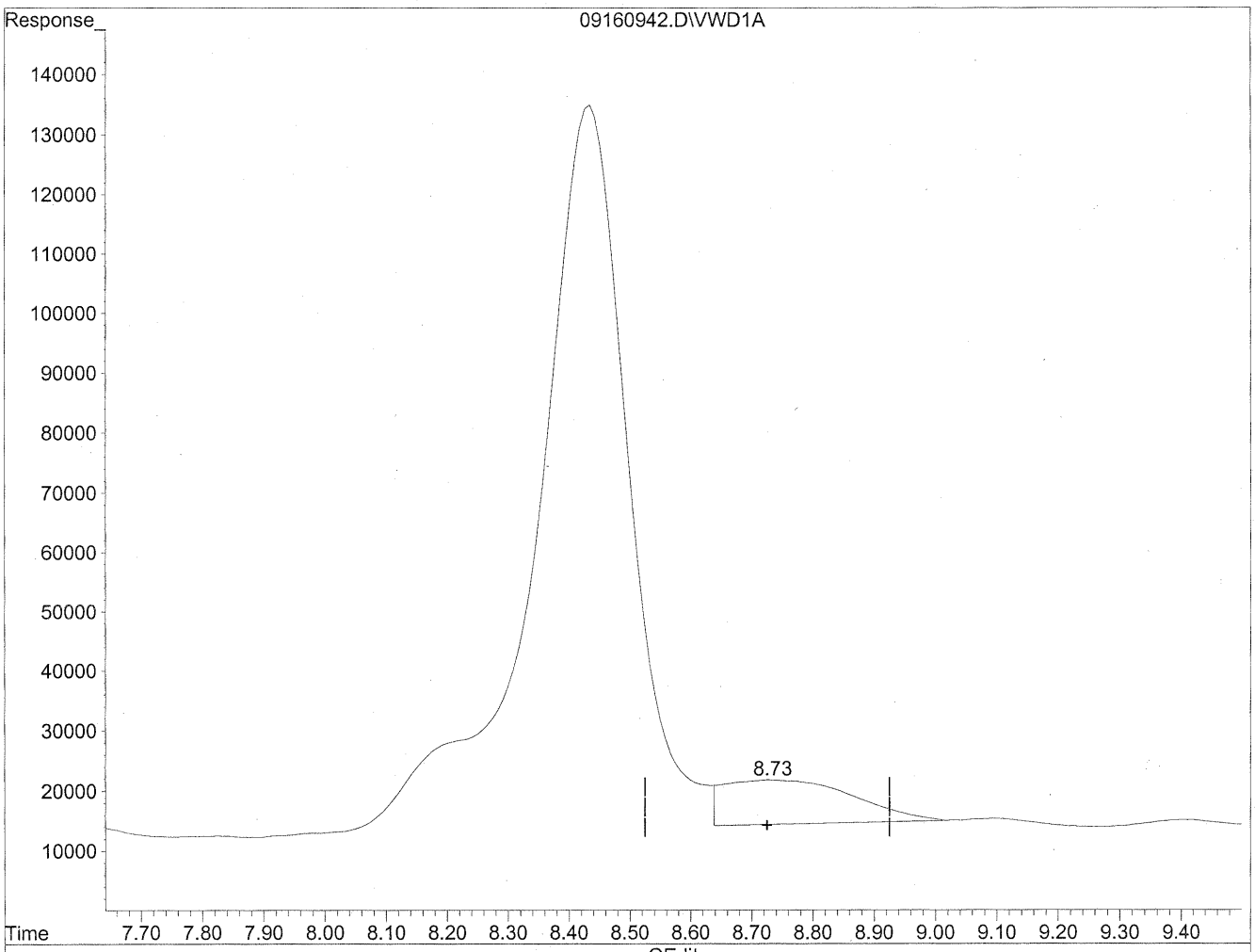
(+) = Expected Retention Time

09160942.D TO110909.M Mon Sep 21 16:36:56 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:35 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.73min 542.797ng/ml

response 1083146

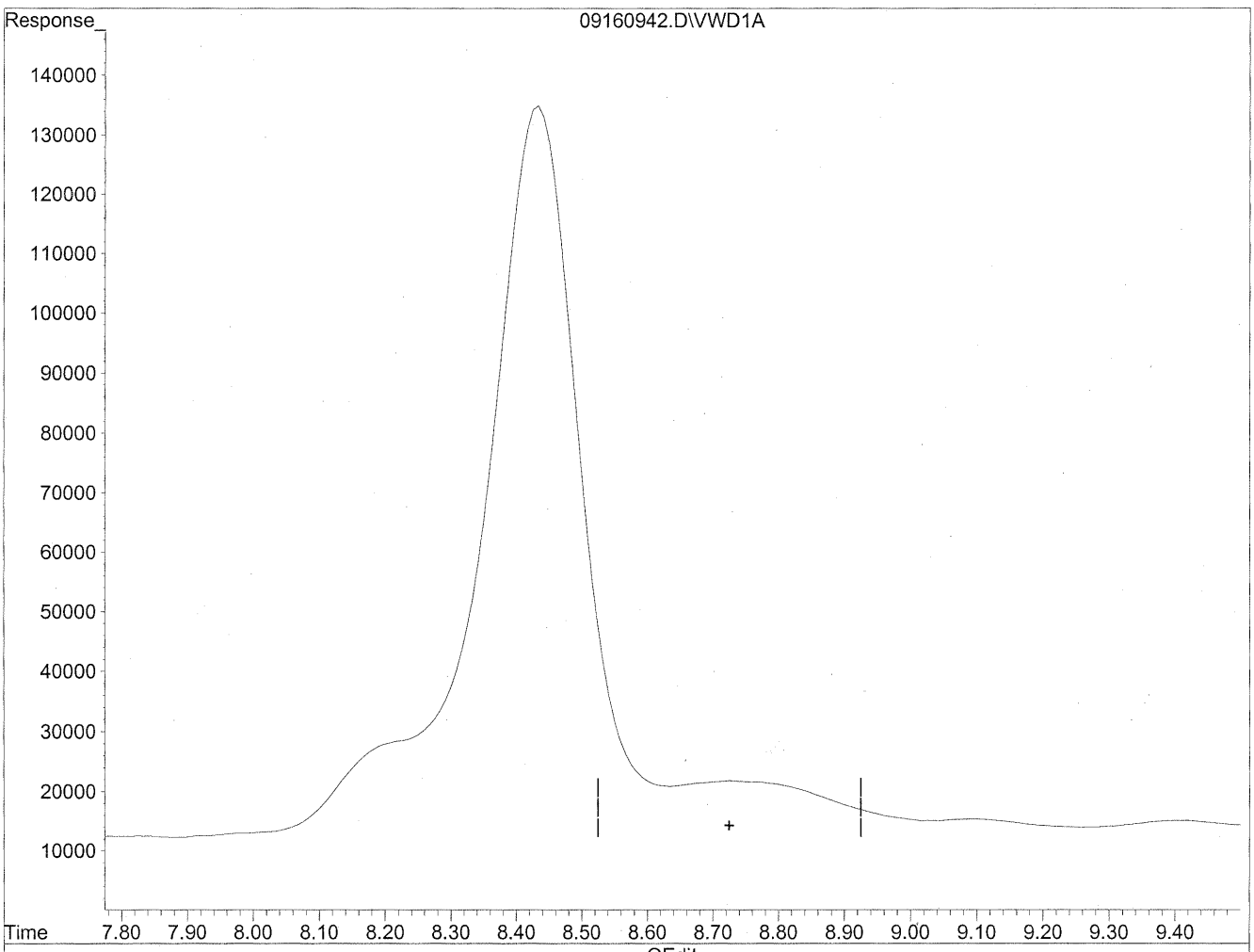
(+) = Expected Retention Time

09160942.D TO110909.M Mon Sep 21 16:37:03 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160942.D Vial: 124
Acq On : 16-Sep-2009, 19:01 Operator: MD
Sample : P0903147-002 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:35 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

9/22/09

9/22/09

(+) = Expected Retention Time

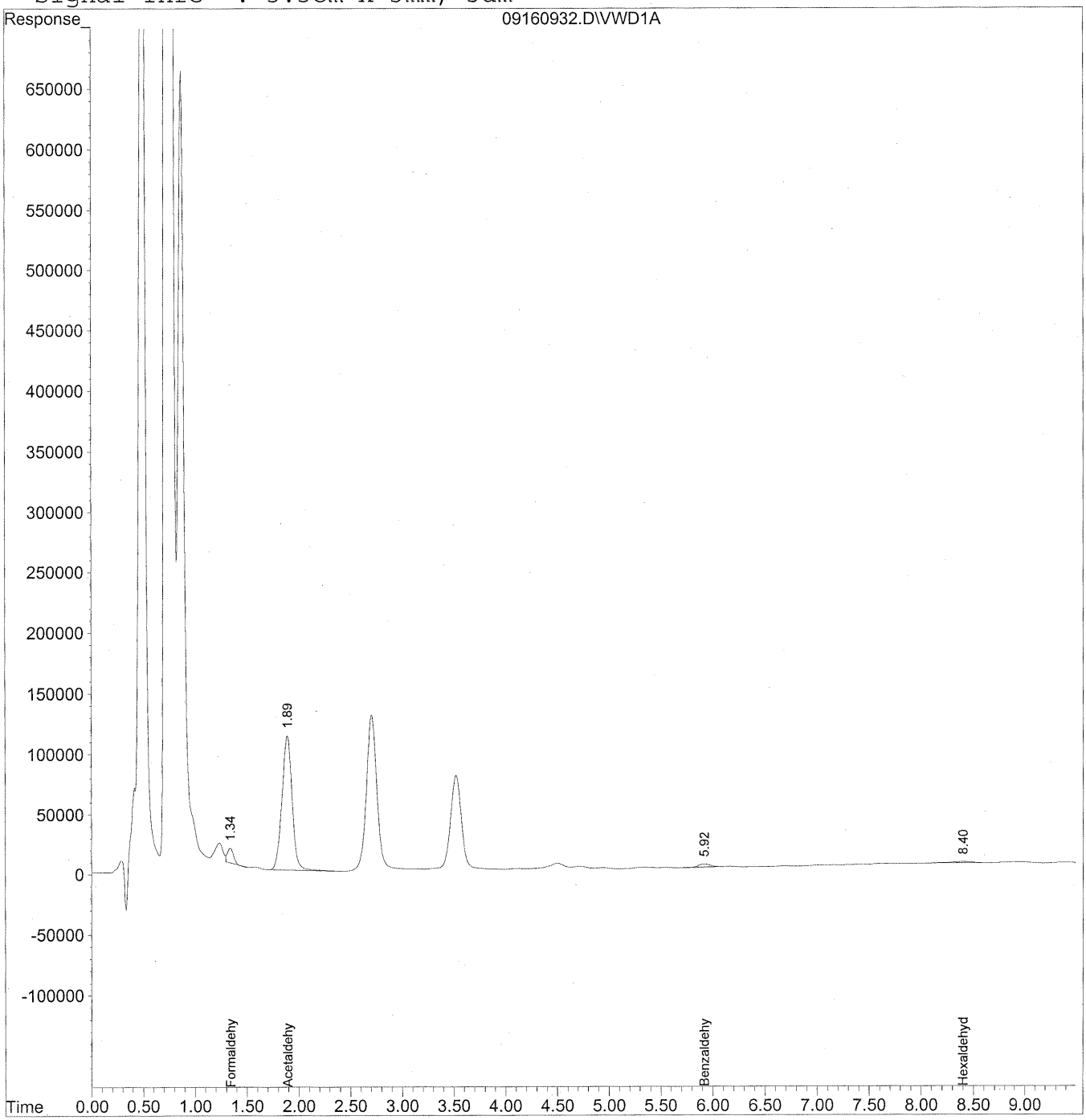
09160942.D TO110909.M Mon Sep 21 16:37:06 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160932.D Vial: 116
Acq On : 16-Sep-2009, 17:02 Operator: MD
Sample : P0903147-002 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:28 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



37

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160932.D Vial: 116
Acq On : 16-Sep-2009, 17:02 Operator: MD
Sample : P0903147-002 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:28 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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

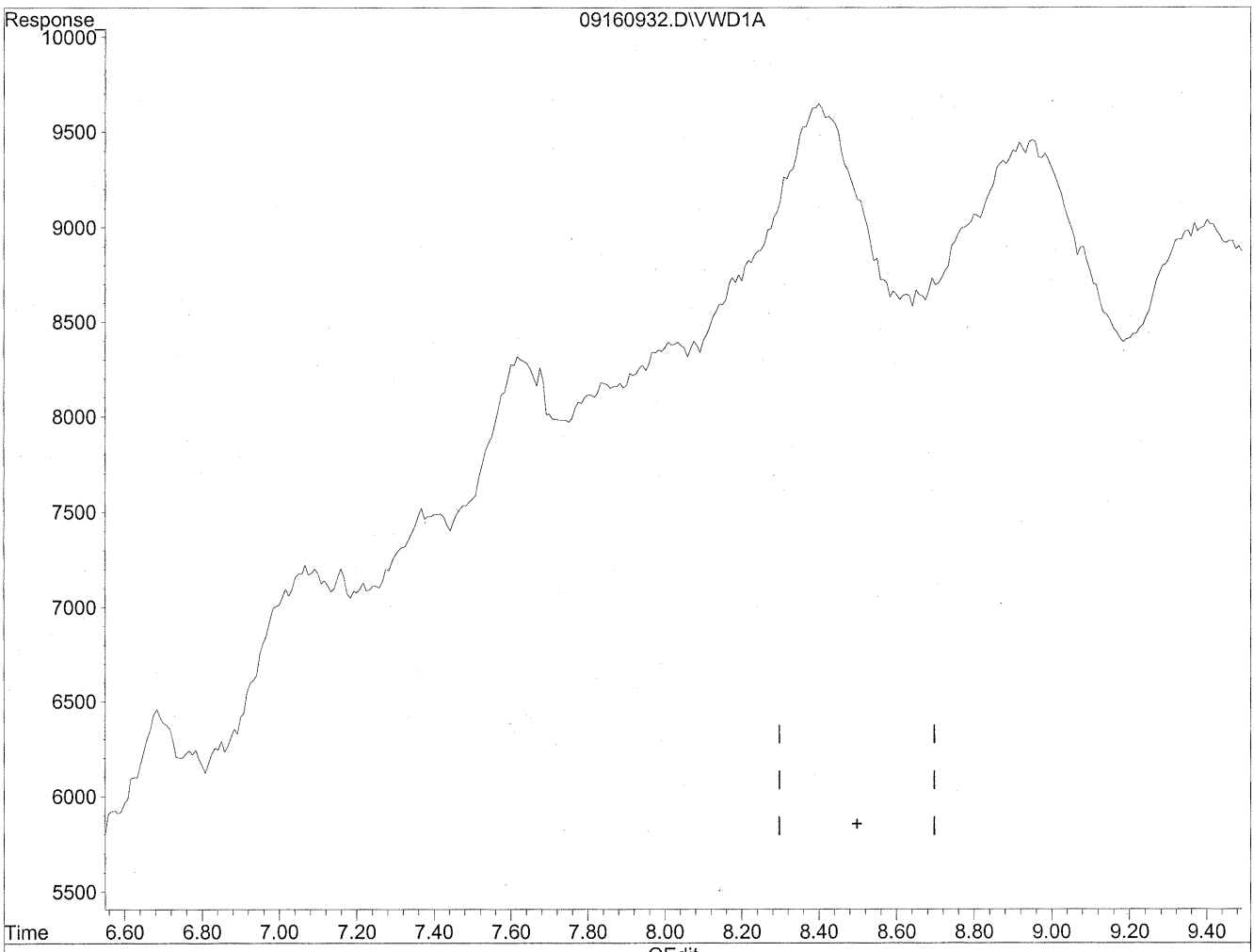
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	516492	57.803	ng/ml
2)	Acetaldehyde	1.89	7648929	1176.614	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	5.92	196691	72.091	ng/ml
7)	Isovaleraldehyde	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	8.40	170963	57.743	ng/mlm
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\16\09160932.D Vial: 116
Acq On : 16-Sep-2009, 17:02 Operator: MD
Sample : P0903147-002 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:27 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.50min 0.000ng/ml

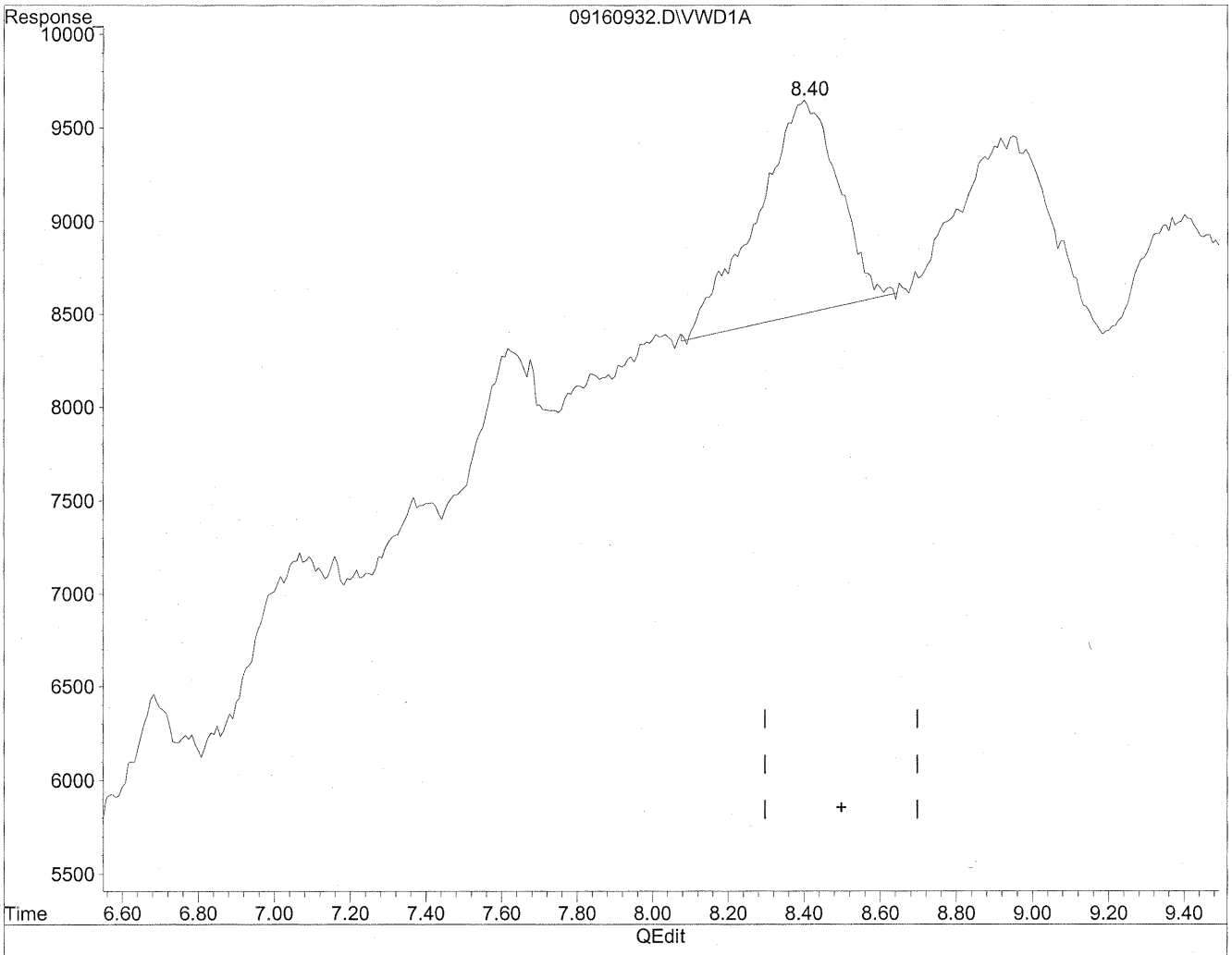
response 0

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160932.D Vial: 116
Acq On : 16-Sep-2009, 17:02 Operator: MD
Sample : P0903147-002 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:27 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.40min 57.743ng/ml m

response 170963

9/22/09

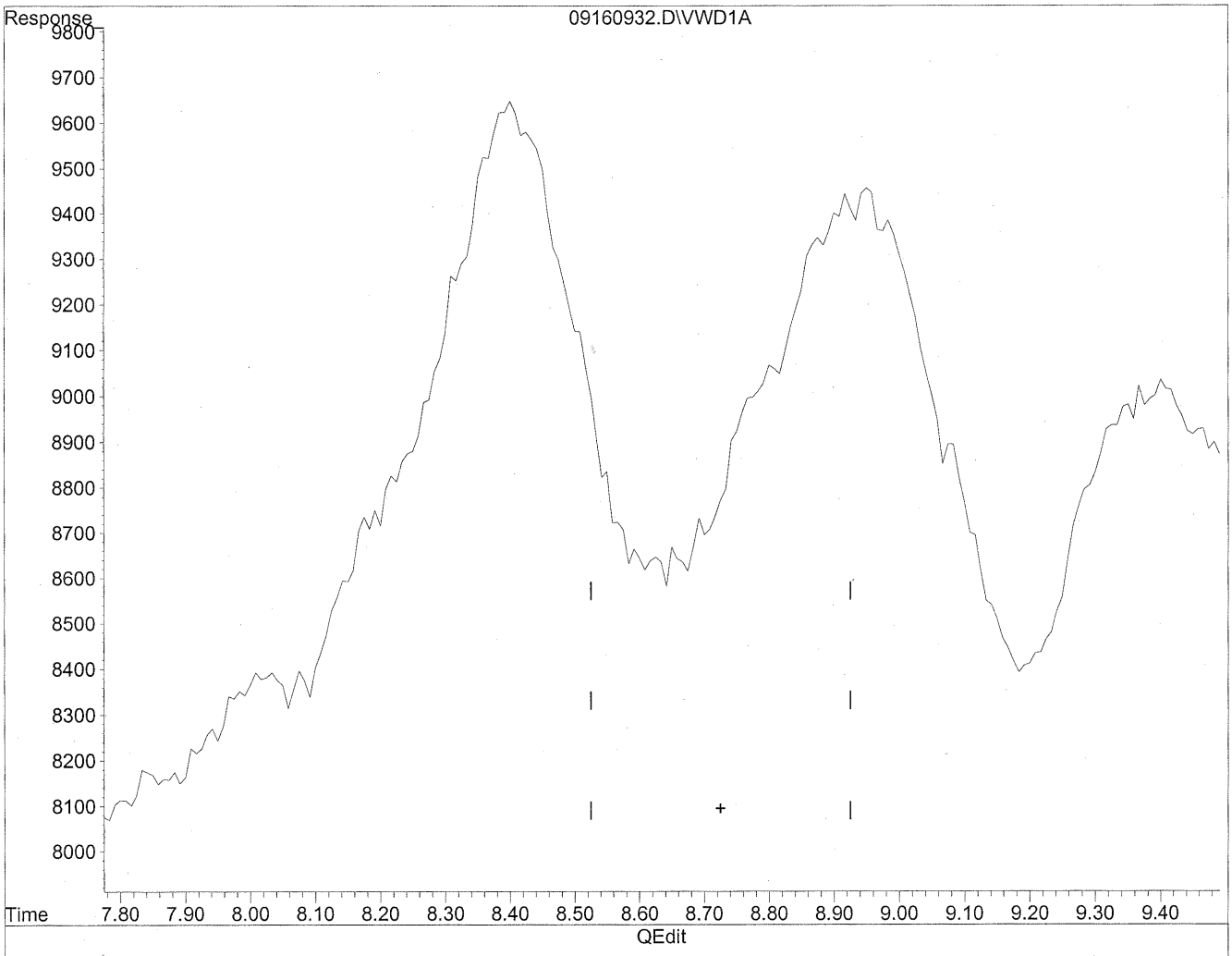
(+) = Expected Retention Time

09160932.D TO110909.M Mon Sep 21 16:28:25 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160932.D Vial: 116
Acq On : 16-Sep-2009, 17:02 Operator: MD
Sample : P0903147-002 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:27 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.73min 0.000ng/ml

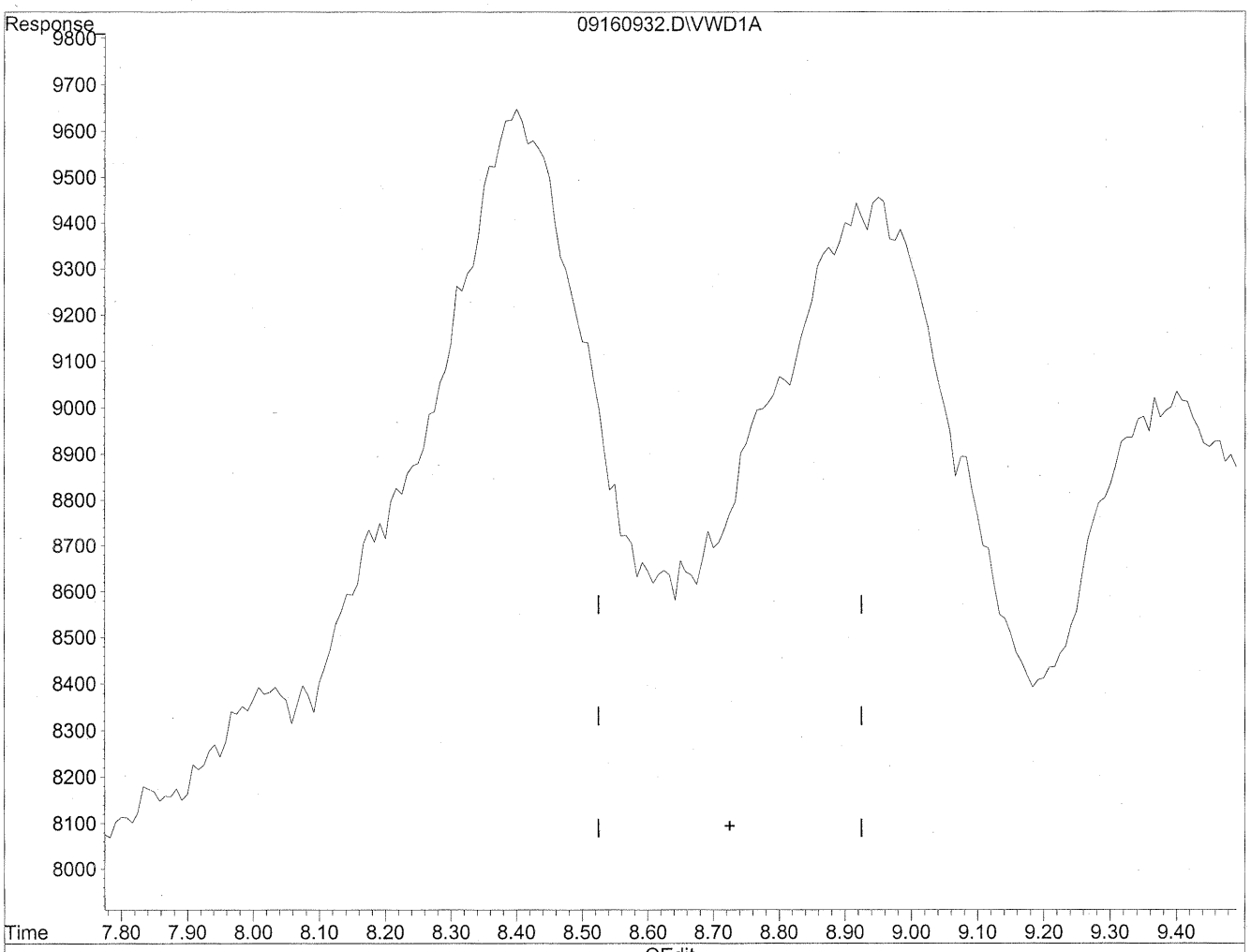
response 0

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160932.D Vial: 116
Acq On : 16-Sep-2009, 17:02 Operator: MD
Sample : P0903147-002 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:27 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

9/22/09 not real

9/22/09

(+) = Expected Retention Time

09160932.D TO110909.M Mon Sep 21 16:28:34 2009

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **106304**
Client Project ID: **16512**

CAS Project ID: P0903147
CAS Sample ID: P0903147-003

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

Date Collected: 9/3/09
Date Received: 9/4/09
Date Analyzed: 9/16/09
Desorption Volume: 1.0 ml
Volume Sampled: 105.7 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**6,900**	**65**	0.95	**53**	0.77	
75-07-0	**Acetaldehyde**	**8,400**	**79**	0.95	**44**	0.53	**BT**
123-38-6	**Propionaldehyde**	**360**	**3.4**	0.95	**1.4**	0.40	
4170-30-3	Crotonaldehyde, Total	< 100	ND	0.95	ND	0.33	
123-72-8	**Butyraldehyde**	**370**	**3.5**	0.95	**1.2**	0.32	
100-52-7	**Benzaldehyde**	**940**	**8.9**	0.95	**2.1**	0.22	
590-86-3	**Isovaleraldehyde**	**130**	**1.3**	0.95	**0.36**	0.27	
110-62-3	**Valeraldehyde**	**1,200**	**11**	0.95	**3.3**	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**	**5,300**	**50**	0.95	**12**	0.23	**M**
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.
BT = Results indicated possible breakthrough; back section > 10% front section.
M = Matrix interference; results may be biased high.

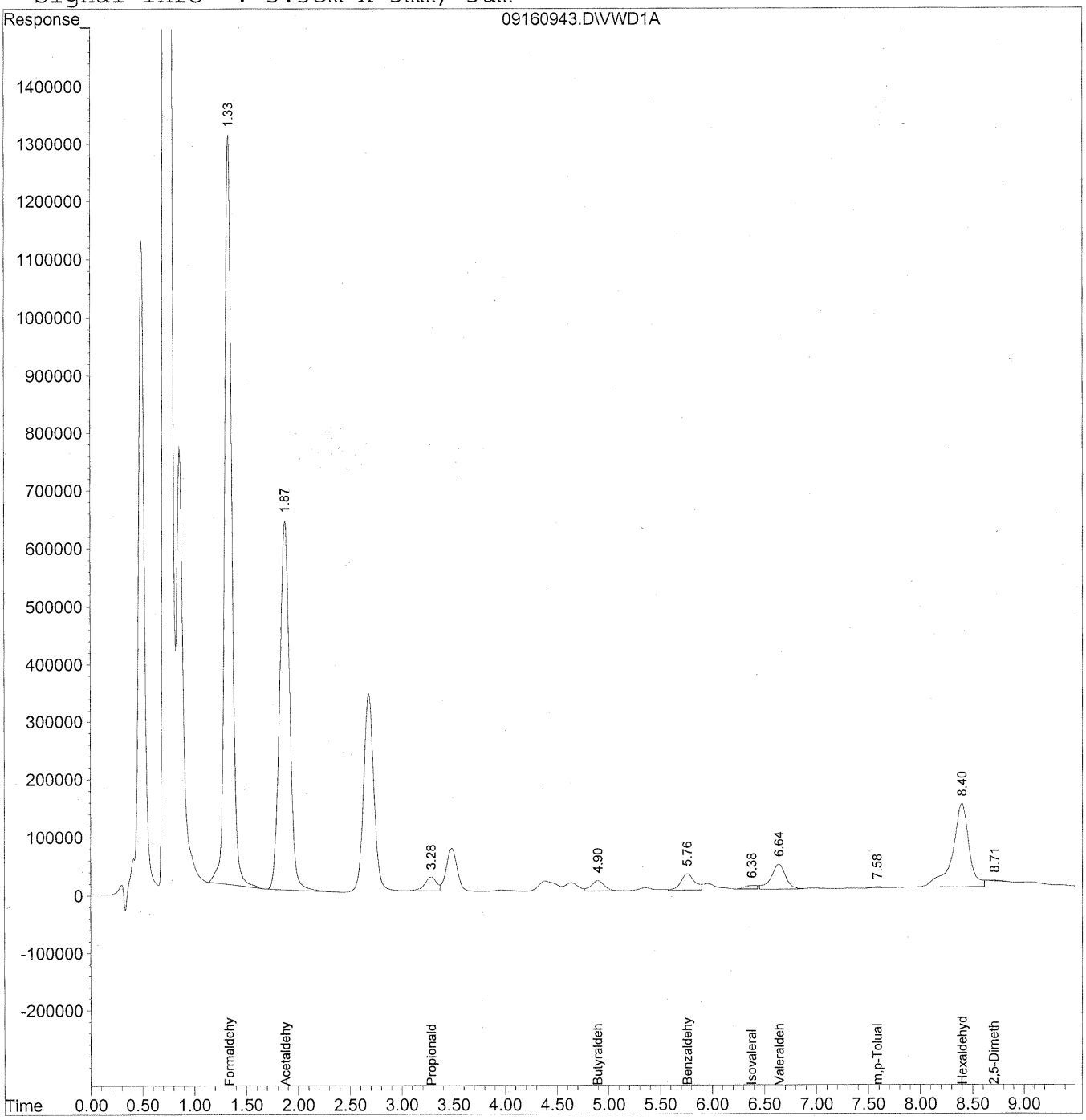
Verified By: Re Date: 9/28/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



44

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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	61733443	6908.838	ng/ml
2)	Acetaldehyde	1.88	42437665	6528.071	ng/ml
3)	Propionaldehyde	3.28	1853455	356.583	ng/mlm
4)	Crotonaldehyde	0.00	0	N.D.	ng/mld
5)	Butyraldehyde	4.90	1518246	374.619	ng/ml
6)	Benzaldehyde	5.76	2569715	941.847	ng/mlm
7)	Isovaleraldehyde	6.38	460675	133.848	ng/ml
8)	Valeraldehyde	6.64	4121634	1212.374	ng/mlm
9)	o-Tolualdehyde	0.00	0	N.D.	ng/ml
10)	m,p-Tolualdehyde	7.59f	166685	72.569	ng/ml
11)	Hexaldehyde	8.40	15554167	5253.500	ng/ml *
12)	2,5-Dimethylbenzaldehyde	8.71	129894	65.094	ng/mlm

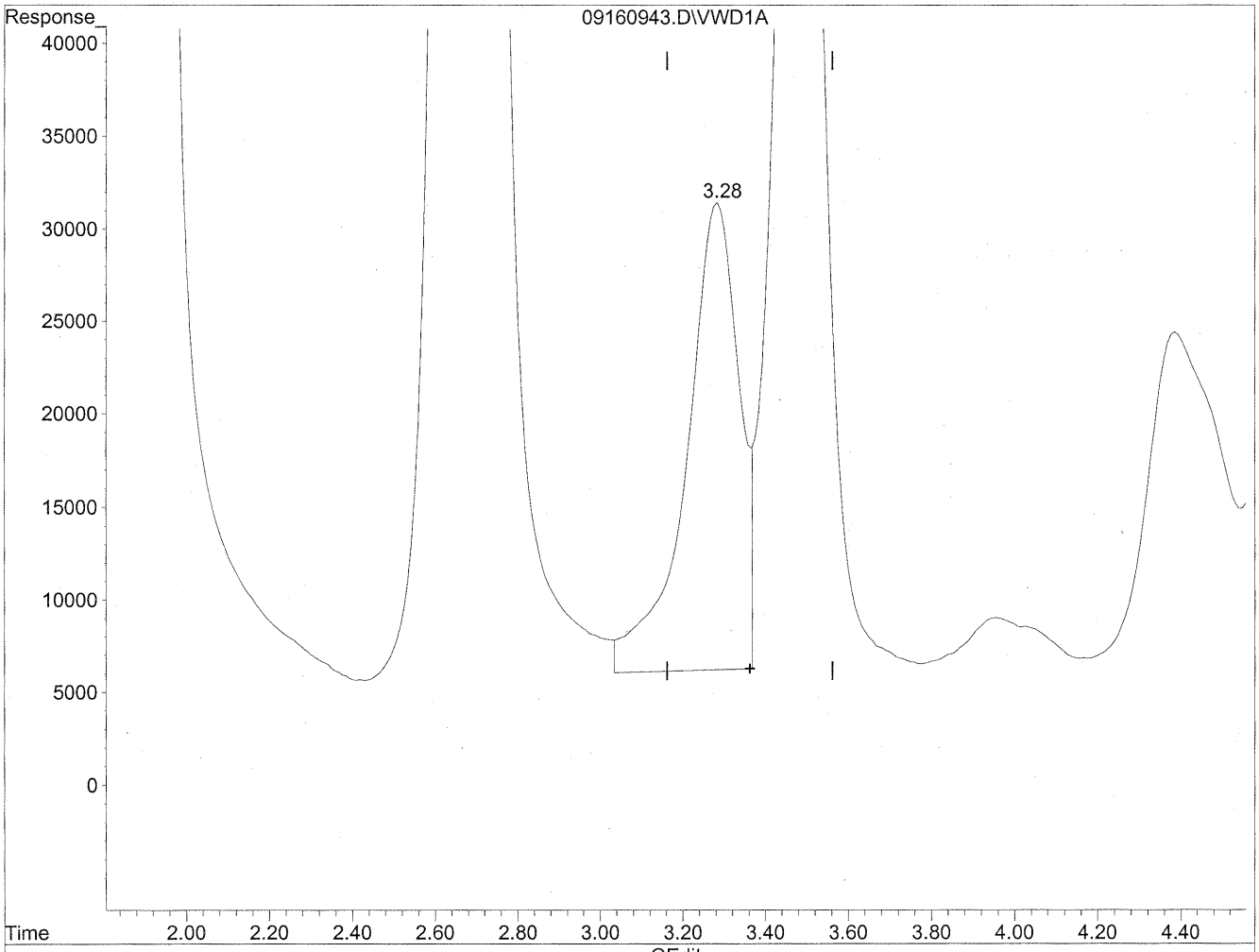
* mflag

(f)=RT Delta > 1/2 Window (m)=manual int.
09160943.D TO110909.M Tue Sep 22 09:16:04 2009 Page 1

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.29min 425.841ng/ml

response 2213447

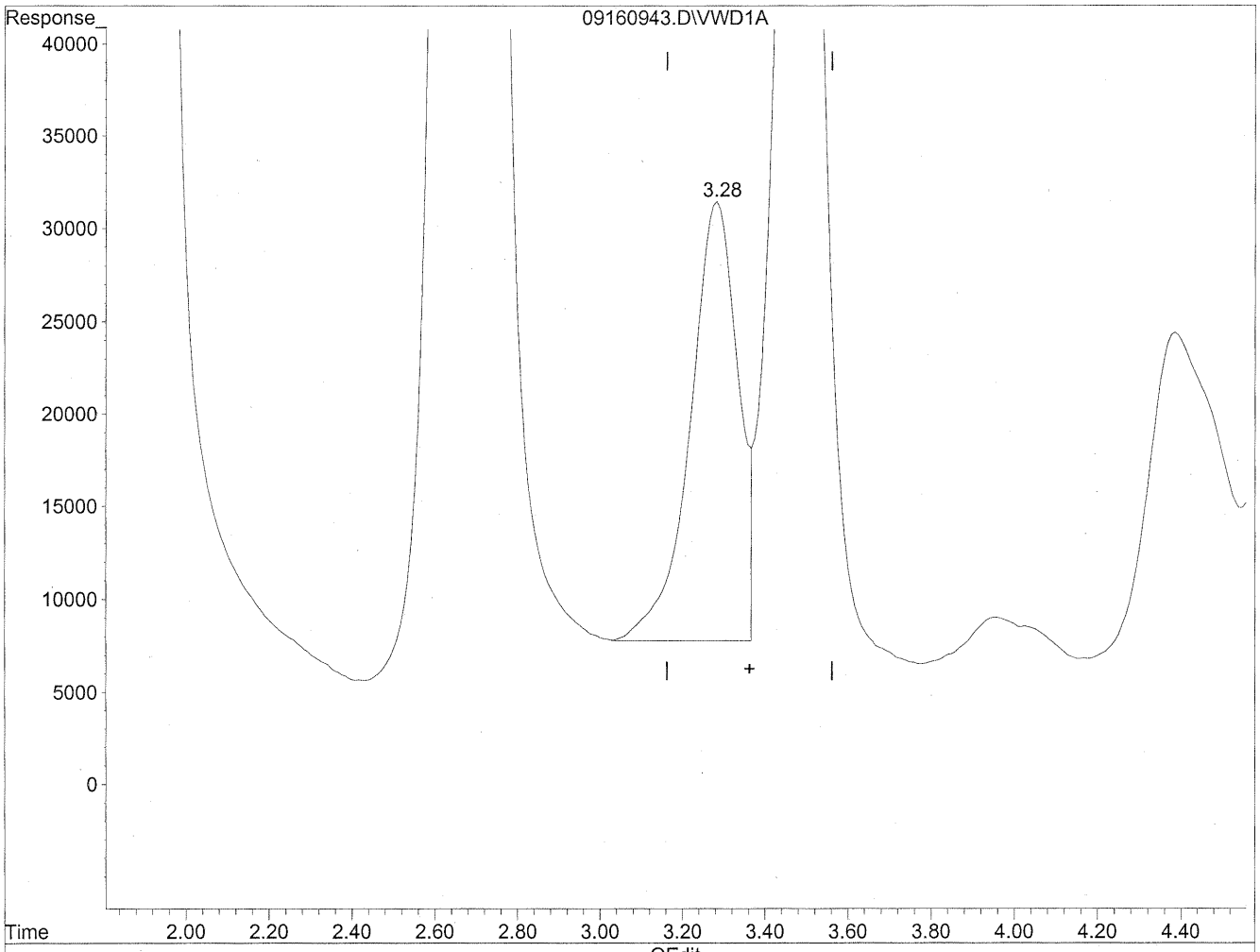
(+) = Expected Retention Time

09160943.D TO110909.M Mon Sep 21 16:37:35 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.28min 356.583ng/ml m

response 1853455

9/22/09

9/22/09

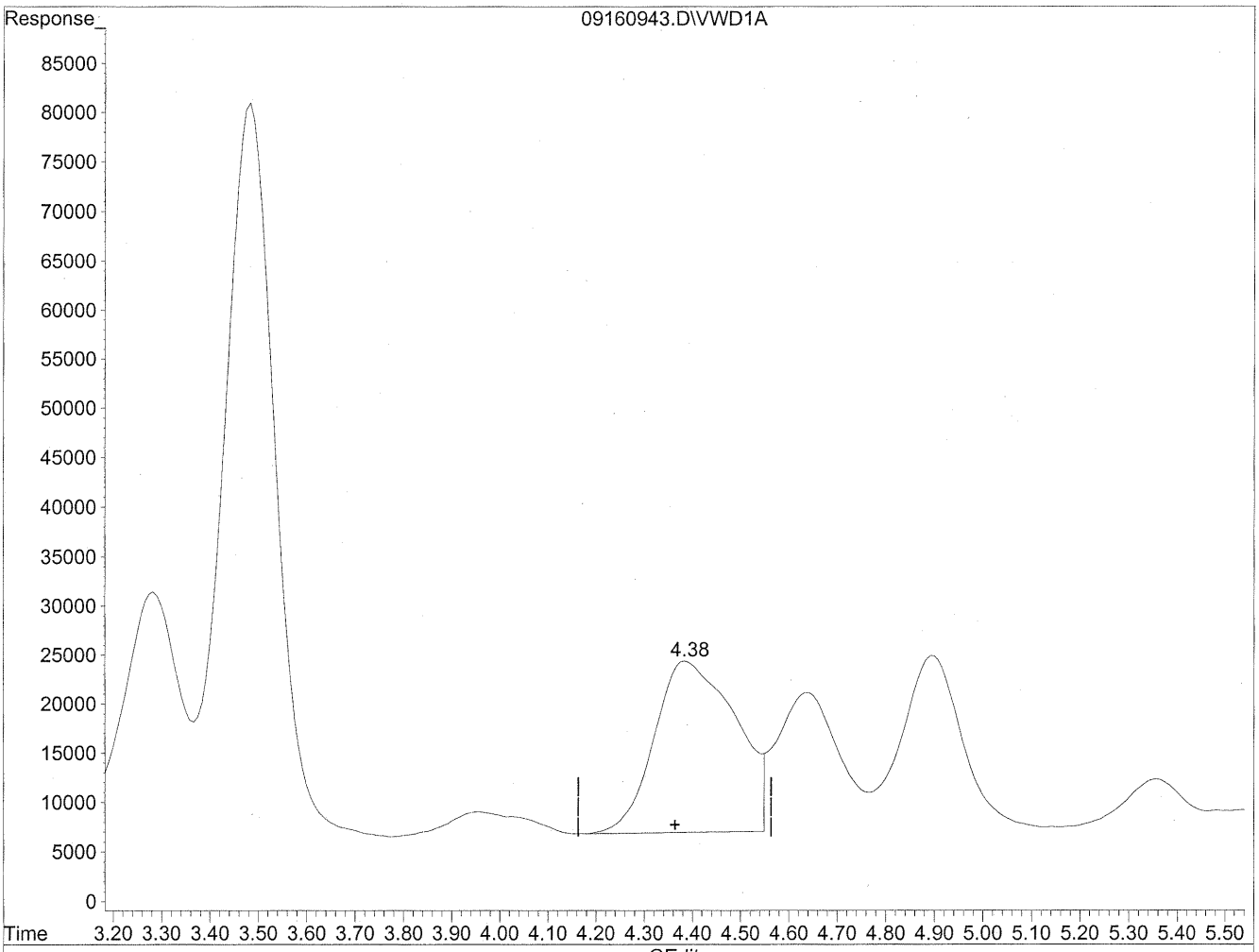
47

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

4.39min 500.285ng/ml

response 2030944

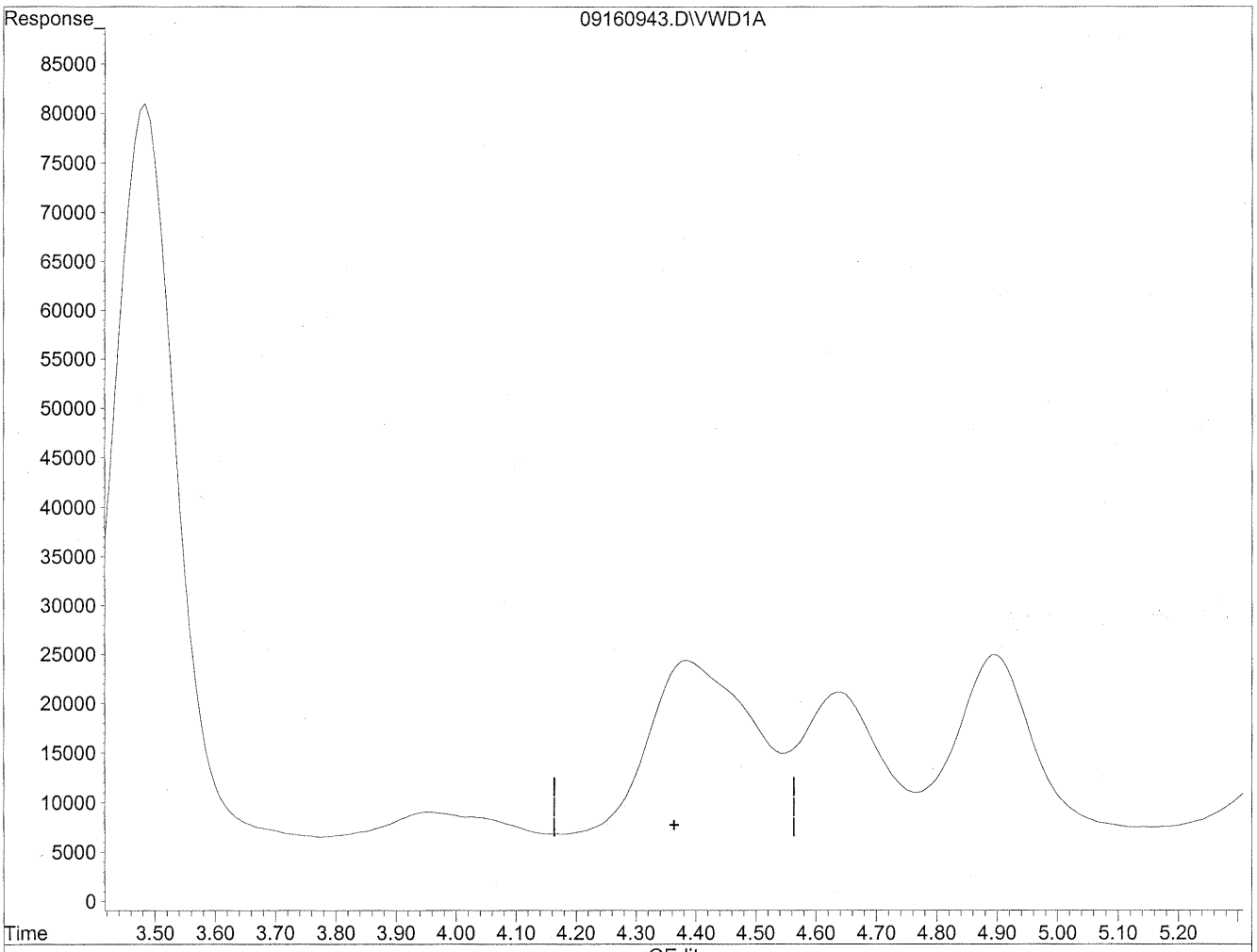
(+) = Expected Retention Time

09160943.D TO110909.M Mon Sep 21 16:37:46 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

0.00min 0.000ng/ml d

response 0

HC 9/22/09

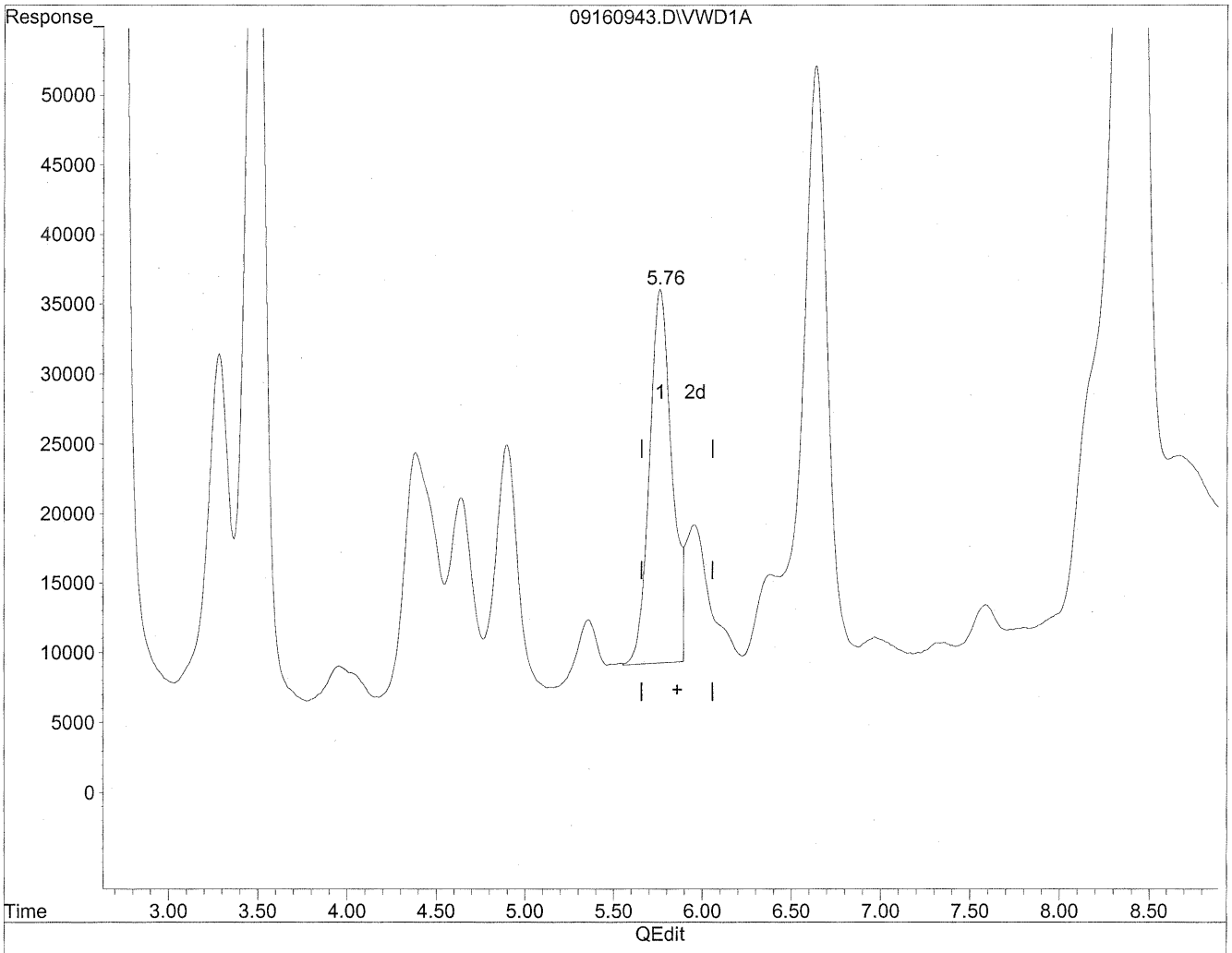
9/22/09 mp

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.76min 862.339ng/ml

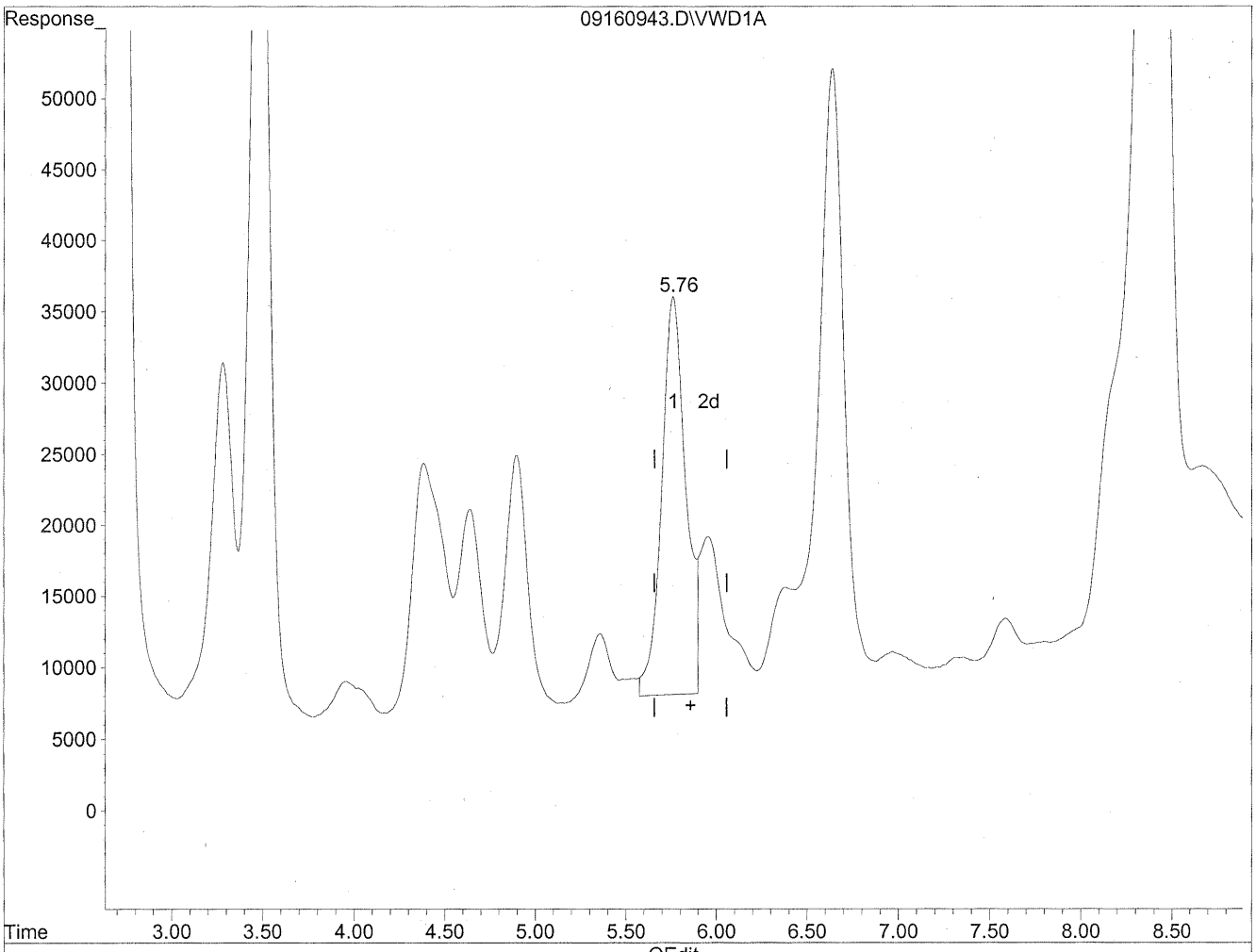
response 2352786

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(6) Benzaldehyde

5.76min 941.847ng/ml m

response 2569715

HC 9/22/09

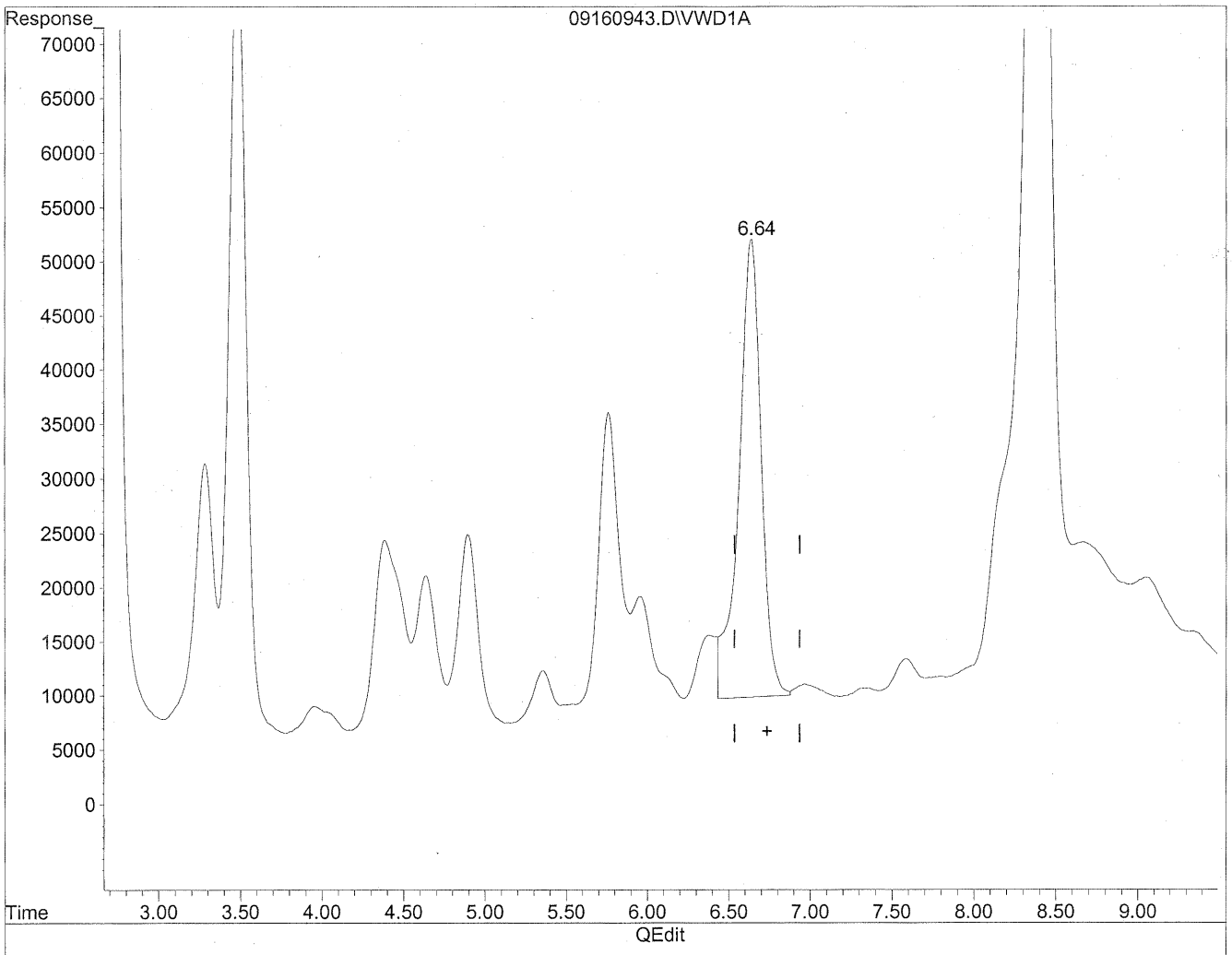
MD 9/22/09 BC

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(8) Valeraldehyde

6.64min 1191.227ng/ml

response 4049744

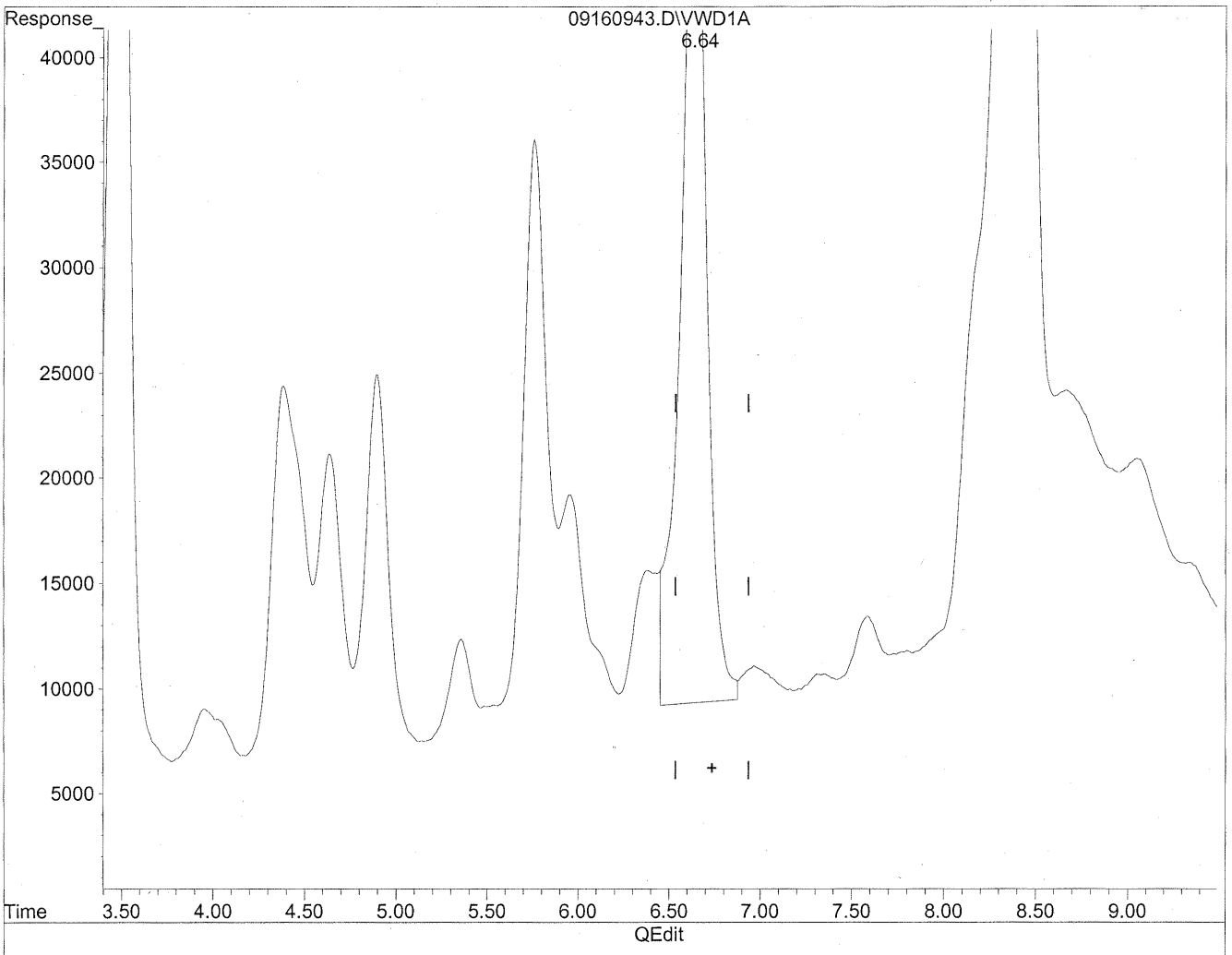
(+) = Expected Retention Time

09160943.D TO110909.M Mon Sep 21 16:38:50 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(8) Valeraldehyde

6.64min 1212.374ng/ml m

response 4121634

9/22/09

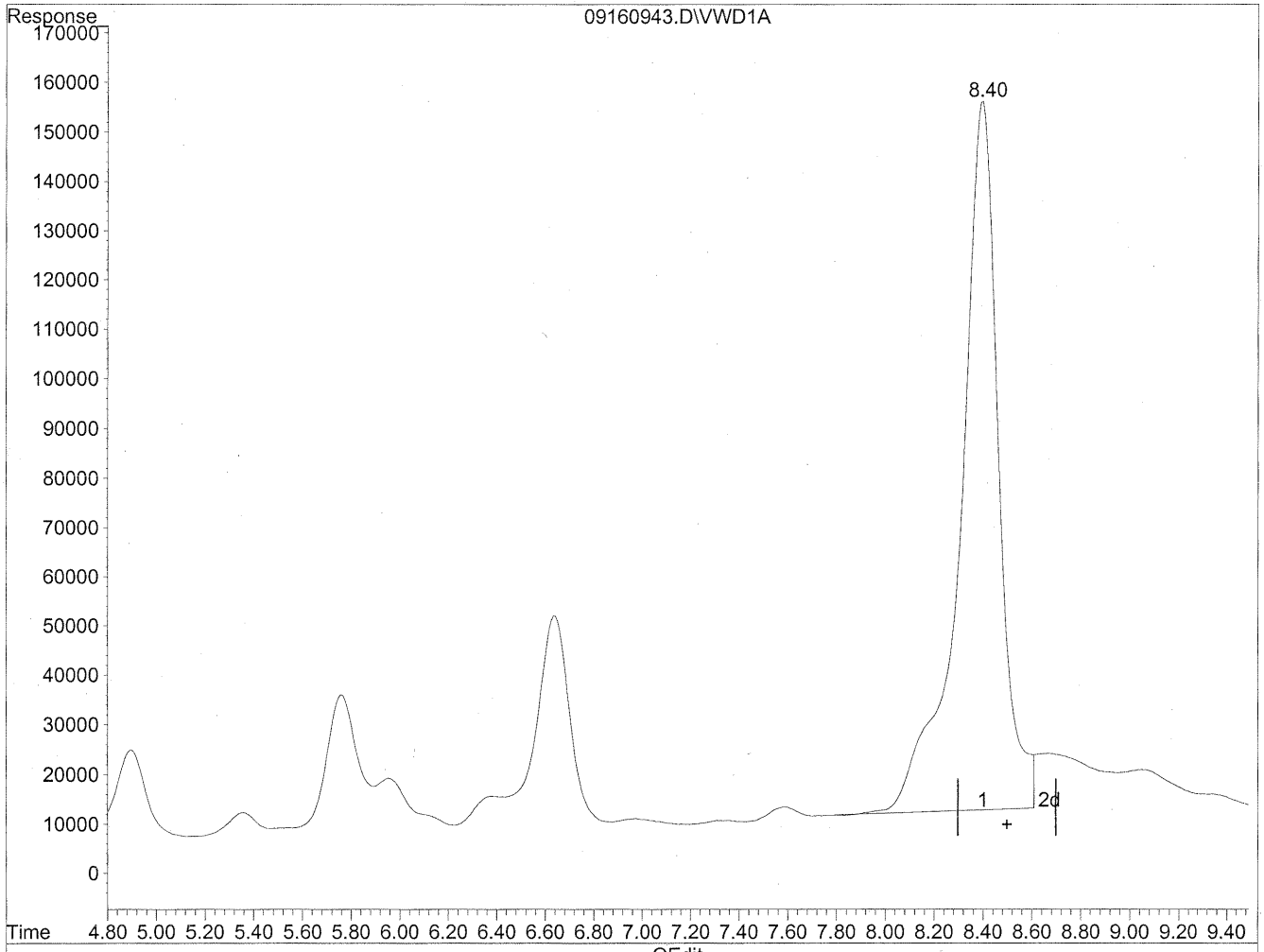
(+) = Expected Retention Time

09160943.D TO110909.M Mon Sep 21 16:39:01 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.40min 5253.500ng/ml

response 15554167

mc 9/22/09

cm flags

mc 9/22/09

54

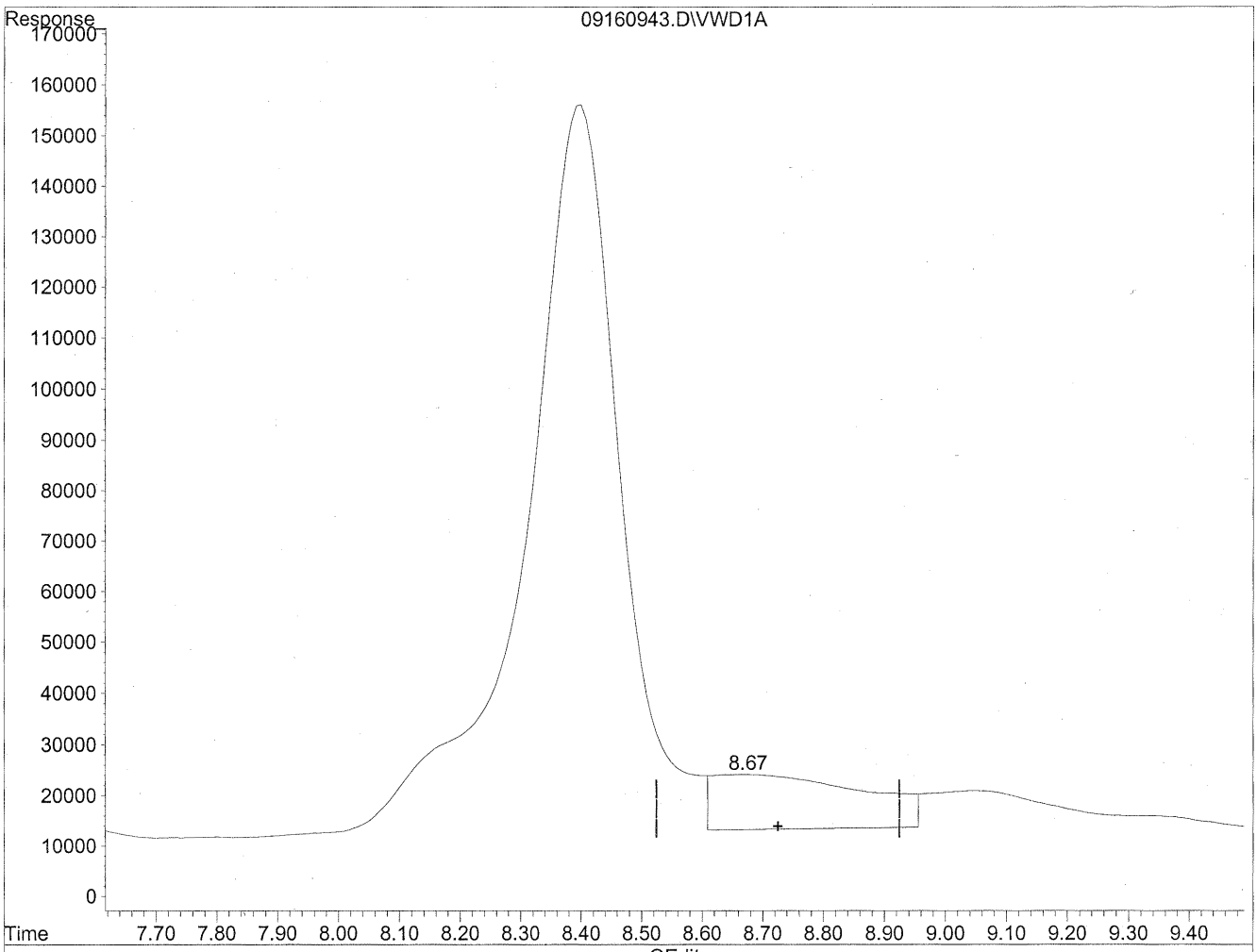
(+) = Expected Retention Time

09160943.D TO110909.M Mon Sep 21 16:39:13 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.67min 938.865ng/ml

response 1873497

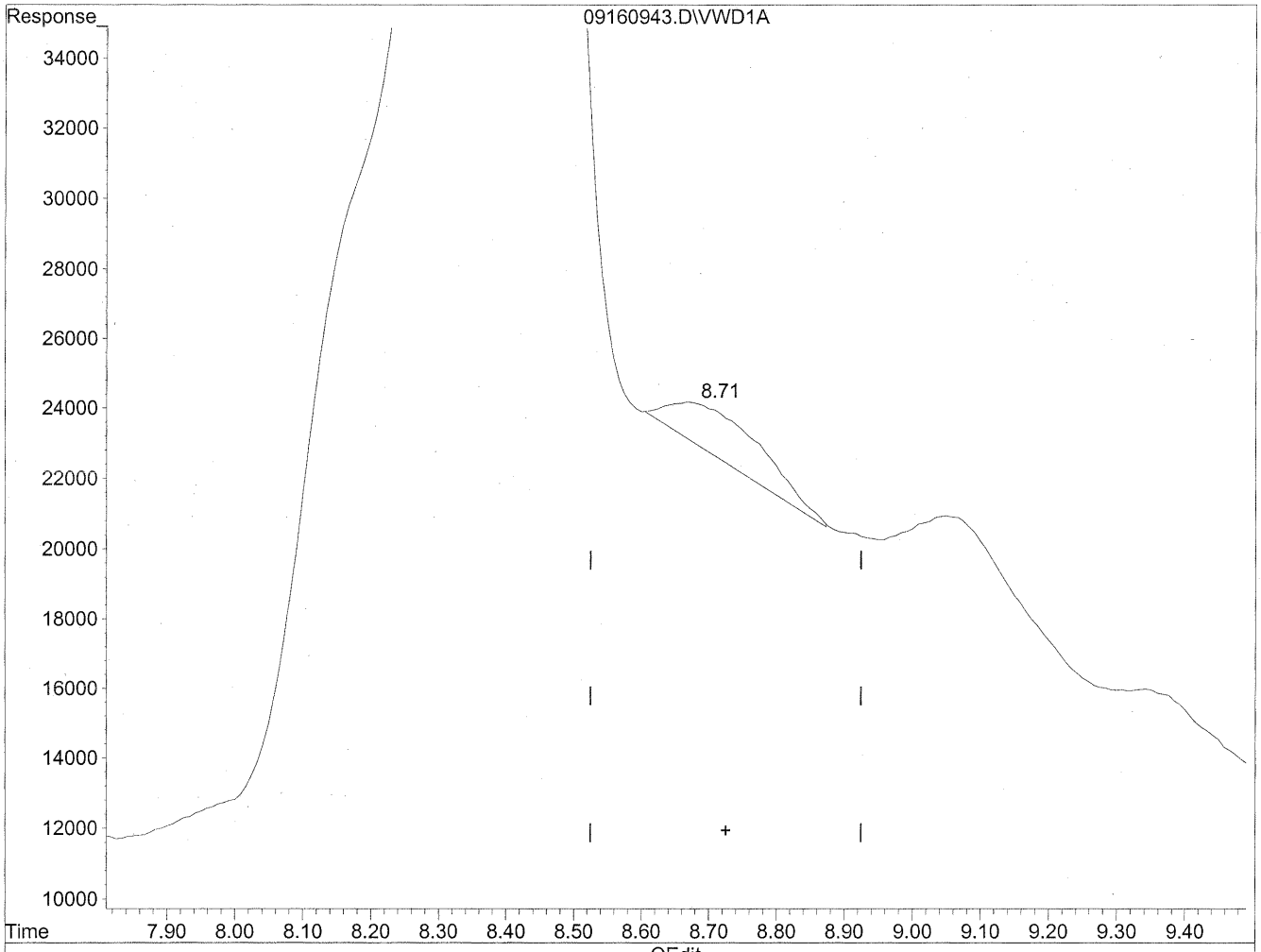
(+) = Expected Retention Time

09160943.D TO110909.M Mon Sep 21 16:39:16 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160943.D Vial: 125
Acq On : 16-Sep-2009, 19:13 Operator: MD
Sample : P0903147-003 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:37 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.71min 65.094ng/ml m

response 129894

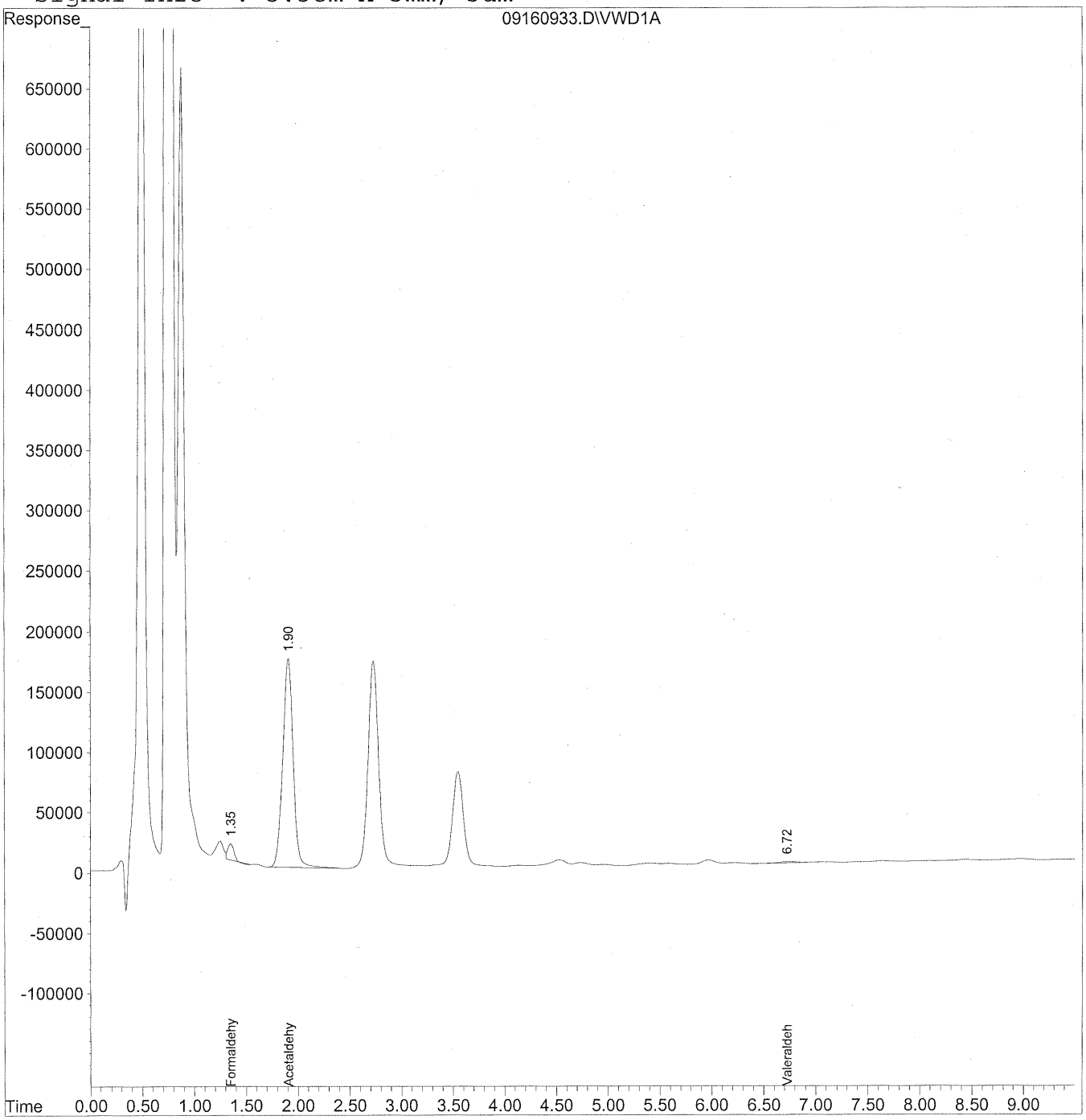
(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160933.D Vial: 117
Acq On : 16-Sep-2009, 17:14 Operator: MD
Sample : P0903147-003 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:29 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



57

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160933.D Vial: 117
Acq On : 16-Sep-2009, 17:14 Operator: MD
Sample : P0903147-003 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:29 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

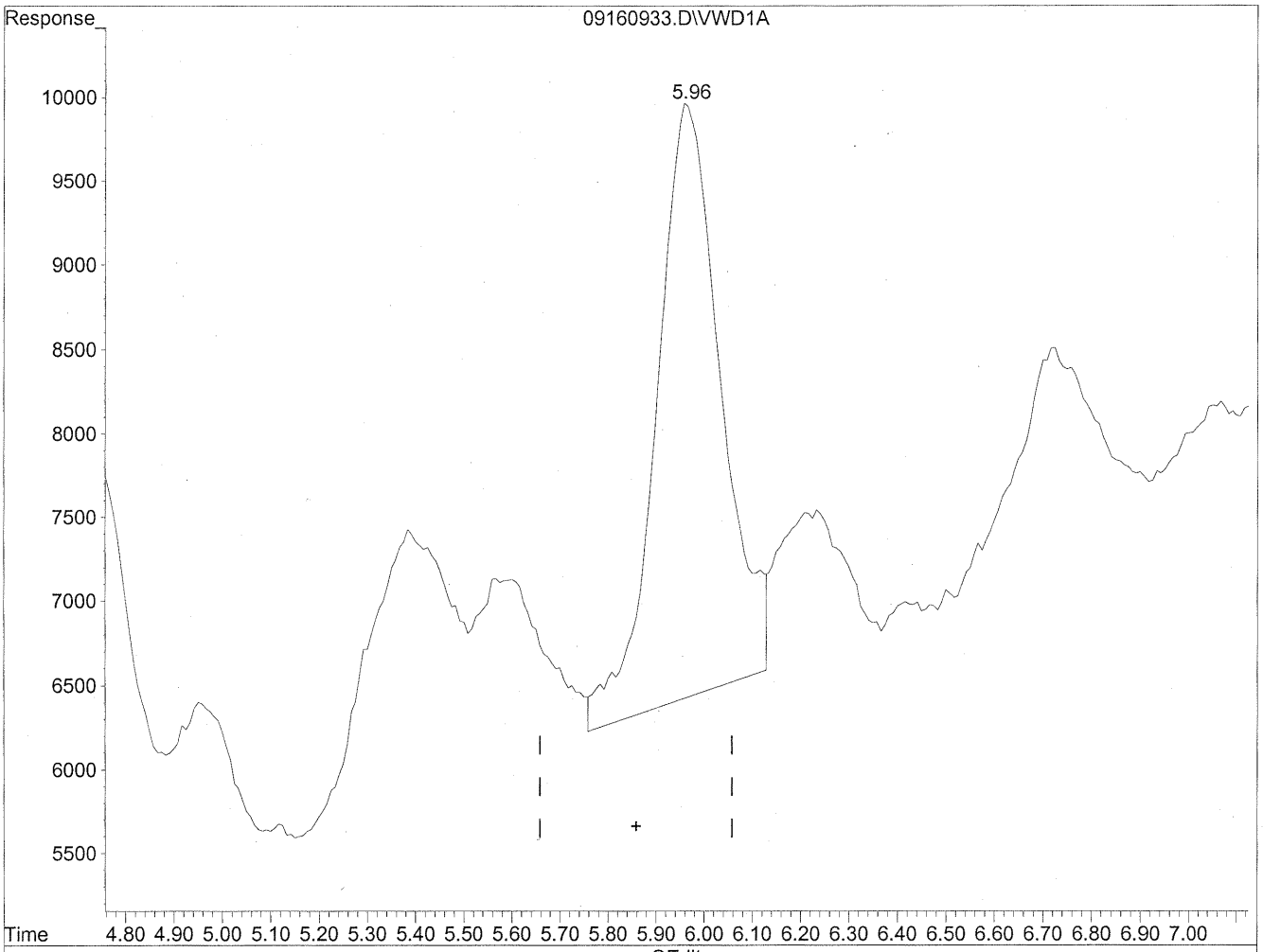
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	537654	60.171	ng/ml
2)	Acetaldehyde	1.91	11999335	1845.825	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/mld
7)	Isovaleraldehyde	0.00	0	N.D.	ng/ml
8)	Valeraldehyde	6.72	115329	33.924	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\16\09160933.D Vial: 117
Acq On : 16-Sep-2009, 17:14 Operator: MD
Sample : P0903147-003 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:28 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.97min 119.358ng/ml

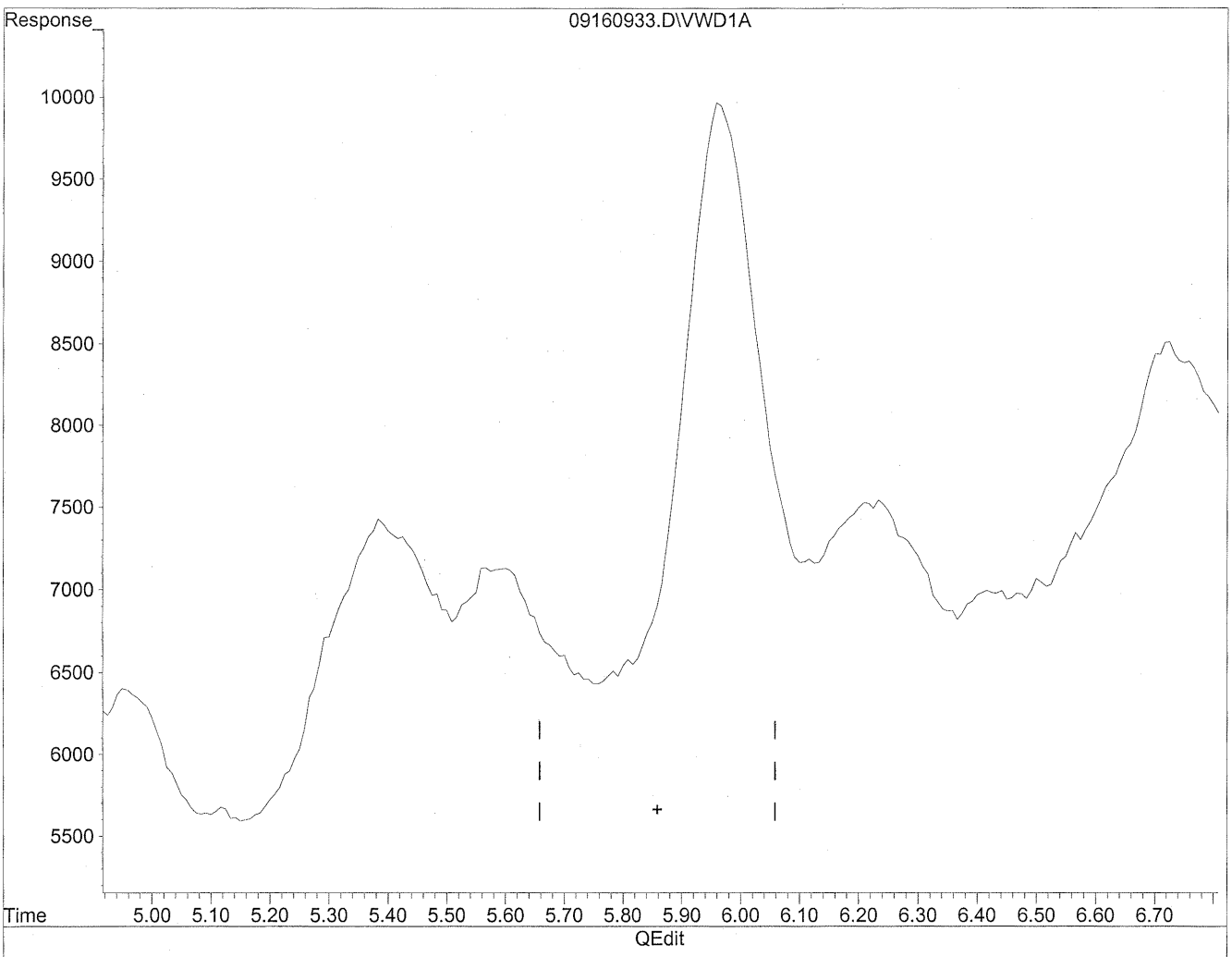
response 325655

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160933.D Vial: 117
Acq On : 16-Sep-2009, 17:14 Operator: MD
Sample : P0903147-003 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:28 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

0.00min 0.000ng/ml d

response 0

MW 9/22/09 not real MP

HC 9/22/09

(+) = Expected Retention Time

09160933.D TO110909.M Mon Sep 21 16:28:59 2009

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **106305**
Client Project ID: **16512**

CAS Project ID: P0903147
CAS Sample ID: P0903147-004

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

Date Collected: 9/3/09
Date Received: 9/4/09
Date Analyzed: 9/16/09
Desorption Volume: 1.0 ml
Volume Sampled: 100.9 Liter(s)

CAS #	Compound	Result ng/Sample	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
50-00-0	**Formaldehyde**	**4,500**	**44**	0.99	**36**	0.81	
75-07-0	**Acetaldehyde**	**5,100**	**50**	0.99	**28**	0.55	**BT**
123-38-6	**Propionaldehyde**	**280**	**2.7**	0.99	**1.2**	0.42	
4170-30-3	Crotonaldehyde, Total	< 100	ND	0.99	ND	0.35	
123-72-8	**Butyraldehyde**	**290**	**2.9**	0.99	**0.98**	0.34	
100-52-7	**Benzaldehyde**	**680**	**6.7**	0.99	**1.5**	0.23	
590-86-3	Isovaleraldehyde	< 100	ND	0.99	ND	0.28	
110-62-3	**Valeraldehyde**	**970**	**9.6**	0.99	**2.7**	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**	**4,200**	**42**	0.99	**10**	0.24	**M**
5779-94-2	2,5-Dimethylbenzaldehyde	< 100	ND	0.99	ND	0.18	

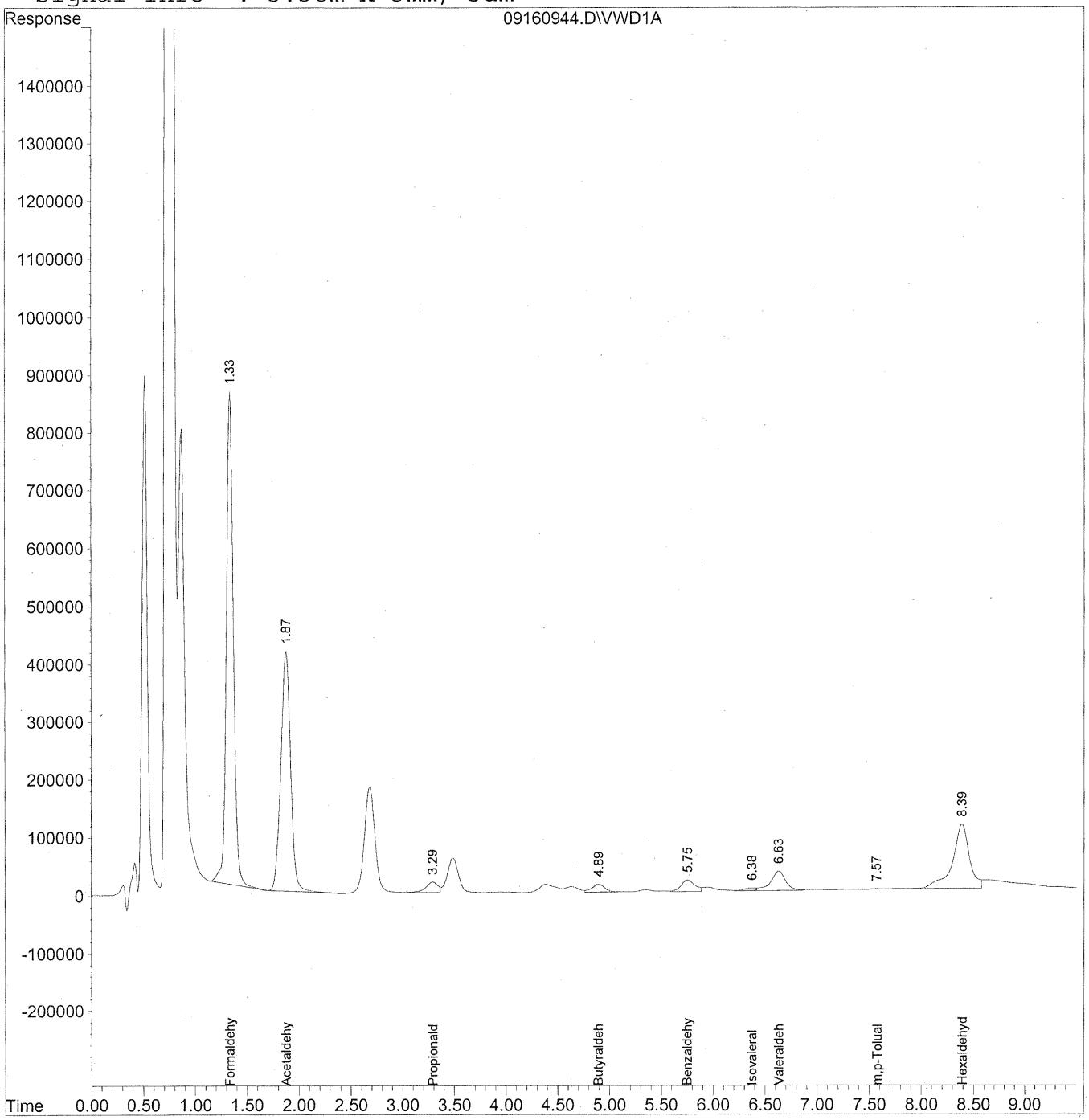
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
BC = Results reported are not blank corrected.
BT = Results indicated possible breakthrough;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

Verified By: Re Date: 9/23/09

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:41 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



62

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:41 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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	39842122	4458.892	ng/ml	
2)	Acetaldehyde	1.88	27252191	4192.131	ng/ml	
3)	Propionaldehyde	3.29	1438604	276.770	ng/mlm	
4)	Crotonaldehyde	0.00	0	N.D.	ng/mld	
5)	Butyraldehyde	4.89	1182019	291.657	ng/mlm	
6)	Benzaldehyde	5.75f	1843646	675.730	ng/mlm	
7)	Isovaleraldehyde	6.38	308251	89.561	ng/ml	
8)	Valeraldehyde	6.63f	3300276	970.772	ng/mlm	
9)	o-Tolualdehyde	0.00	0	N.D.	ng/ml	
10)	m,p-Tolualdehyde	7.58f	73118	31.833	ng/ml	
11)	Hexaldehyde	8.39f	12434477	4199.809	ng/mlm	x
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml	

x m flag.

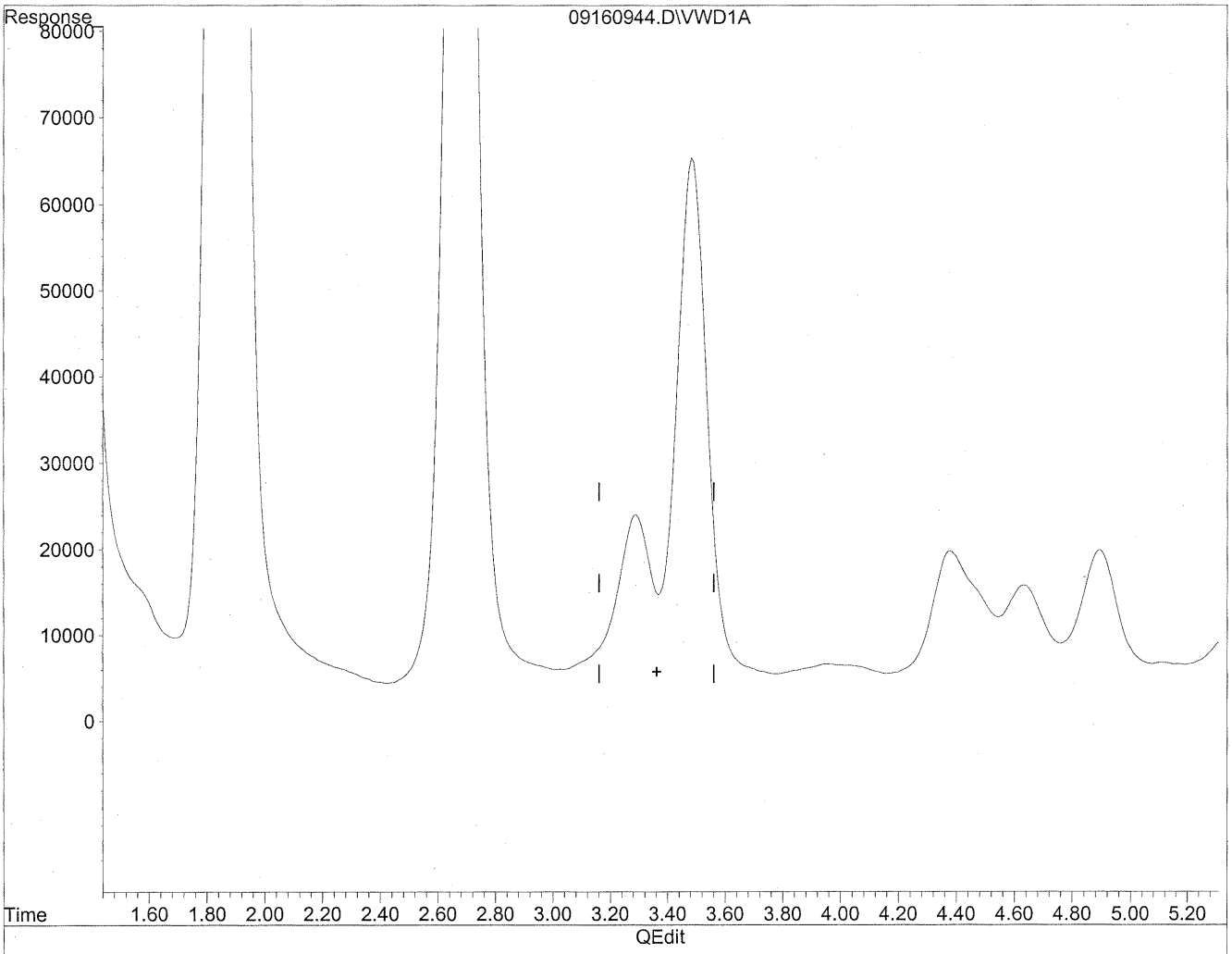
63

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

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.36min 0.000ng/ml

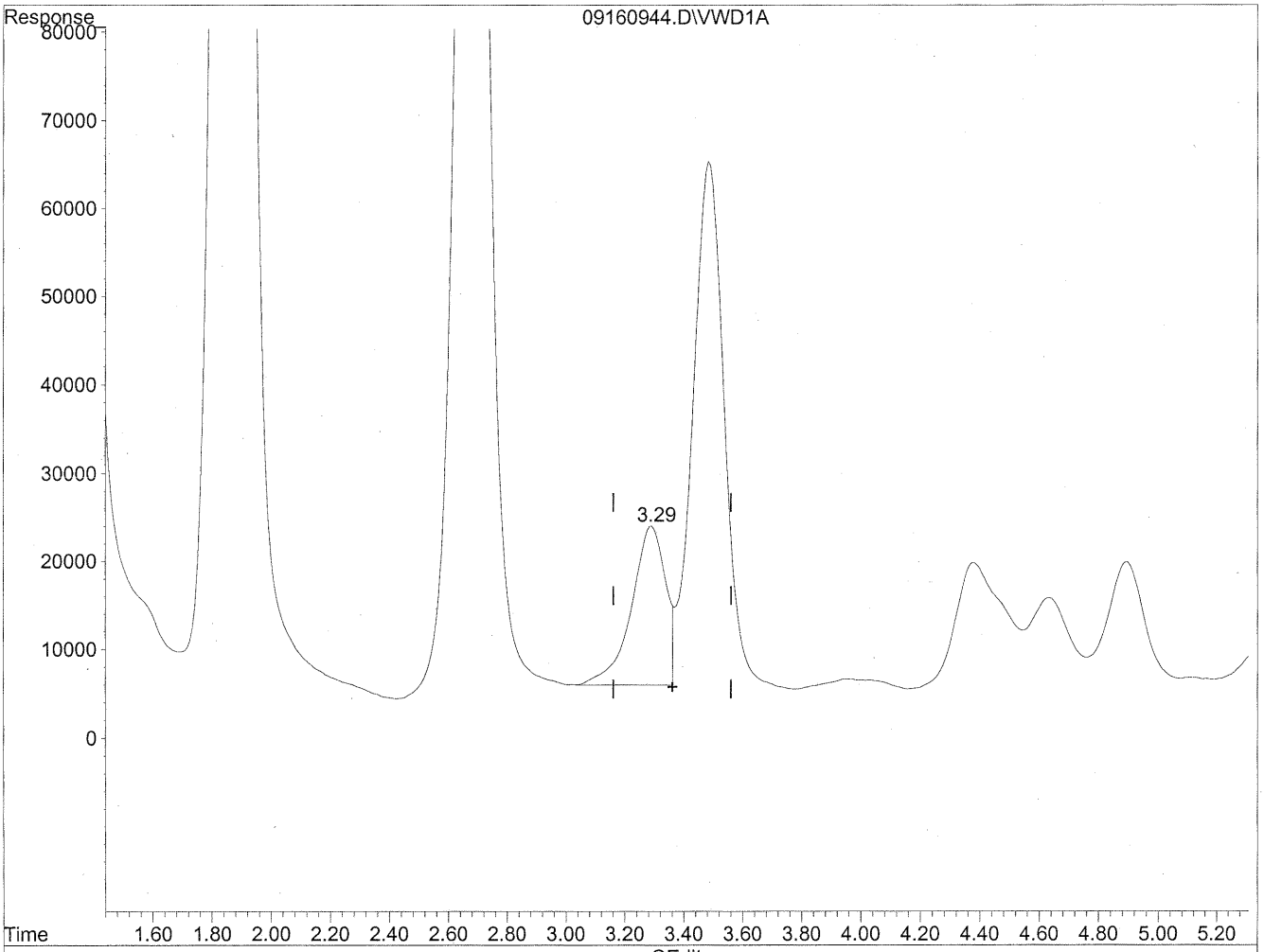
response 0

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(3) Propionaldehyde

3.29min 276.770ng/ml m

response 1438604

MK 9/22/09

MK 9/22/09

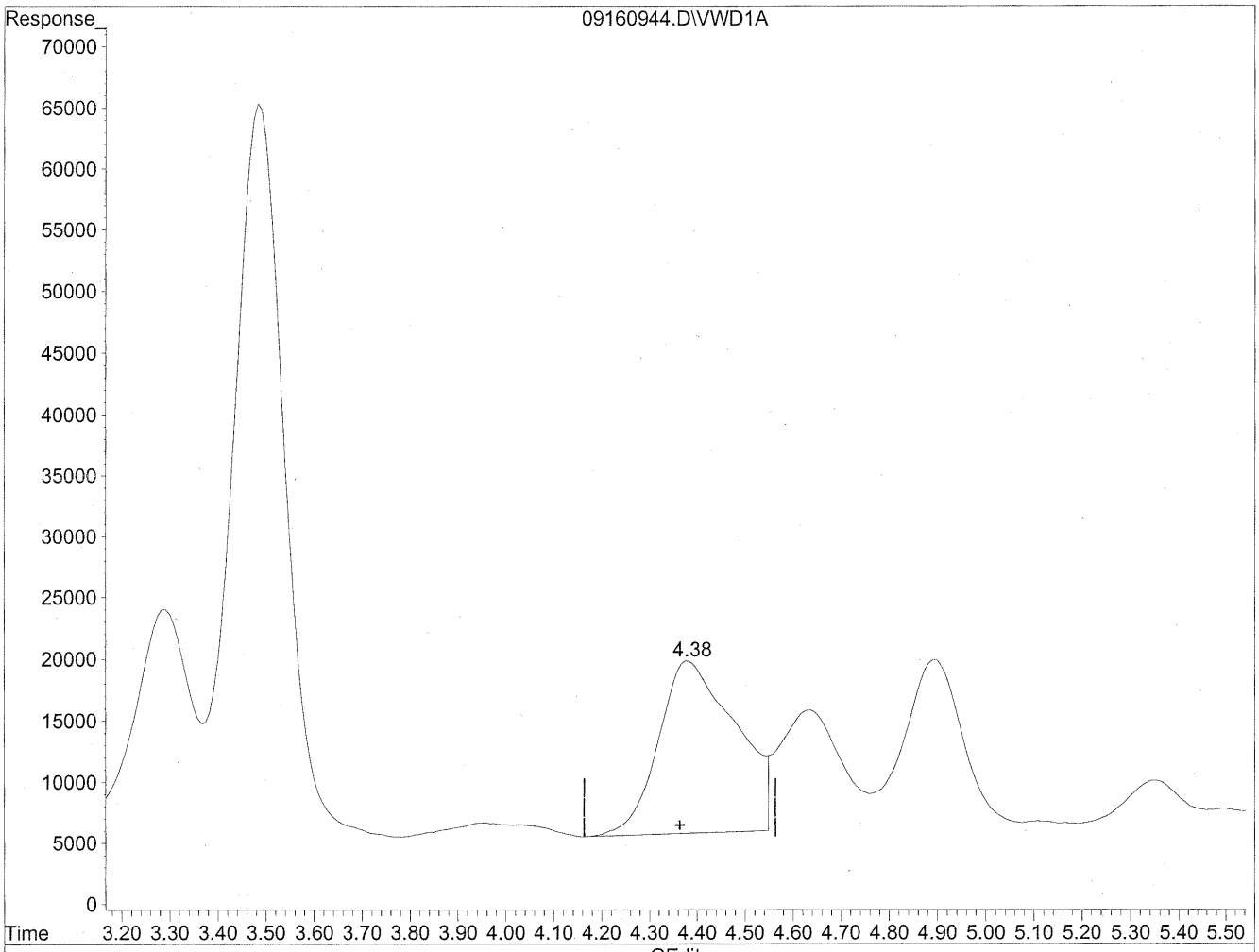
BM

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

4.38min 387.728ng/ml

response 1574010

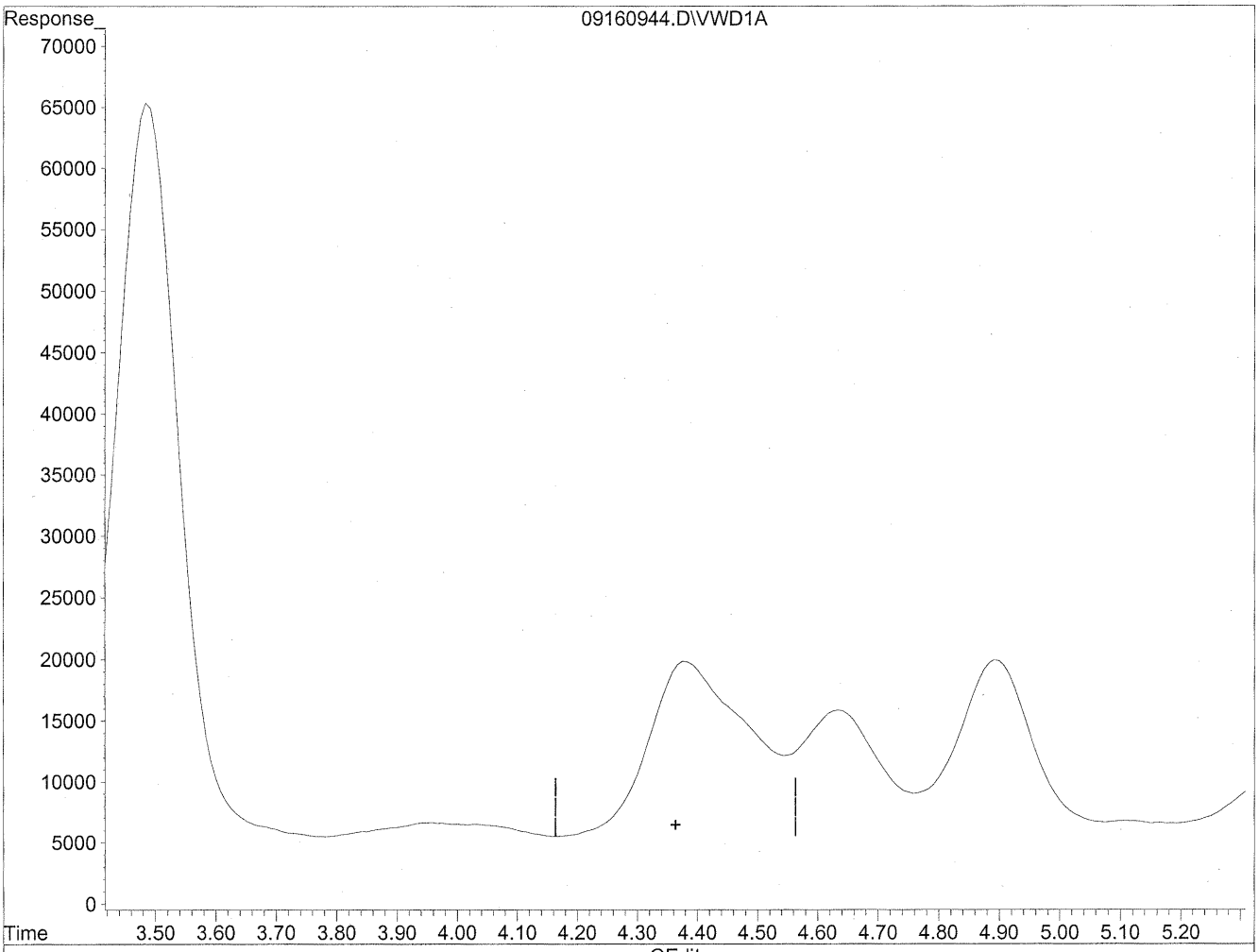
(+) = Expected Retention Time

09160944.D TO110909.M Mon Sep 21 16:40:11 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(4) Crotonaldehyde

0.00min 0.000ng/ml d

response 0

9/22/09 mp

HC 9/22/09

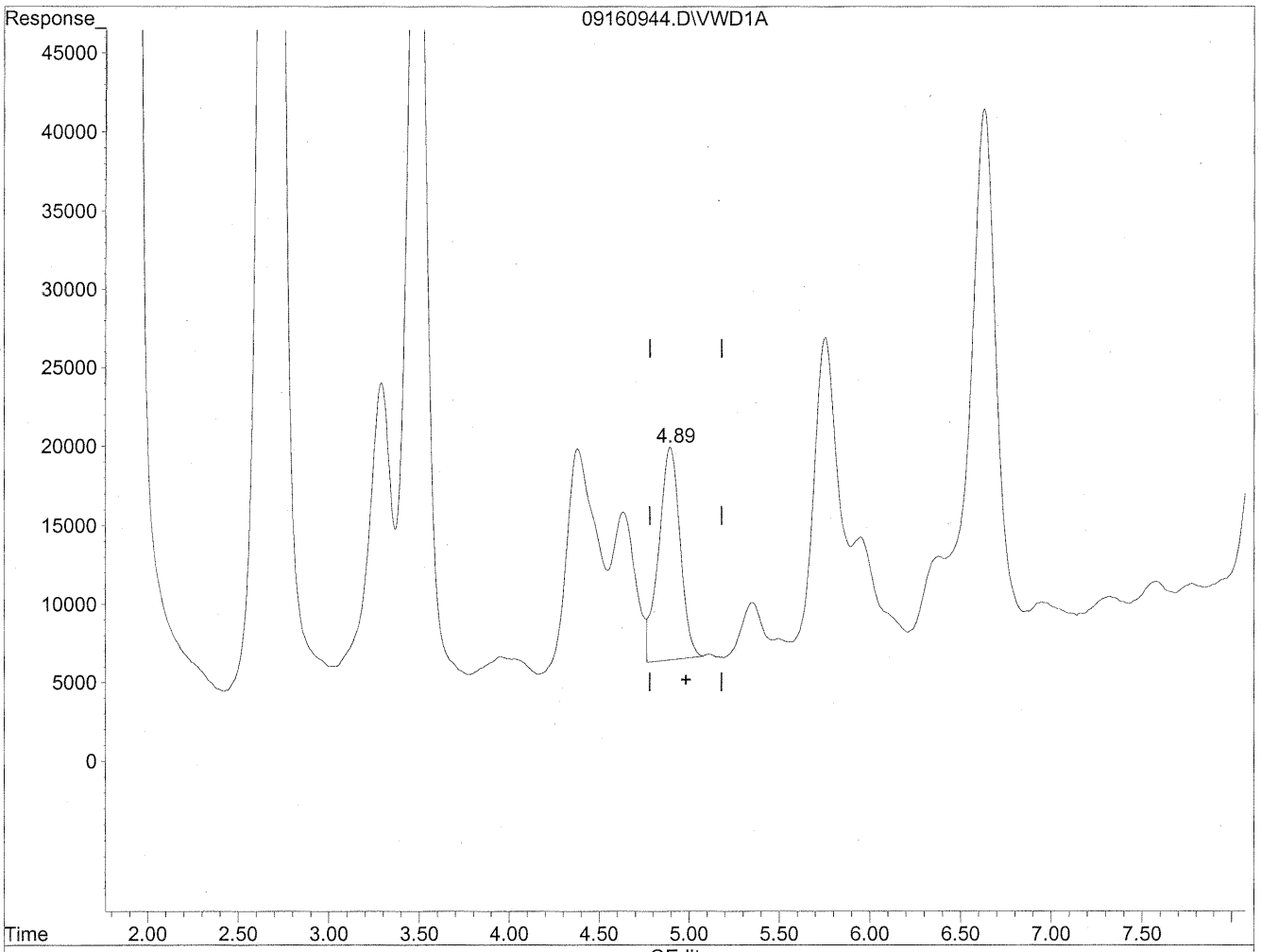
(+) = Expected Retention Time

09160944.D TO110909.M Mon Sep 21 16:40:15 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(5) Butyraldehyde

4.90min 277.404ng/ml

response 1124256

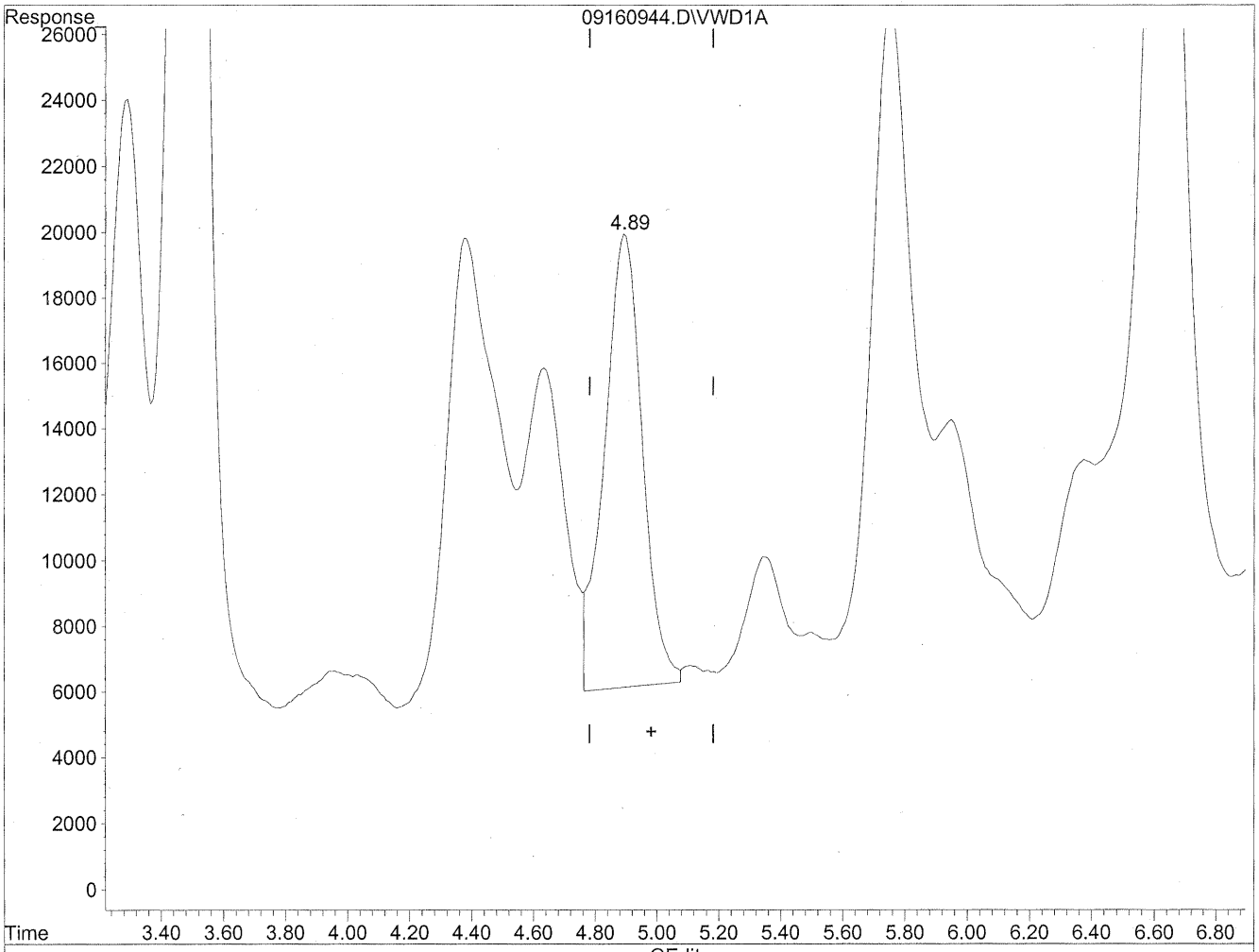
(+) = Expected Retention Time

09160944.D TO110909.M Mon Sep 21 16:40:40 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(5) Butyraldehyde

4.89min 291.657ng/ml m

response 1182019

9/22/09 9/22/09

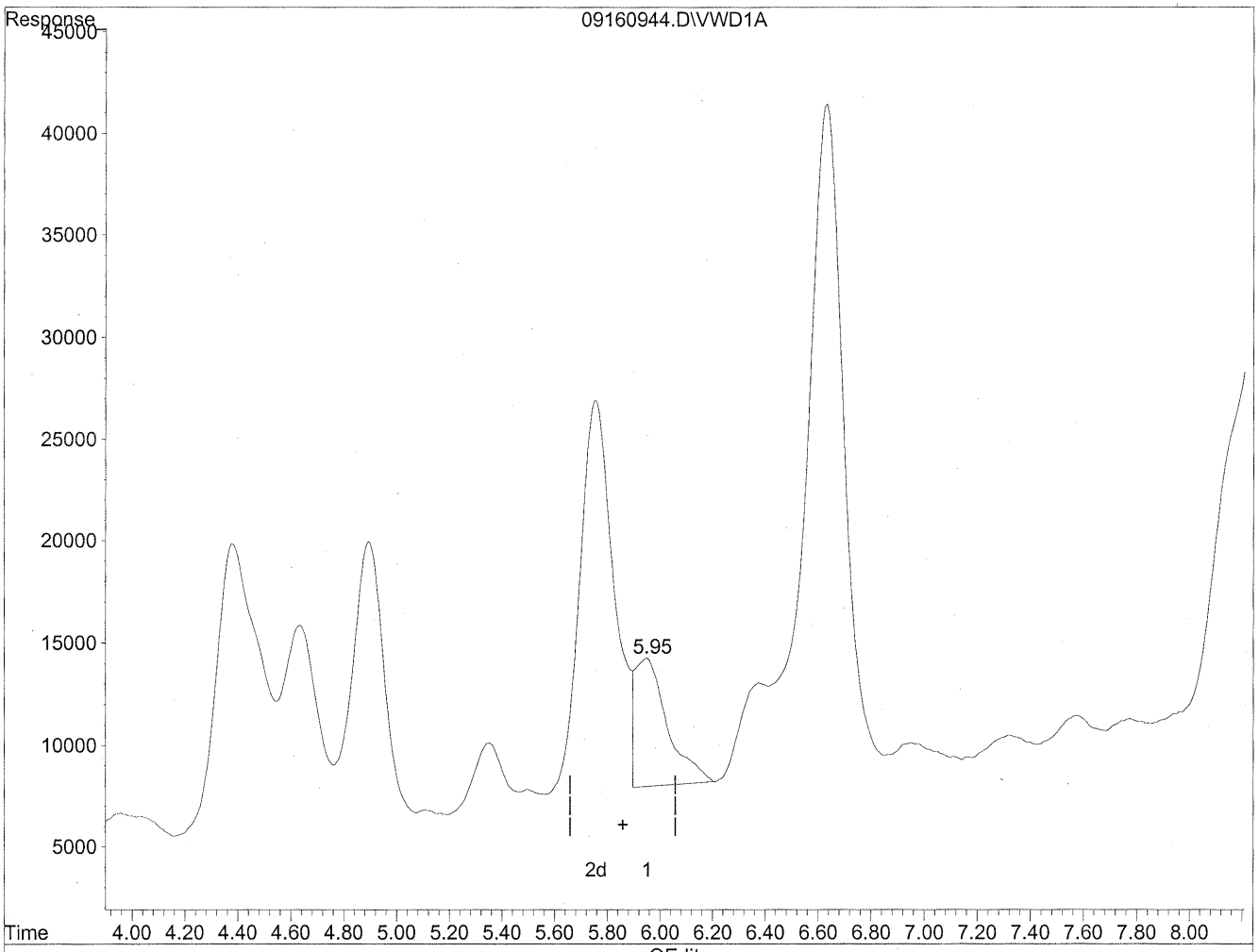
(+) = Expected Retention Time

09160944.D TO110909.M Mon Sep 21 16:40:48 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(6) Benzaldehyde

5.95min 201.982ng/ml

response 551083

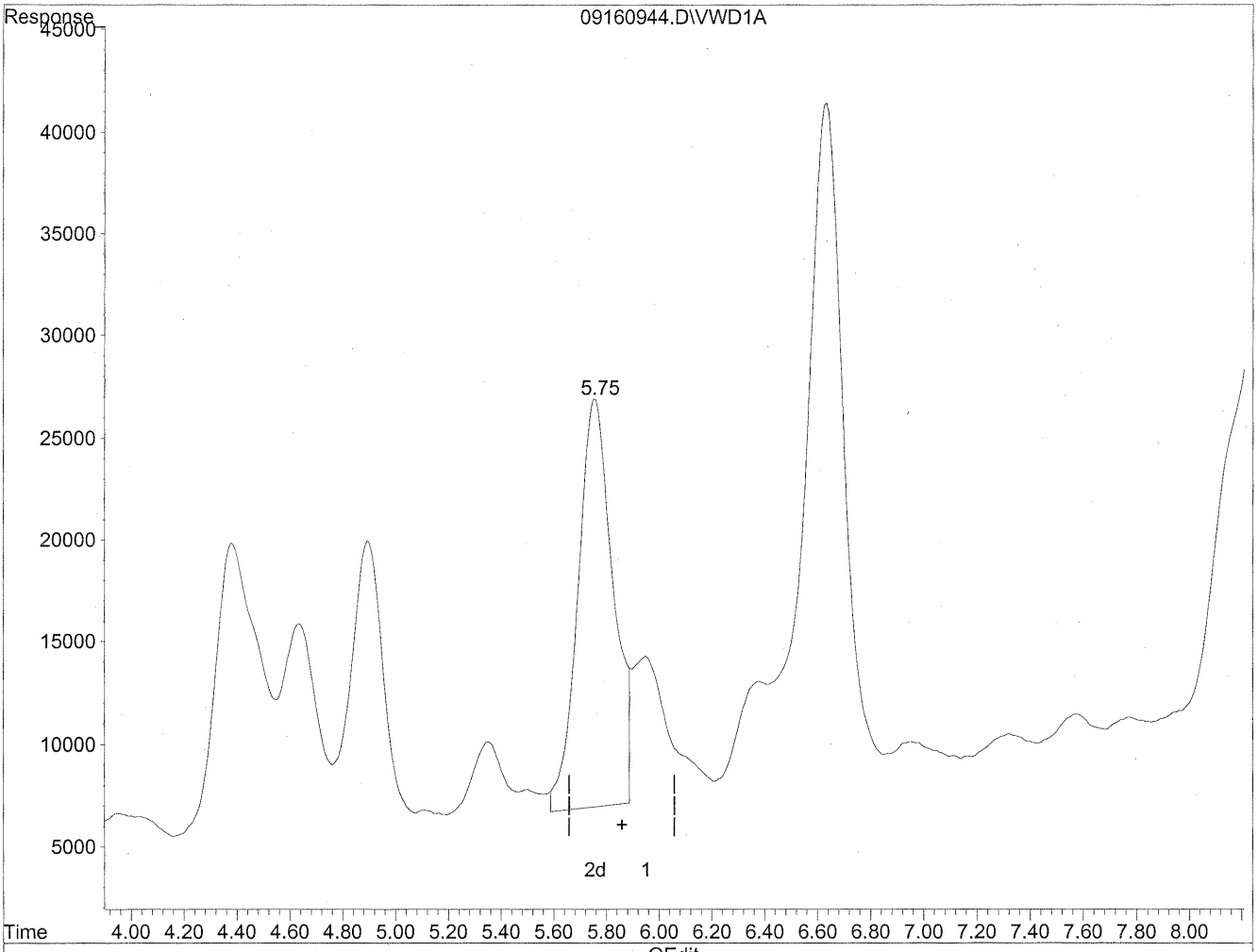
(+) = Expected Retention Time

09160944.D TO110909.M Mon Sep 21 16:40:55 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(6) Benzaldehyde

5.75min 675.730ng/ml m

response 1843646

tlc 9/22/09

9/22/09 TPI

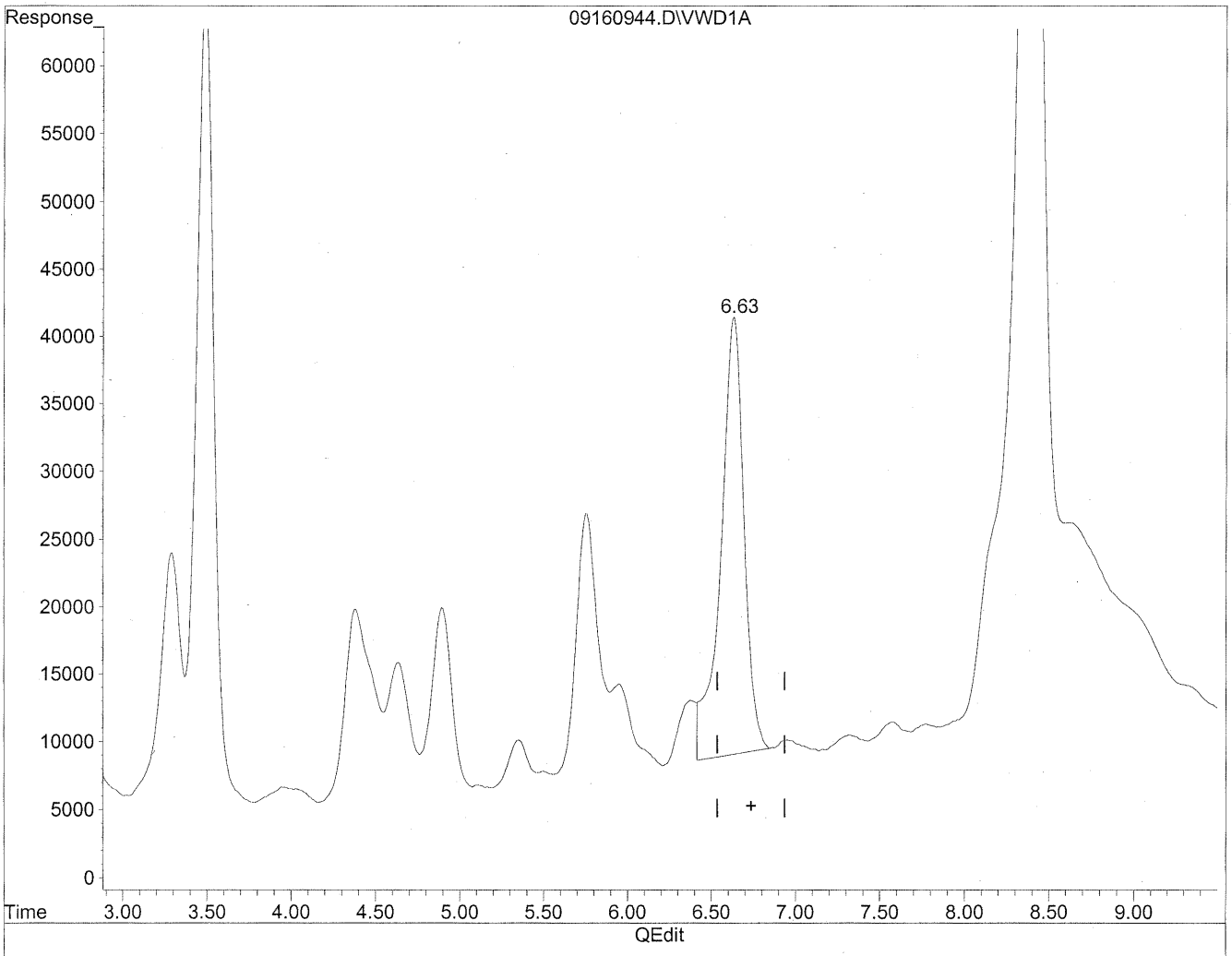
(+) = Expected Retention Time

09160944.D TO110909.M Mon Sep 21 16:41:12 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(8) Valeraldehyde

6.63min 921.095ng/ml

response 3131390

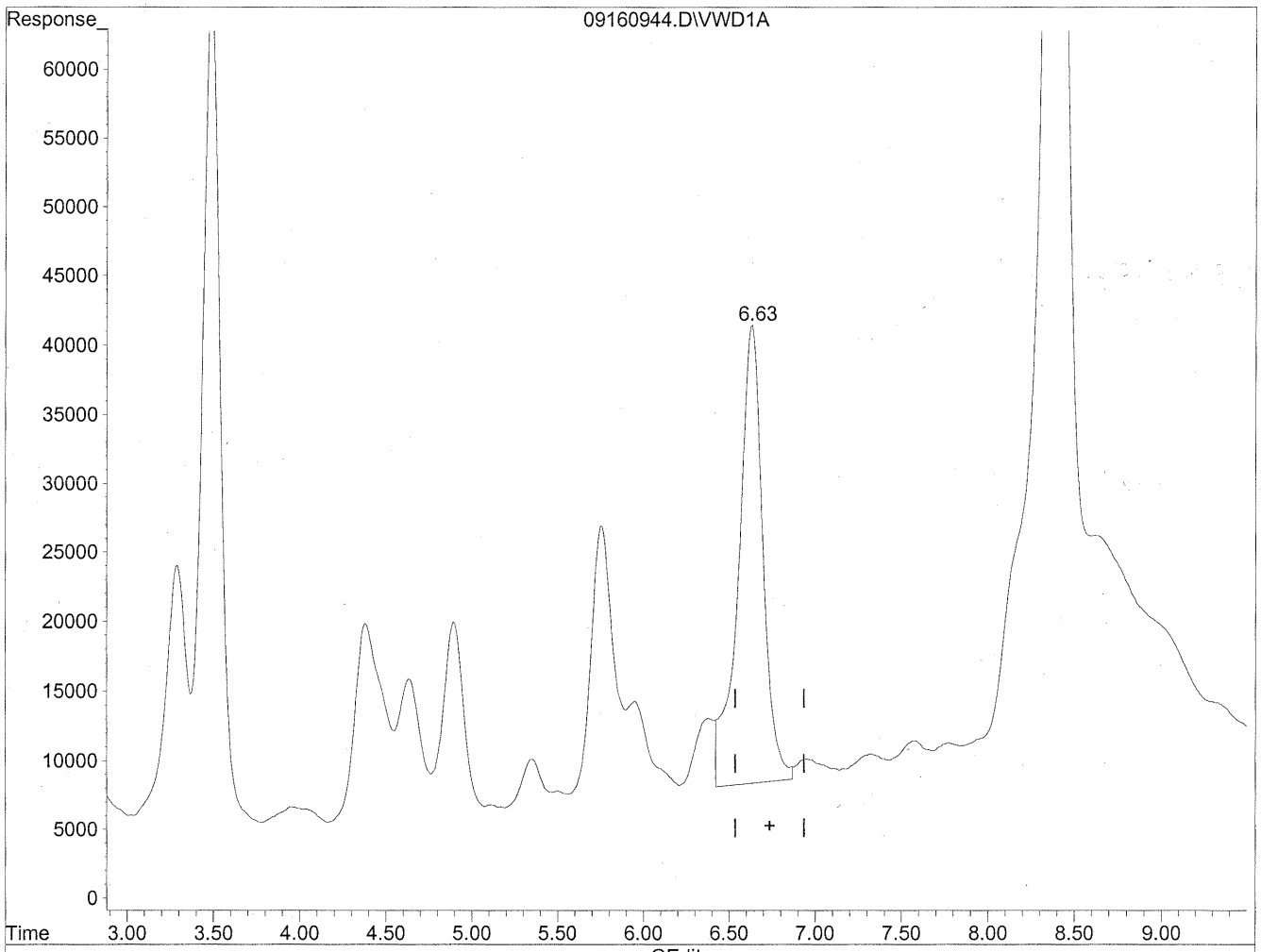
(+) = Expected Retention Time

09160944.D TO110909.M Mon Sep 21 16:41:26 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(8) Valeraldehyde

6.63min 970.772ng/ml m

response 3300276

9/22/09

9/22/09

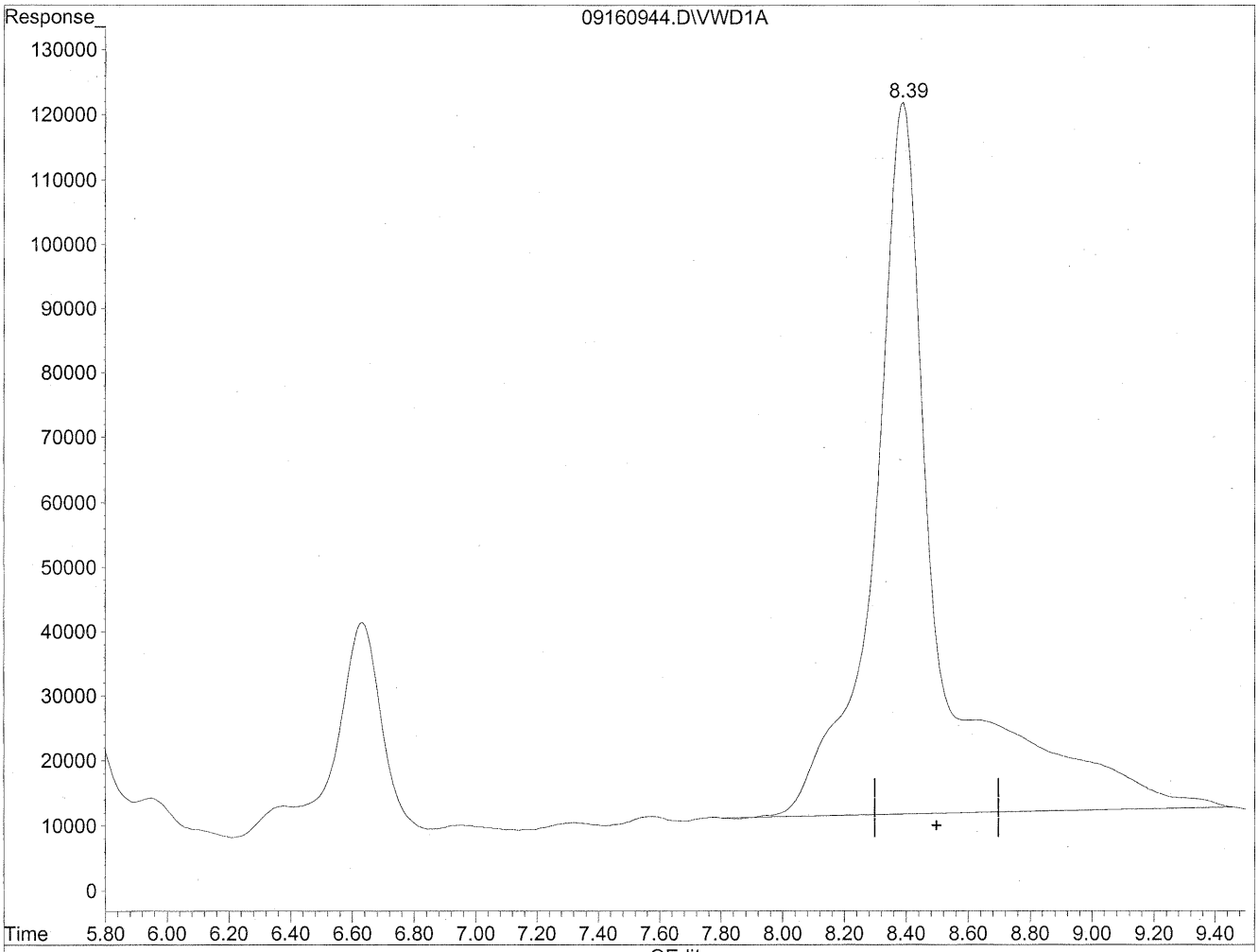
(+) = Expected Retention Time

09160944.D TO110909.M Mon Sep 21 16:41:33 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.39min 5404.144ng/ml

response 16000182

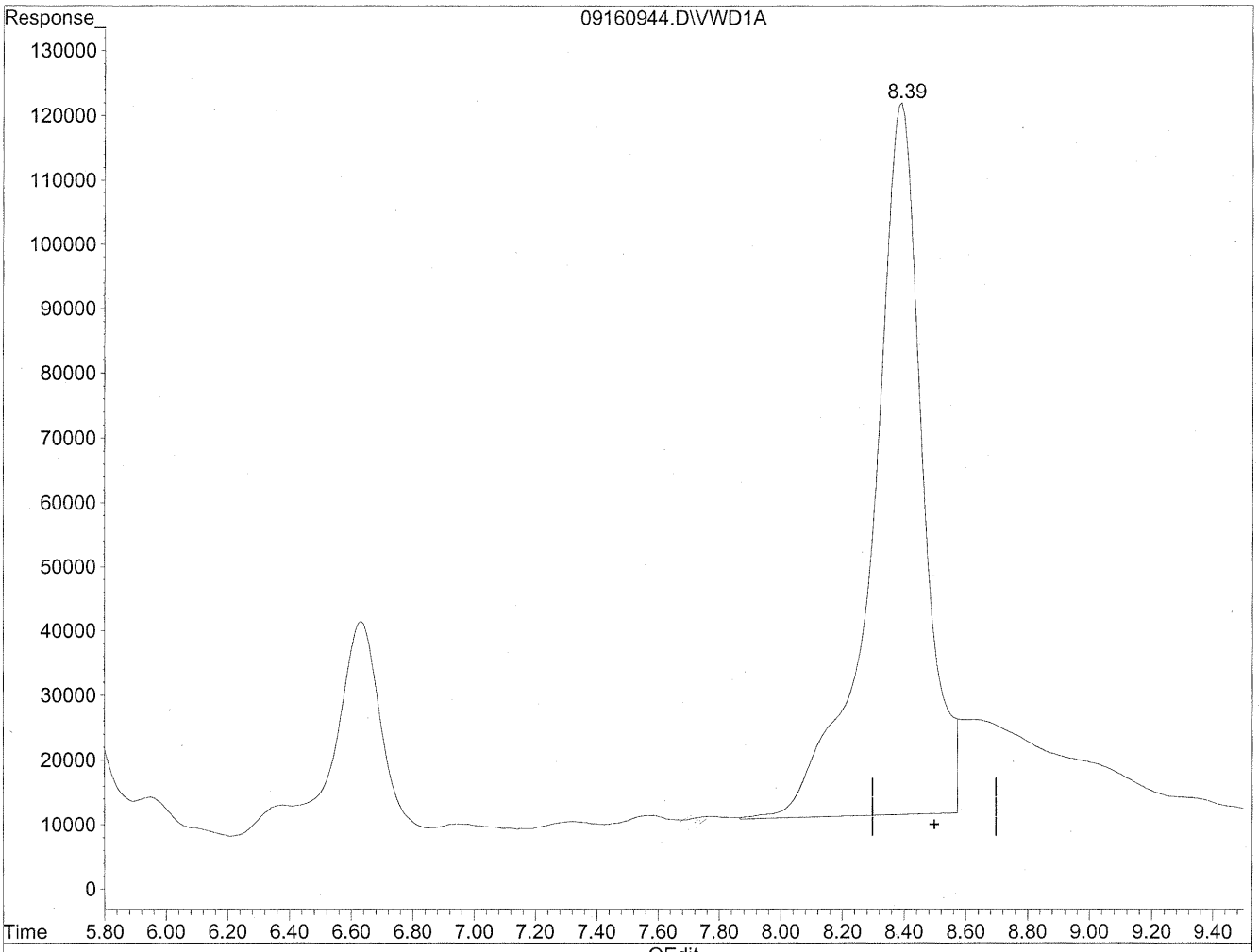
(+) = Expected Retention Time

09160944.D TO110909.M Mon Sep 21 16:41:42 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160944.D Vial: 126
Acq On : 16-Sep-2009, 19:25 Operator: MD
Sample : P0903147-004 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:39 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.39min 4199.809ng/ml m

response 12434477

HC 9/22/09

mw 9/22/09 SH (m flag)

(+) = Expected Retention Time

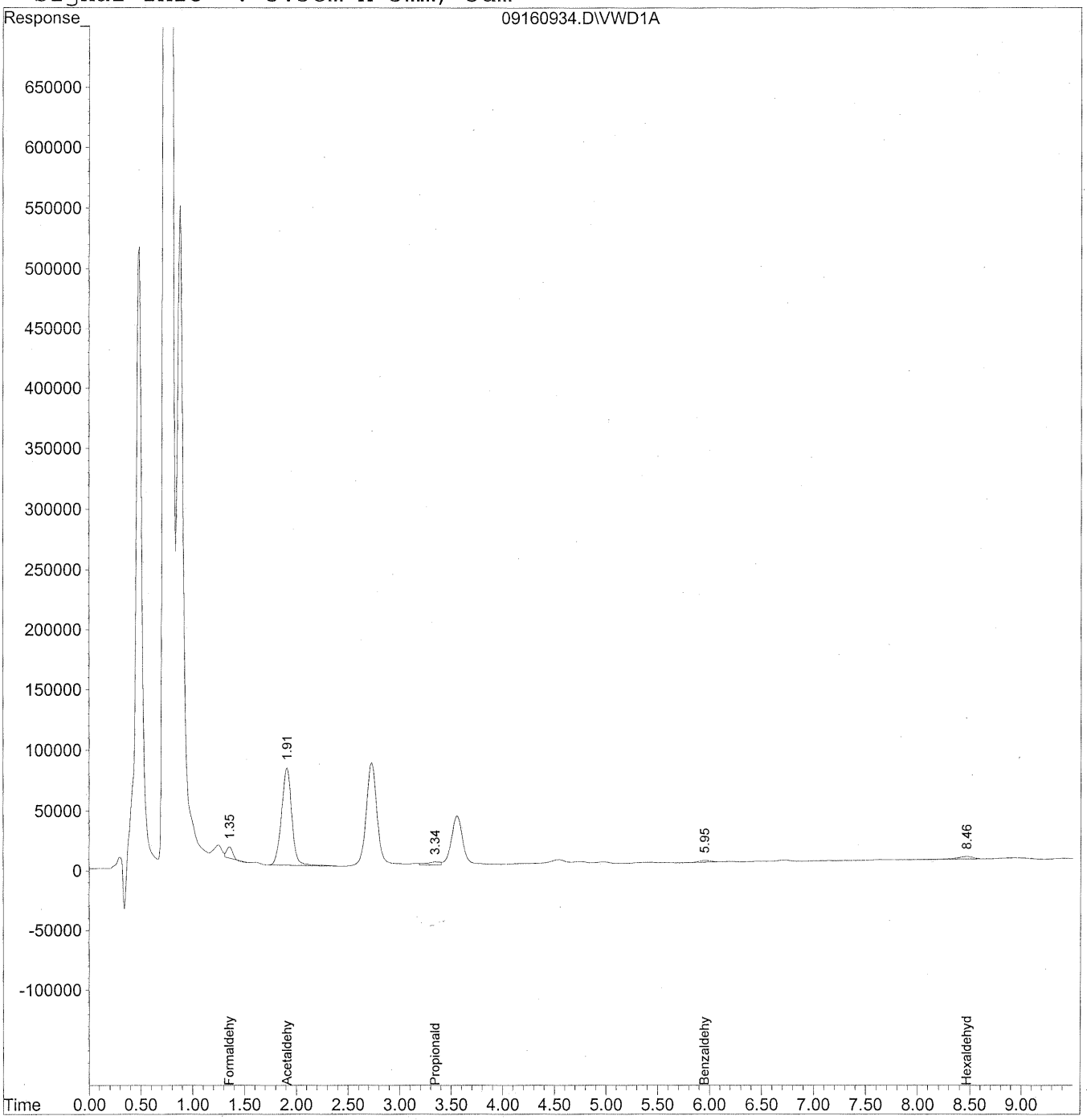
09160944.D TO110909.M Mon Sep 21 16:41:47 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160934.D Vial: 118
Acq On : 16-Sep-2009, 17:26 Operator: MD
Sample : P0903147-004 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:29 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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\16\09160934.D Vial: 118
Acq On : 16-Sep-2009, 17:26 Operator: MD
Sample : P0903147-004 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:29 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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	364567	40.800	ng/ml
2)	Acetaldehyde	1.91	5599615	861.374	ng/ml
3)	Propionaldehyde	3.34	245205	47.175	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	5.96	115832	42.454	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	8.47	246263	83.177	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: **106306**
Client Project ID: **16512**

CAS Project ID: P0903147
CAS Sample ID: P0903147-005

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

Date Collected: 9/3/09
Date Received: 9/4/09
Date Analyzed: 9/16/09
Desorption Volume: 1.0 ml
Volume Sampled: 93.5 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	1.1	ND	0.87	
75-07-0	Acetaldehyde	< 100	ND	1.1	ND	0.59	
123-38-6	Propionaldehyde	< 100	ND	1.1	ND	0.45	
4170-30-3	Crotonaldehyde, Total	< 100	ND	1.1	ND	0.37	
123-72-8	Butyraldehyde	< 100	ND	1.1	ND	0.36	
100-52-7	Benzaldehyde	< 100	ND	1.1	ND	0.25	
590-86-3	Isovaleraldehyde	< 100	ND	1.1	ND	0.30	
110-62-3	Valeraldehyde	< 100	ND	1.1	ND	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	0.44	
66-25-1	n-Hexaldehyde	< 100	ND	1.1	ND	0.26	
5779-94-2	**2,5-Dimethylbenzaldehyde**	**110**	**1.2**	1.1	**0.21**	0.19	**BH**

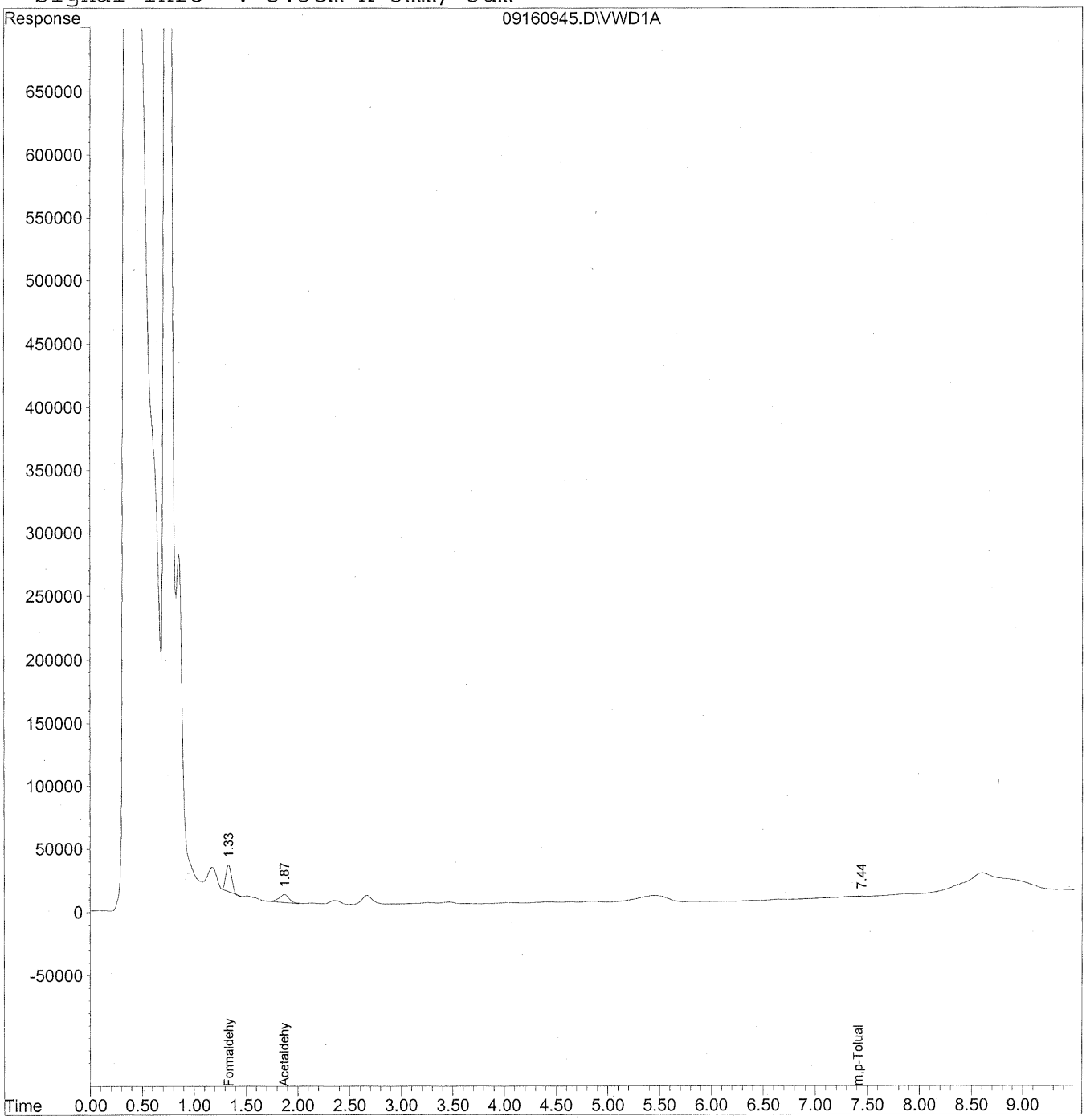
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
BC = Results reported are not blank corrected.
BH = The back section of the tube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

Verified By: Rev Date: 9/23/09

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160945.D Vial: 127
Acq On : 16-Sep-2009, 19:37 Operator: MD
Sample : P0903147-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:42 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



79

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160945.D Vial: 127
Acq On : 16-Sep-2009, 19:37 Operator: MD
Sample : P0903147-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:42 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

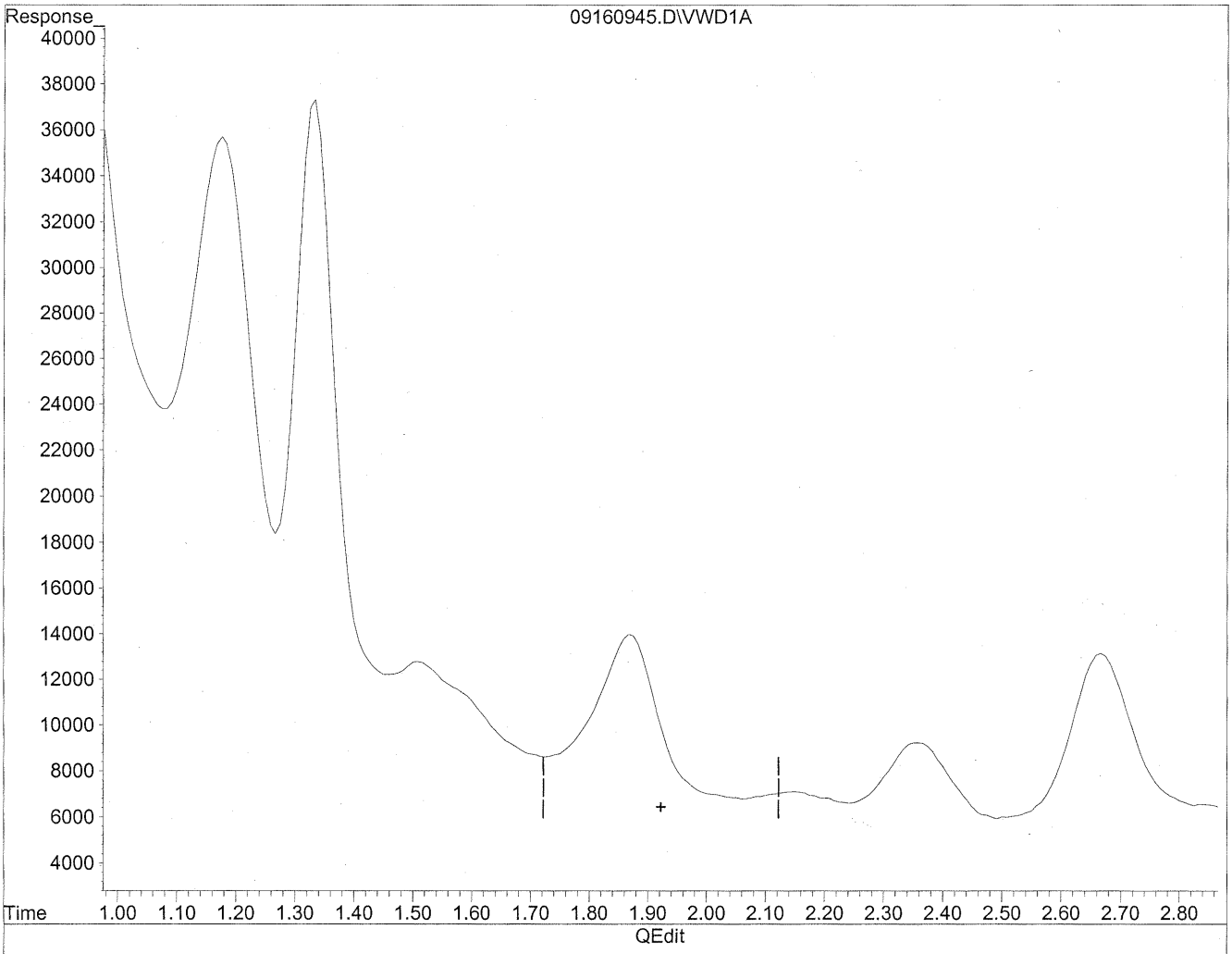
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.33	824213	92.241	ng/ml
2)	Acetaldehyde	1.87	418875	64.434	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	7.42	19903	8.665	ng/ml
11)	Hexaldehyde	0.00	0	N.D.	ng/mld
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/mld

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160945.D Vial: 127
Acq On : 16-Sep-2009, 19:37 Operator: MD
Sample : P0903147-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:41 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.92min 0.000ng/ml

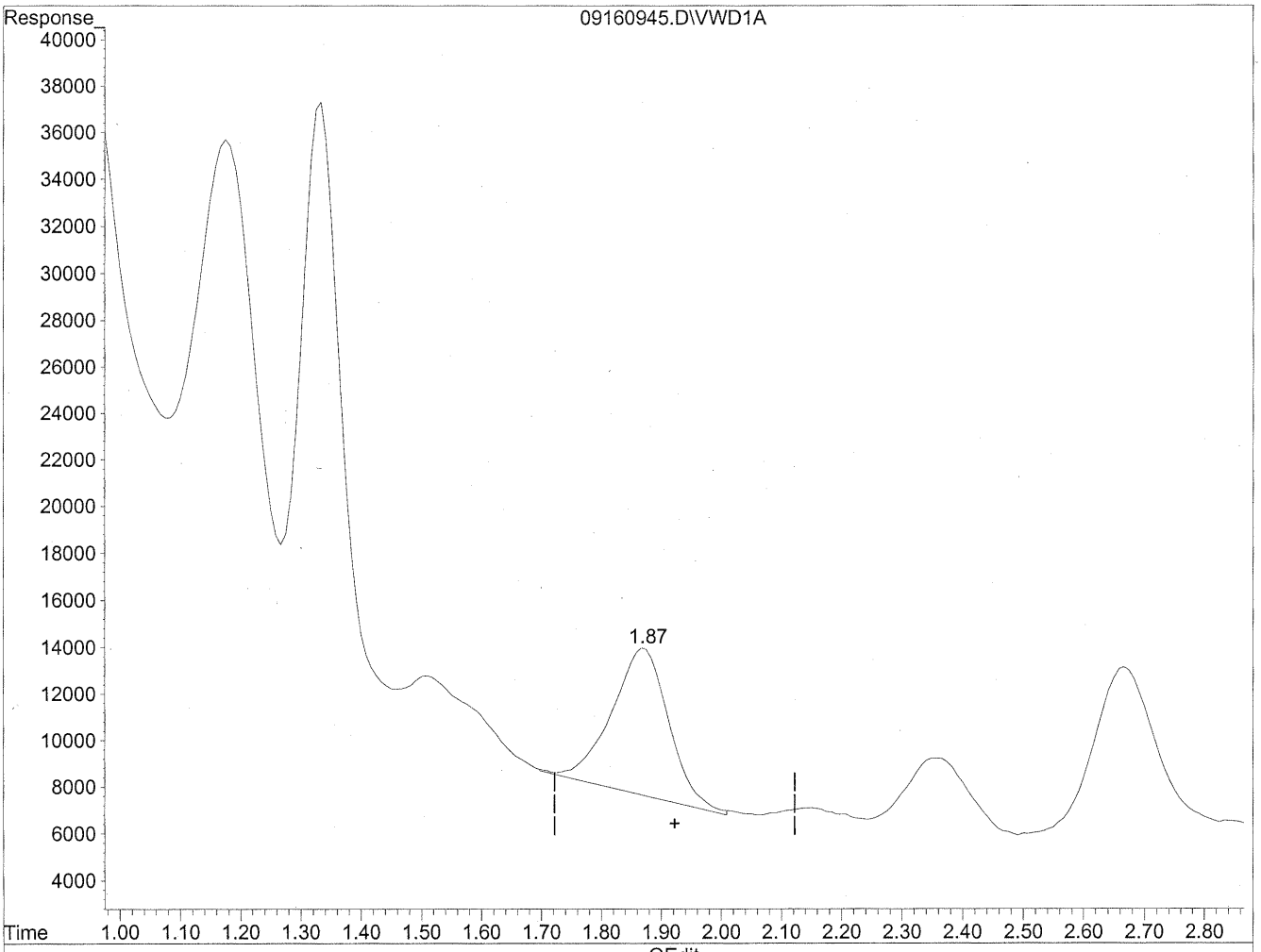
response 0

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160945.D Vial: 127
Acq On : 16-Sep-2009, 19:37 Operator: MD
Sample : P0903147-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:41 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.87min 64.434ng/ml m

response 418875

HC 9/22/09

9/22/09

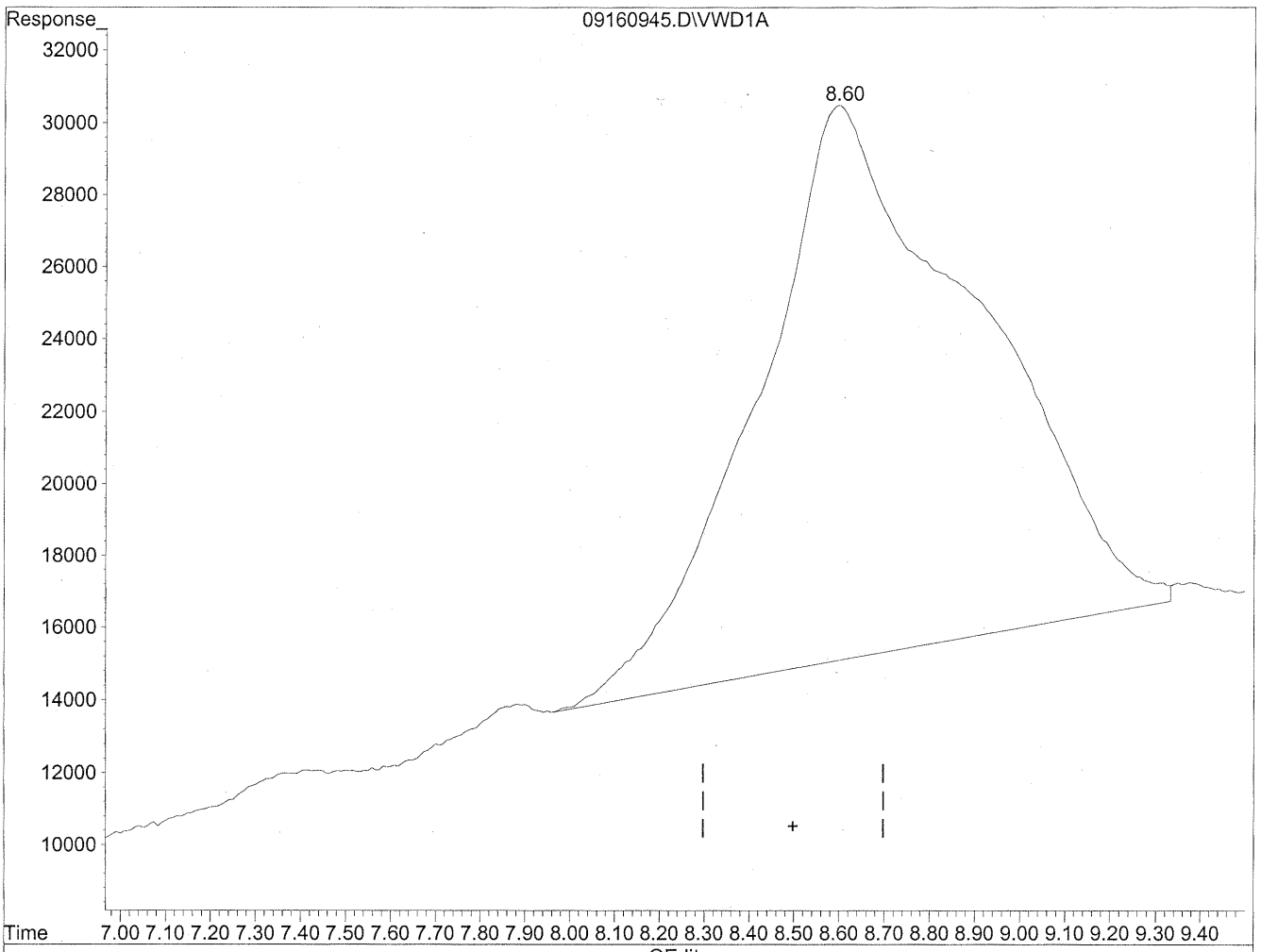
(+) = Expected Retention Time

09160945.D TO110909.M Mon Sep 21 16:42:13 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160945.D Vial: 127
Acq On : 16-Sep-2009, 19:37 Operator: MD
Sample : P0903147-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:41 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.60min 1756.334ng/ml

response 5200022

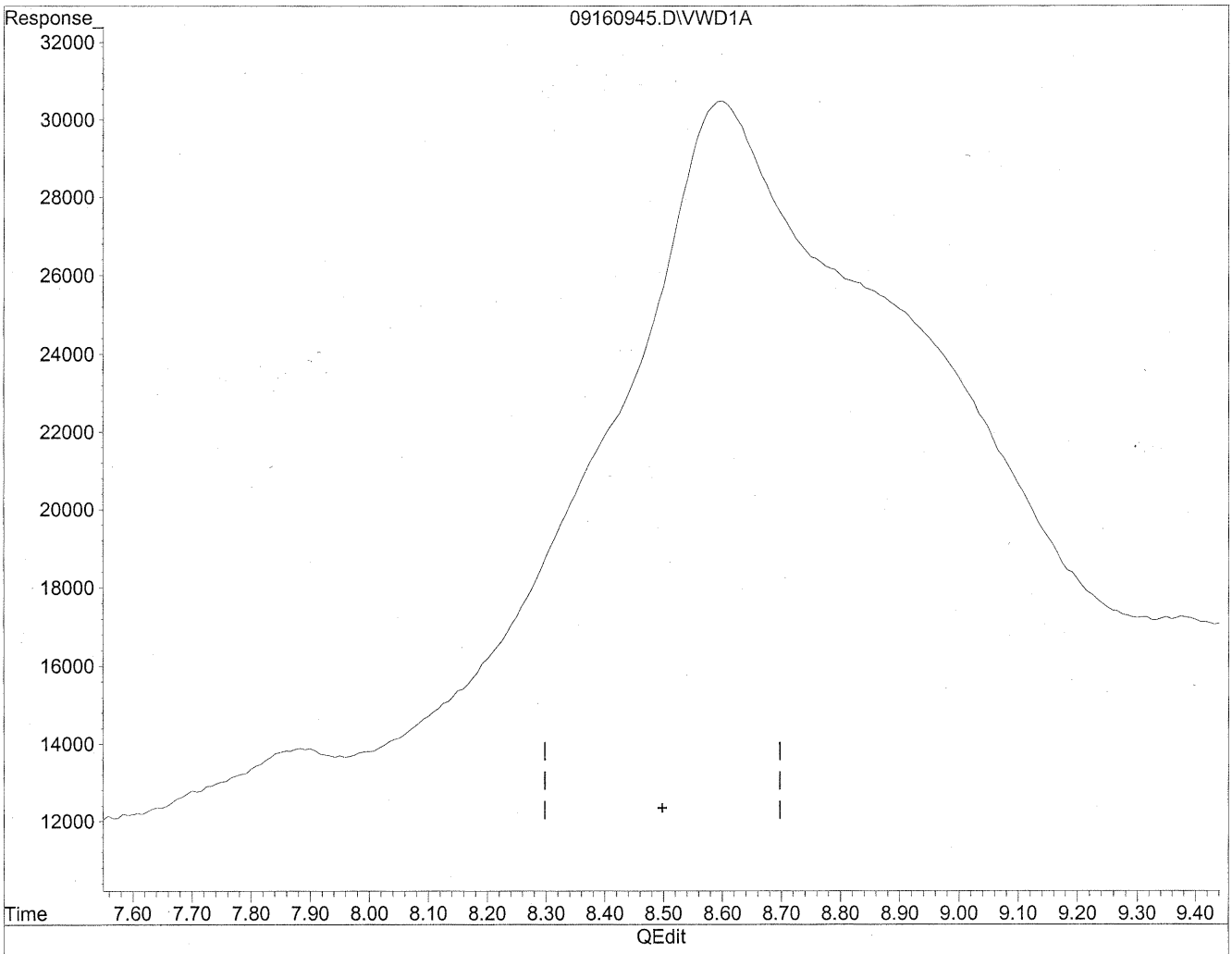
(+) = Expected Retention Time

09160945.D TO110909.M Mon Sep 21 16:42:22 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160945.D Vial: 127
Acq On : 16-Sep-2009, 19:37 Operator: MD
Sample : P0903147-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:41 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

0.00min 0.000ng/ml d

response 0

HC 9/22/09

MD 9/22/09 not real

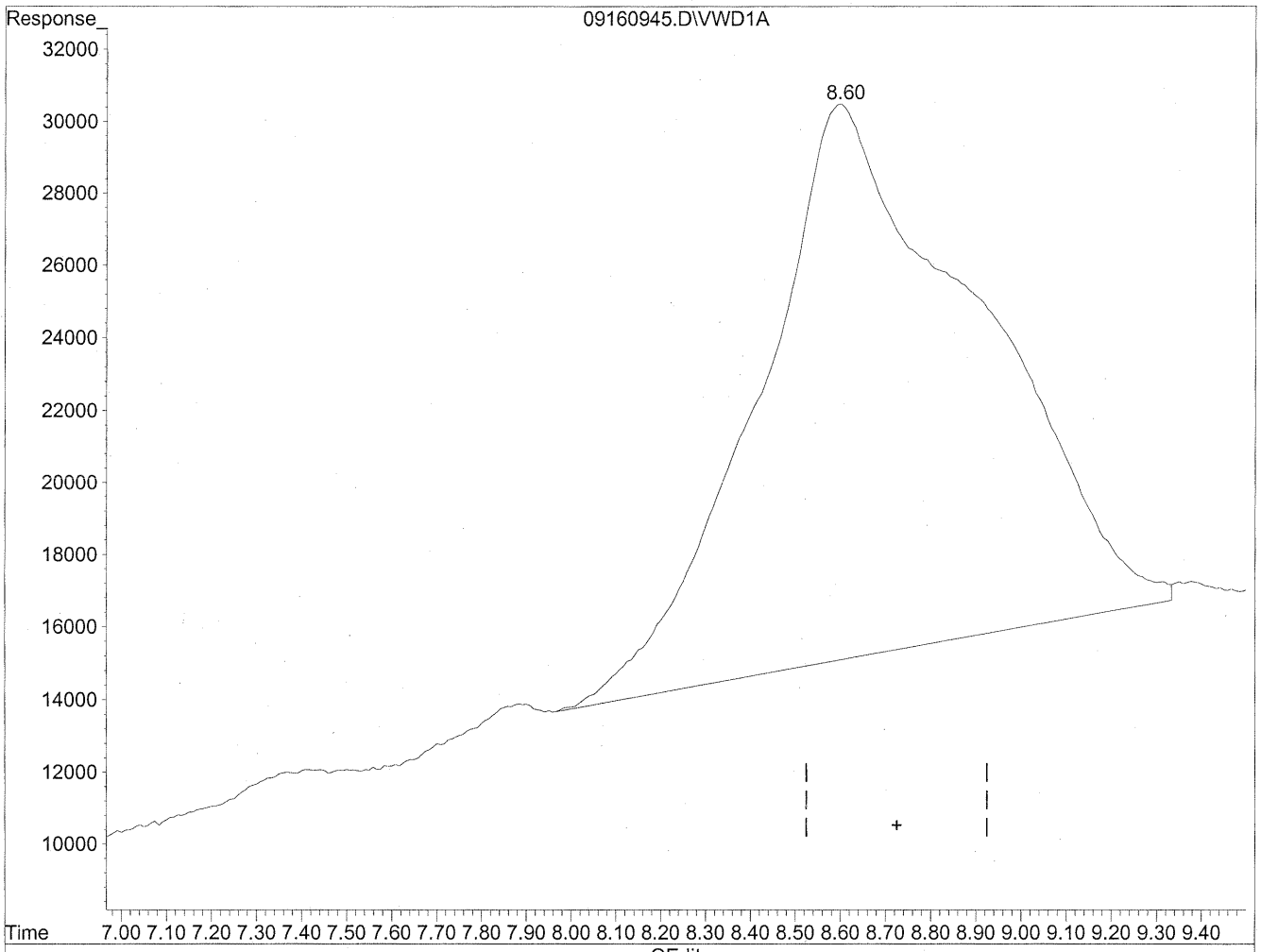
(+) = Expected Retention Time

09160945.D TO110909.M Mon Sep 21 16:42:25 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160945.D Vial: 127
Acq On : 16-Sep-2009, 19:37 Operator: MD
Sample : P0903147-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:41 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(12) 2,5-Dimethylbenzaldehyde

8.60min 2605.885ng/ml

response 5200022

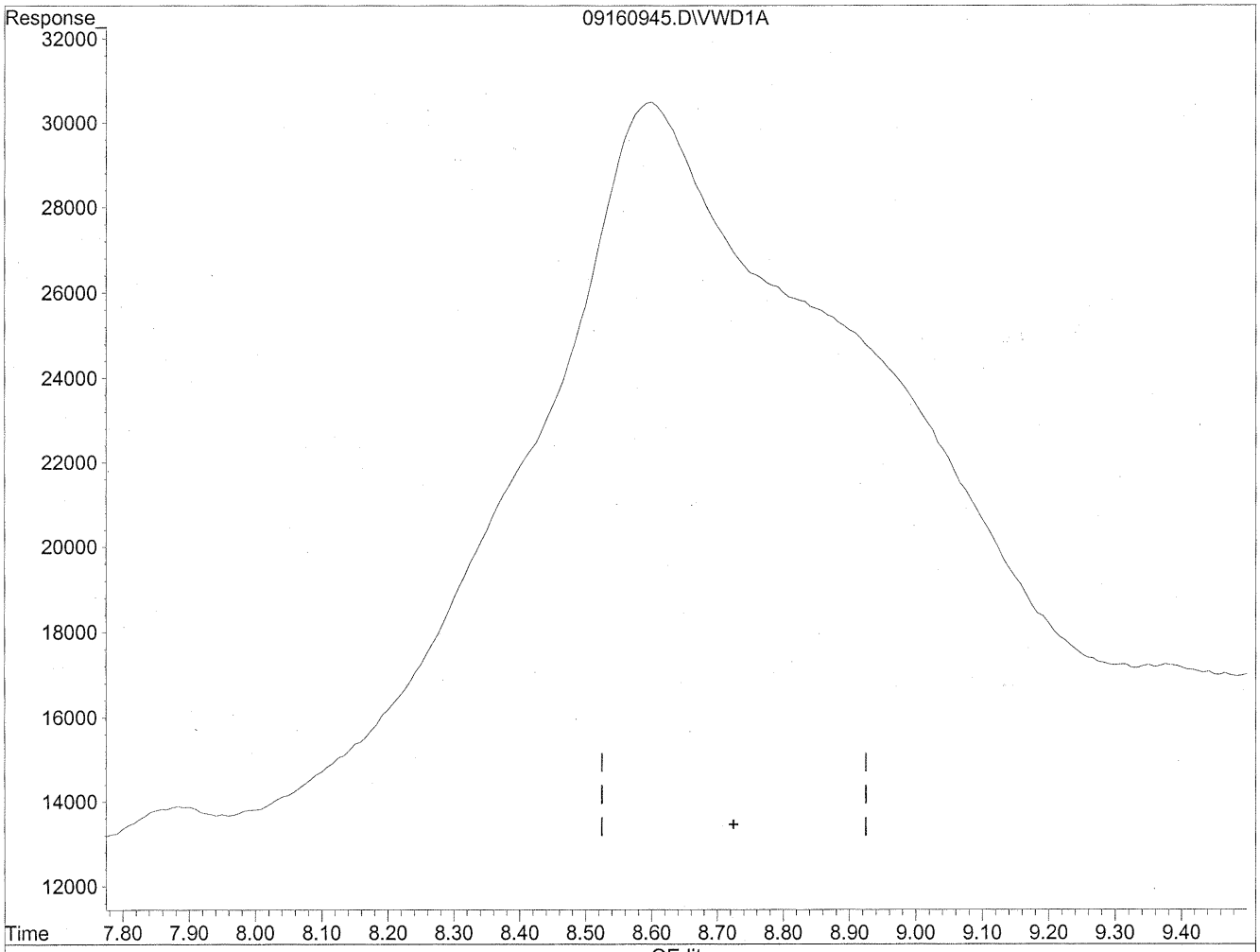
(+) = Expected Retention Time

09160945.D TO110909.M Mon Sep 21 16:42:32 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160945.D Vial: 127
Acq On : 16-Sep-2009, 19:37 Operator: MD
Sample : P0903147-005 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:41 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

MC 9/22/09

MC 9/22/09 not real

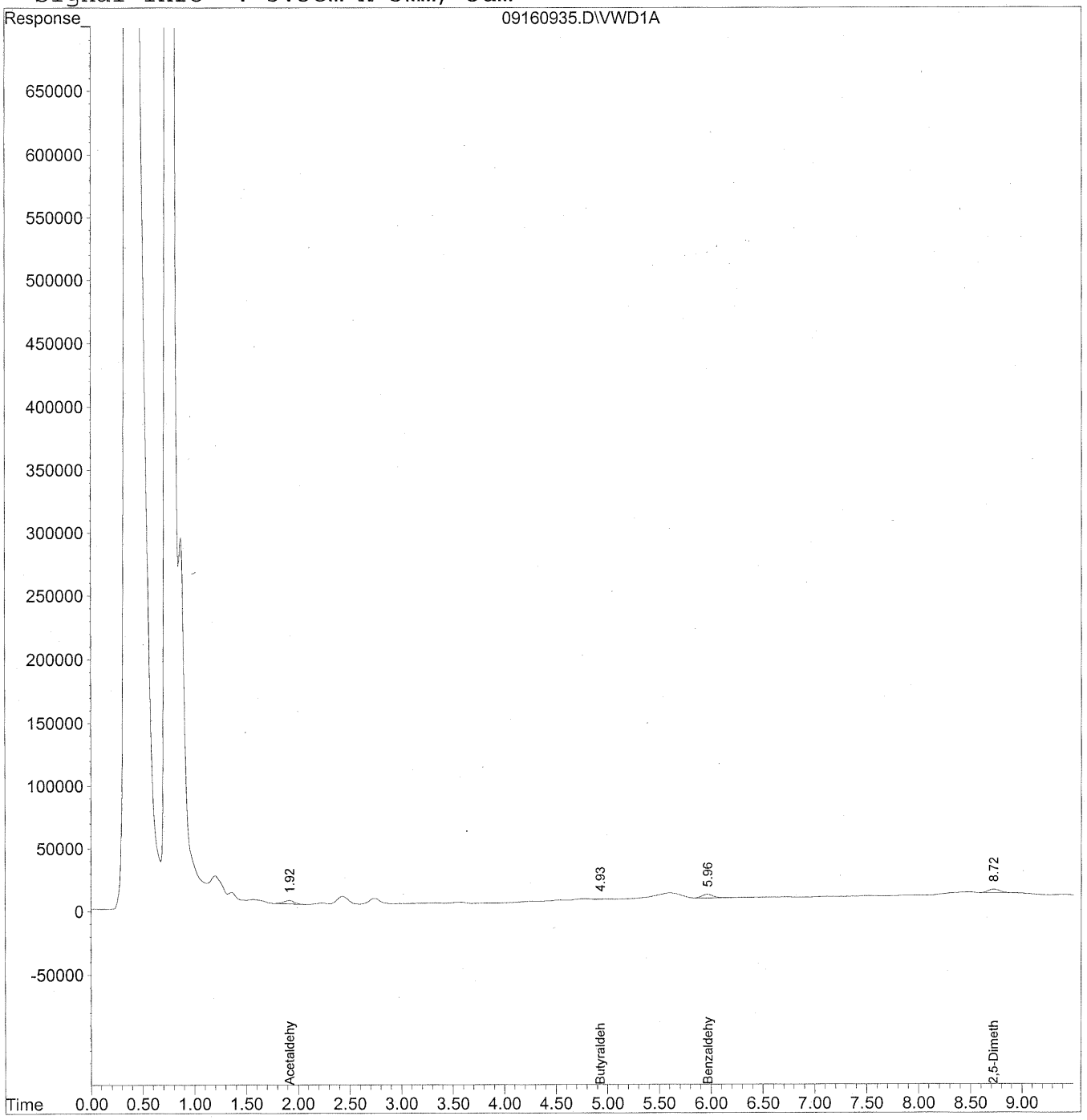
(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160935.D Vial: 119
Acq On : 16-Sep-2009, 17:38 Operator: MD
Sample : P0903147-005 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:30 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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\16\09160935.D Vial: 119
Acq On : 16-Sep-2009, 17:38 Operator: MD
Sample : P0903147-005 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:30 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

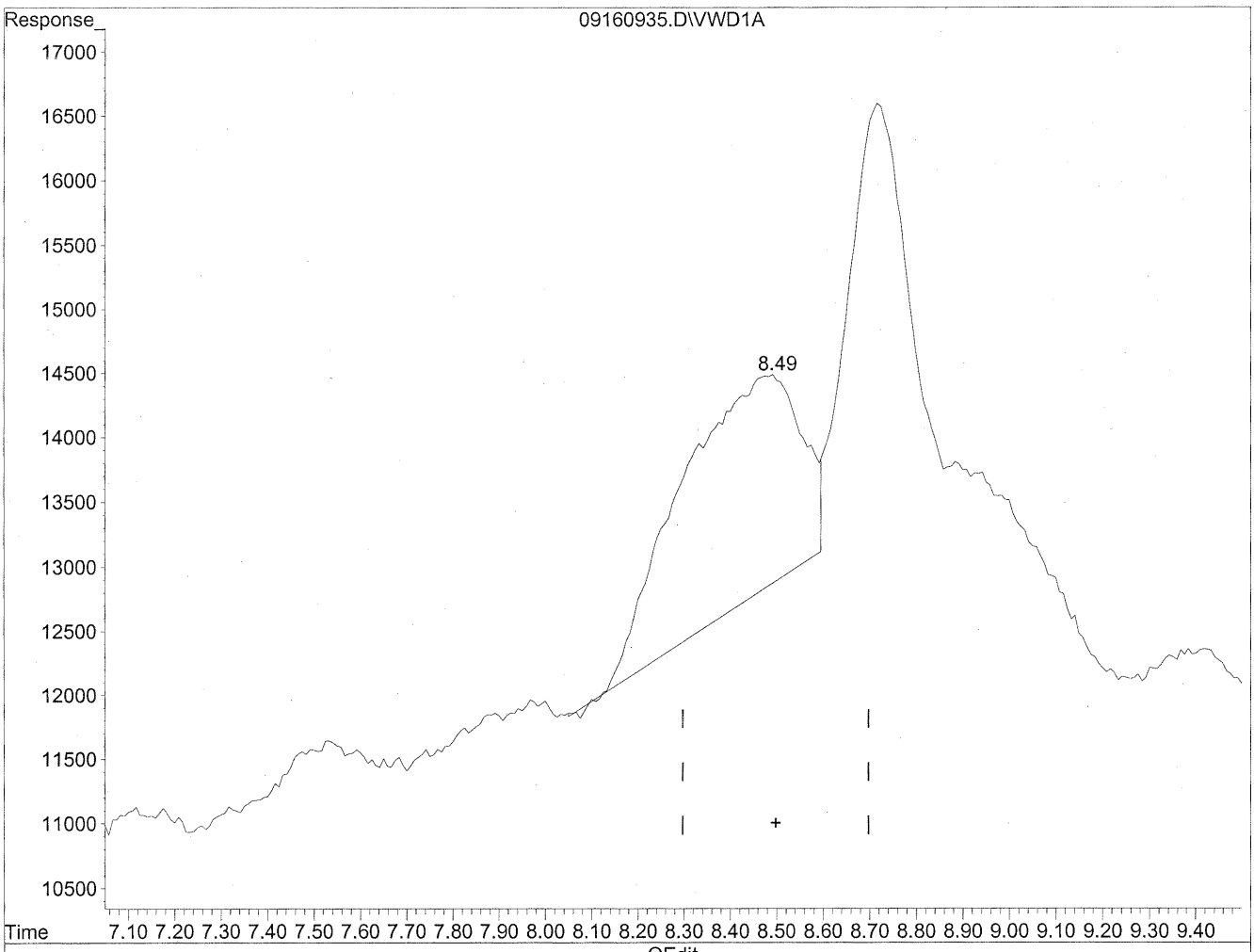
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	0.00	0	N.D.	ng/ml
2)	Acetaldehyde	1.92	186831	28.740	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	4.93	16356	4.036	ng/ml
6)	Benzaldehyde	5.97f	230724	84.564	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/mld
12)	2,5-Dimethylbenzaldehyde	8.72	217913	109.203	ng/mlm

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160935.D Vial: 119
Acq On : 16-Sep-2009, 17:38 Operator: MD
Sample : P0903147-005 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:29 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.49min 103.778ng/ml

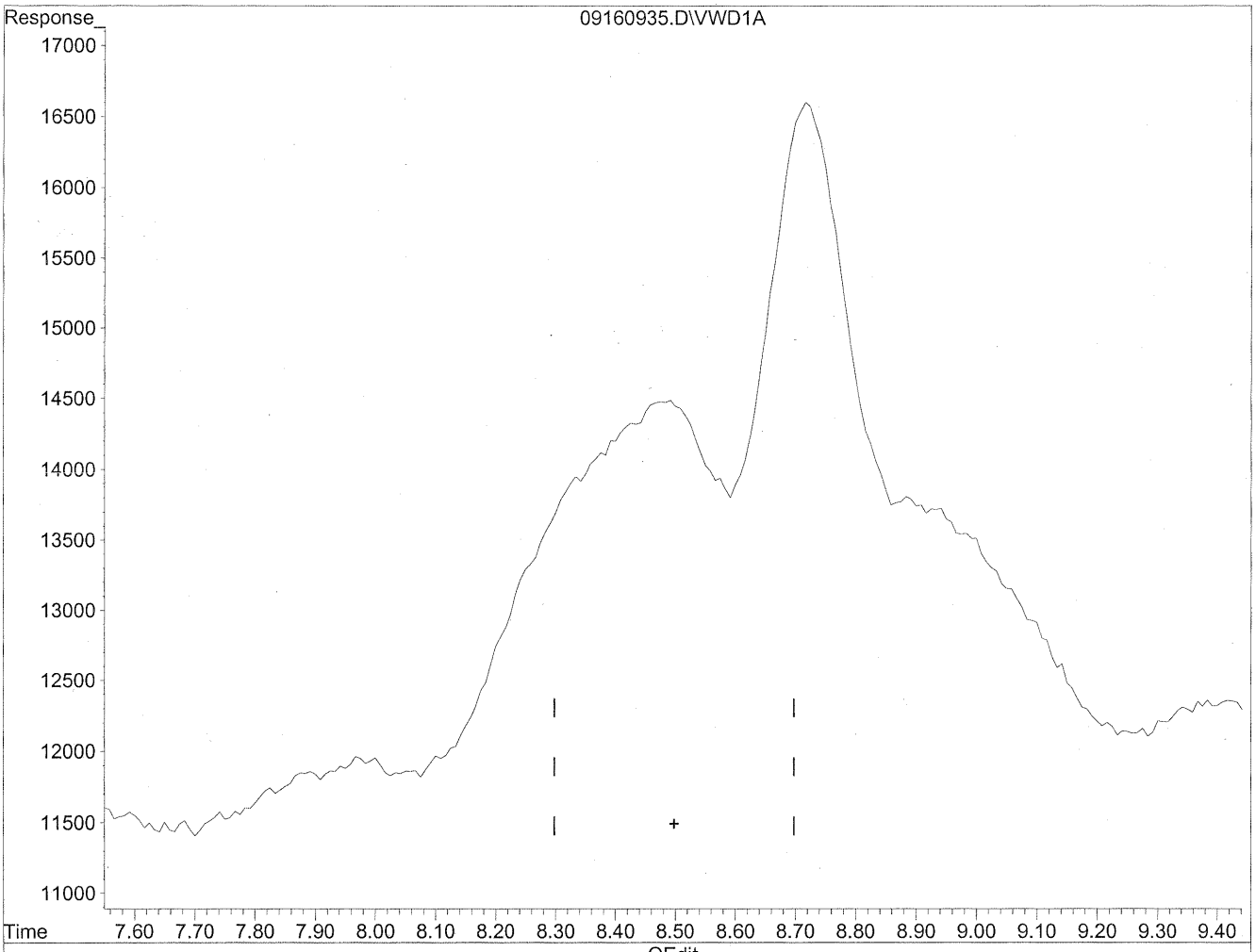
response 307257

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160935.D Vial: 119
Acq On : 16-Sep-2009, 17:38 Operator: MD
Sample : P0903147-005 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:29 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(11) Hexaldehyde

0.00min 0.000ng/ml d

response 0

AC 9/22/09

5mL 9/22/09 not used

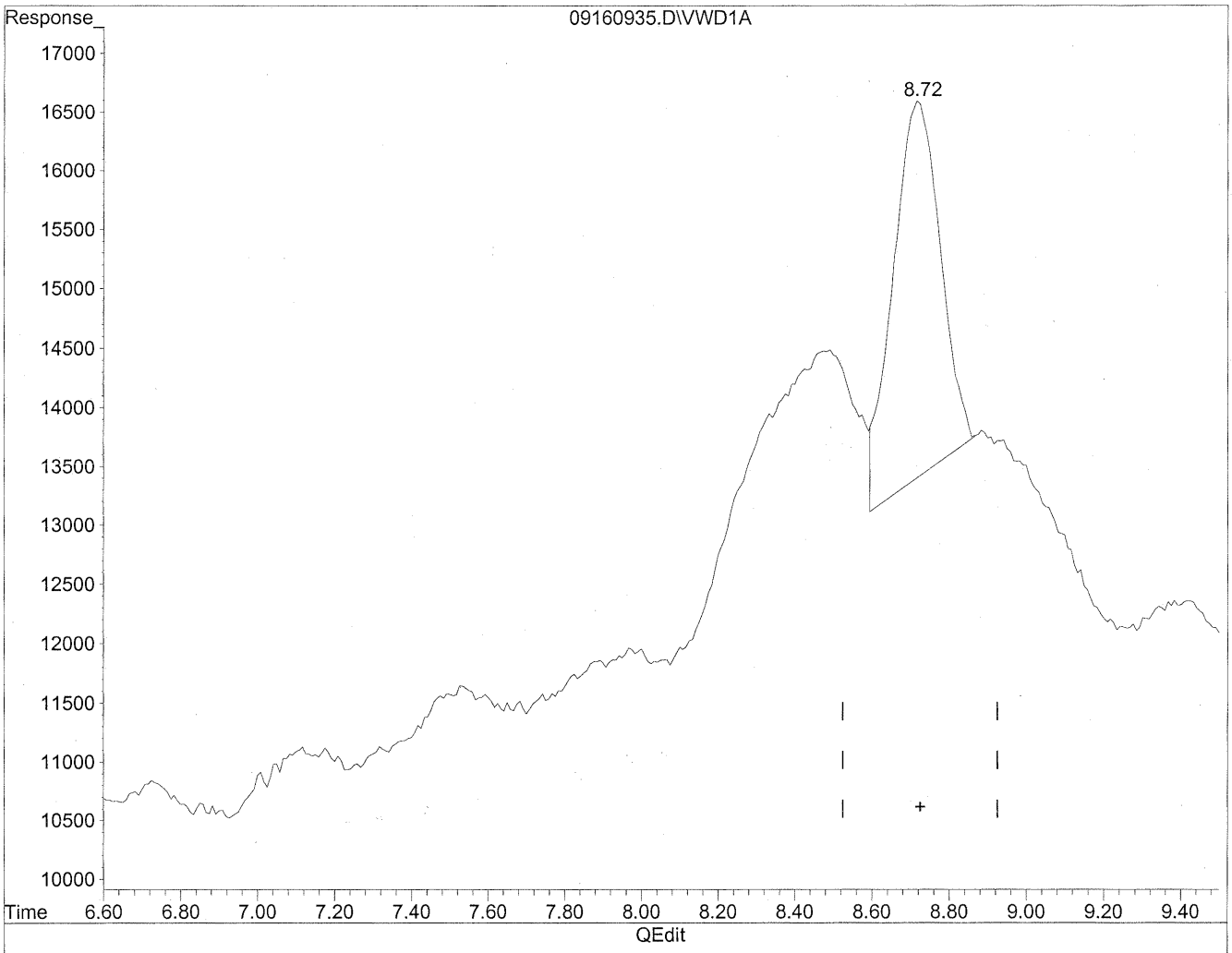
(+) = Expected Retention Time

09160935.D TO110909.M Mon Sep 21 16:30:27 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160935.D Vial: 119
Acq On : 16-Sep-2009, 17:38 Operator: MD
Sample : P0903147-005 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:29 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.72min 136.736ng/ml

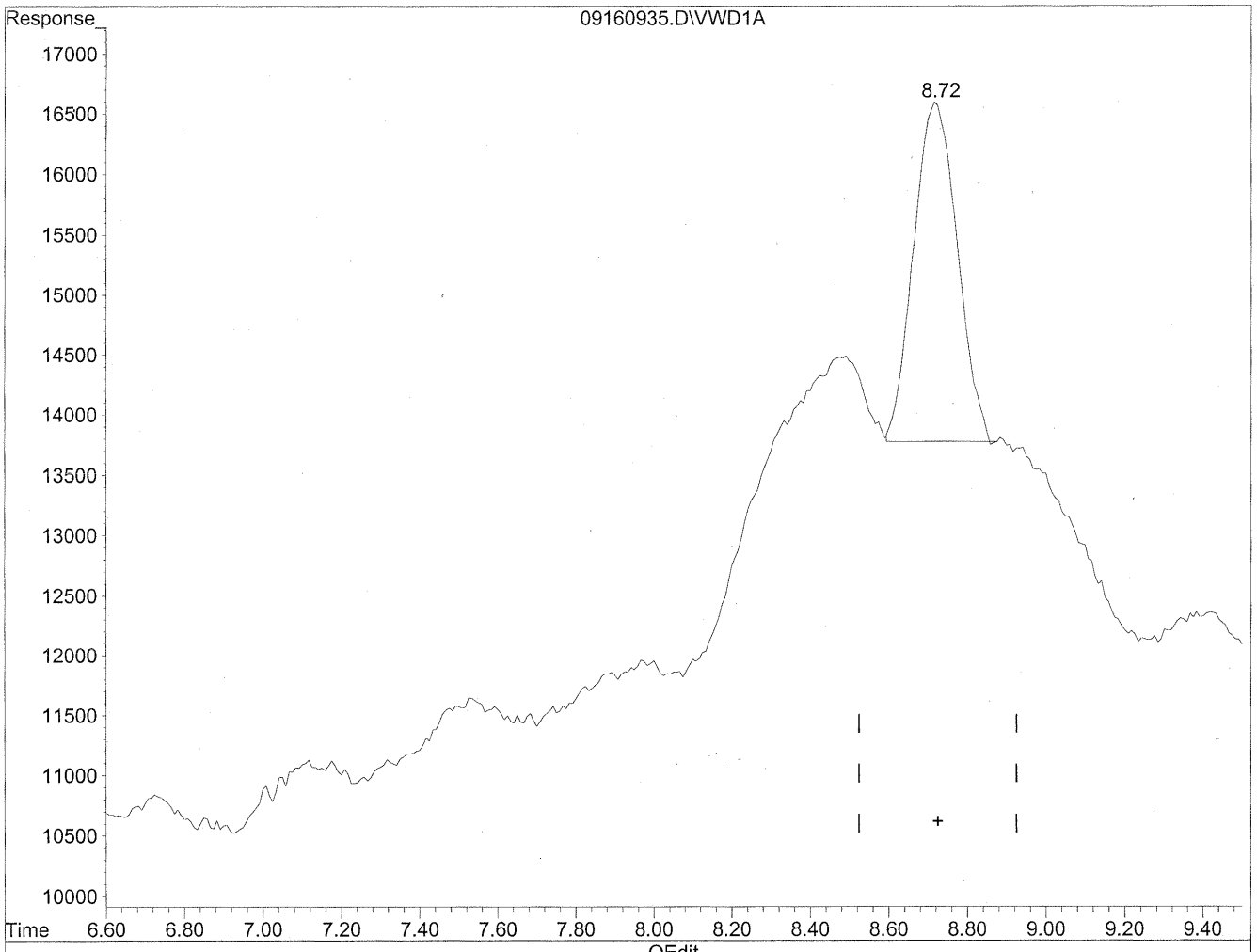
response 272855

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160935.D Vial: 119
Acq On : 16-Sep-2009, 17:38 Operator: MD
Sample : P0903147-005 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:29 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.72min 109.203ng/ml m

response 217913

7/27/09

9/22/09

92

(+) = Expected Retention Time

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Client: **Environmental Health & Engineering, Inc.**
Client Sample ID: **106307**
Client Project ID: **16512**

CAS Project ID: P0903147
CAS Sample ID: P0903147-006

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

Date Collected: 9/3/09
Date Received: 9/4/09
Date Analyzed: 9/16/09
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.

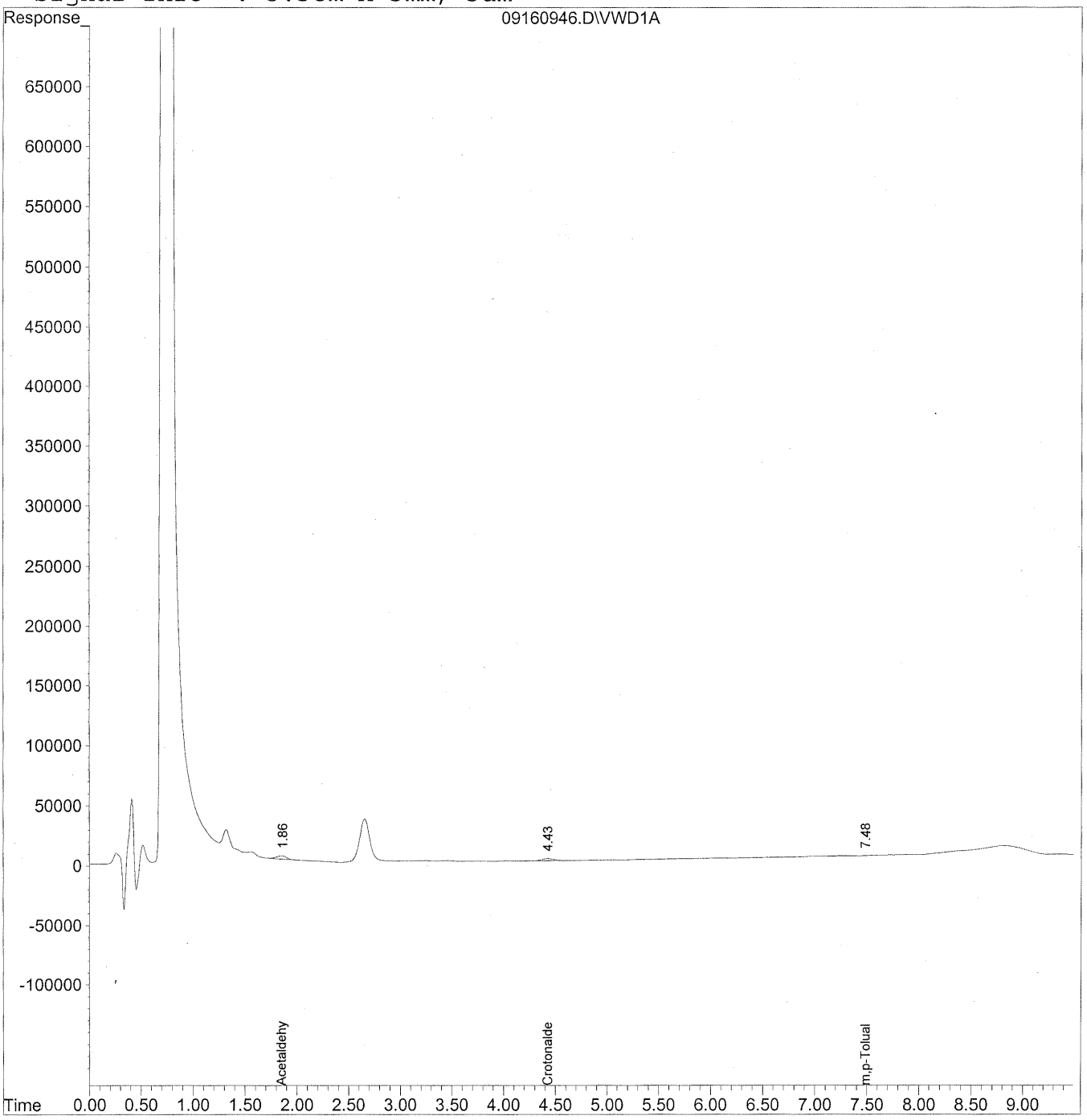
Verified By: Re Date: 9/23/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160946.D Vial: 128
Acq On : 16-Sep-2009, 19:49 Operator: MD
Sample : P0903147-006 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:43 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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\16\09160946.D Vial: 128
Acq On : 16-Sep-2009, 19:49 Operator: MD
Sample : P0903147-006 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:43 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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

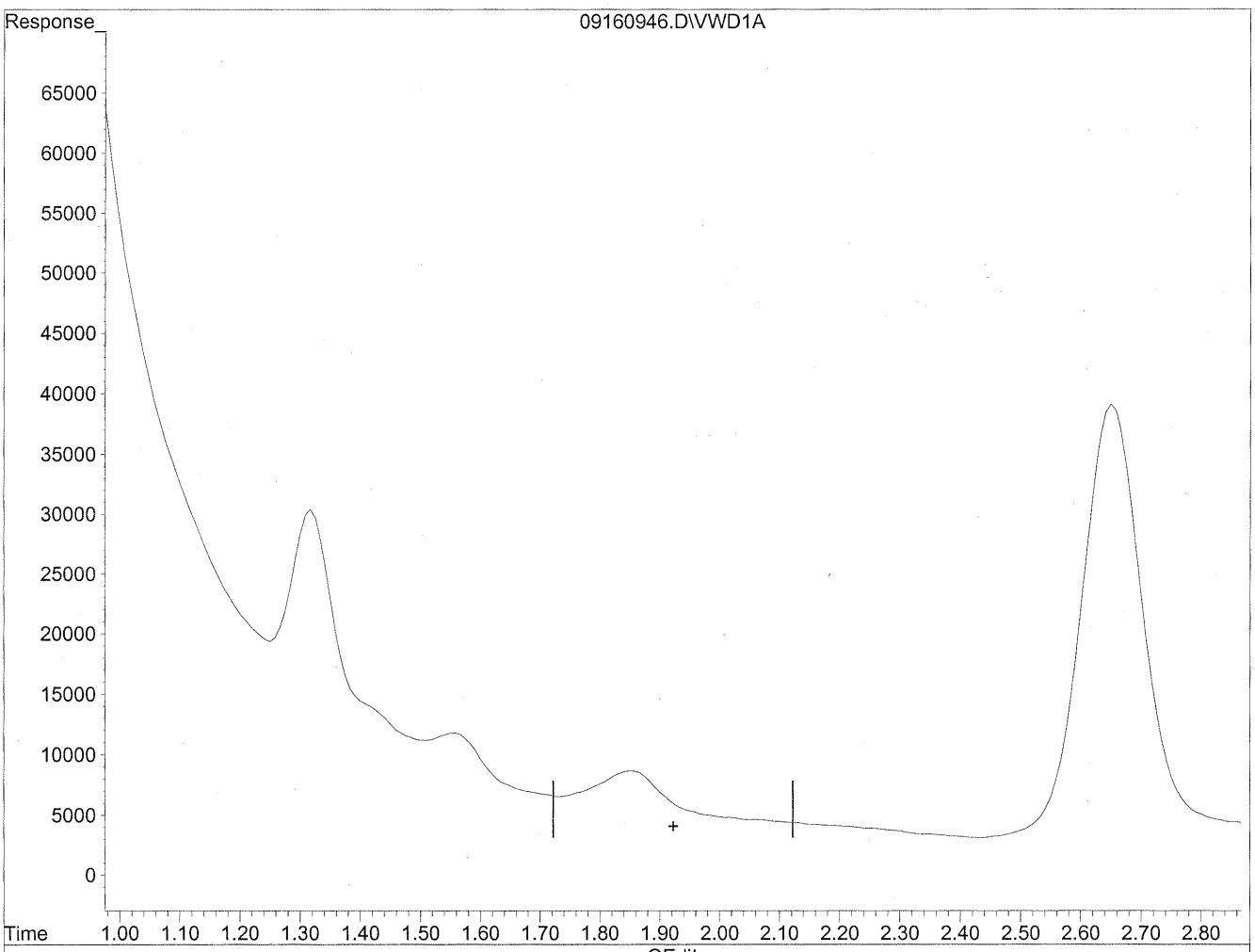
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	0.00	0	N.D.	ng/ml
2)	Acetaldehyde	1.86	176830	27.201	ng/mlm
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	4.43	122099	30.077	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	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	7.49	38064	16.572	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\16\09160946.D Vial: 128
Acq On : 16-Sep-2009, 19:49 Operator: MD
Sample : P0903147-006 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:42 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.92min 0.000ng/ml

response 0

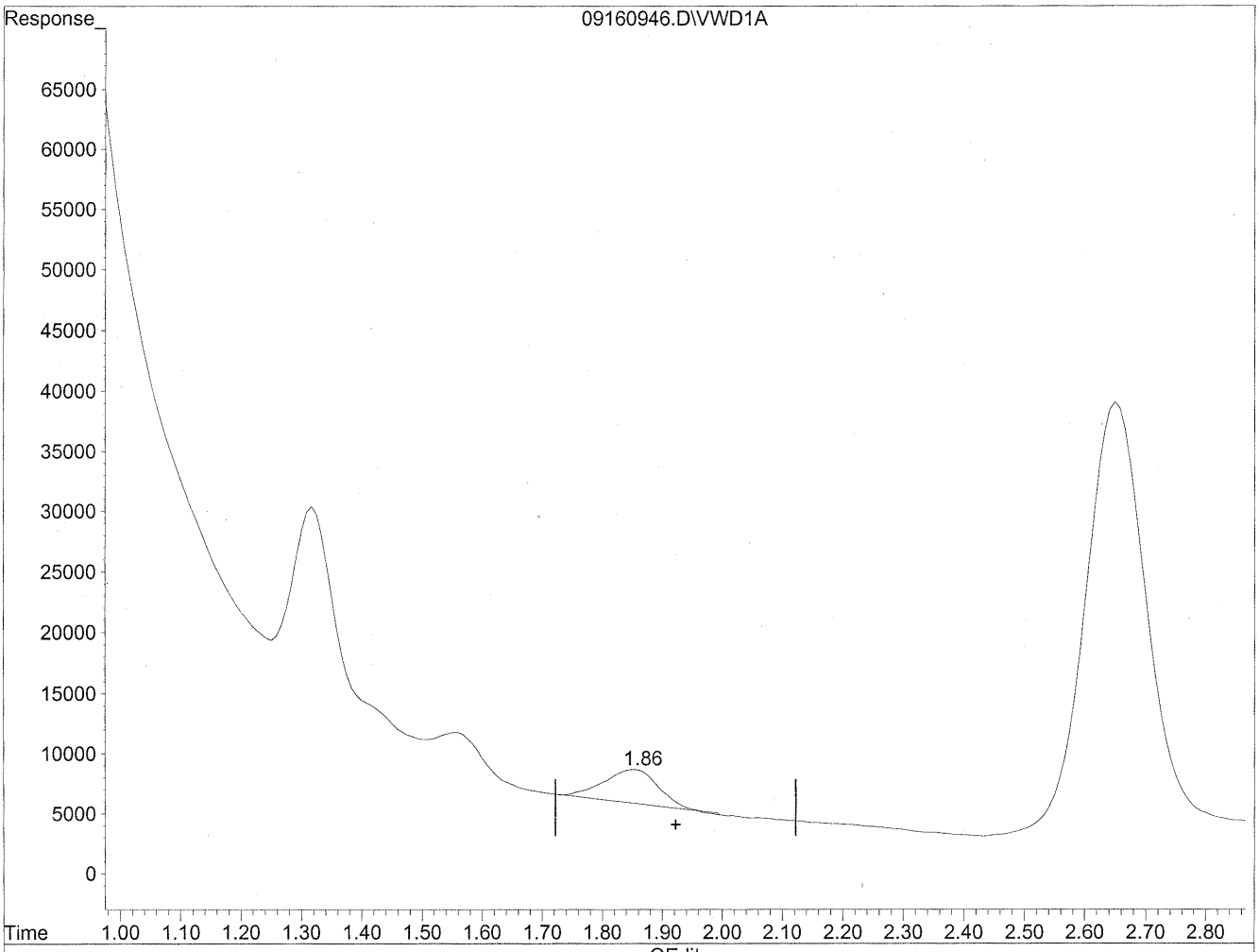
(+) = Expected Retention Time

09160946.D TO110909.M Mon Sep 21 16:42:48 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160946.D Vial: 128
Acq On : 16-Sep-2009, 19:49 Operator: MD
Sample : P0903147-006 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:42 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(2) Acetaldehyde

1.86min 27.201ng/ml m

response 176830

#6
9/22/09

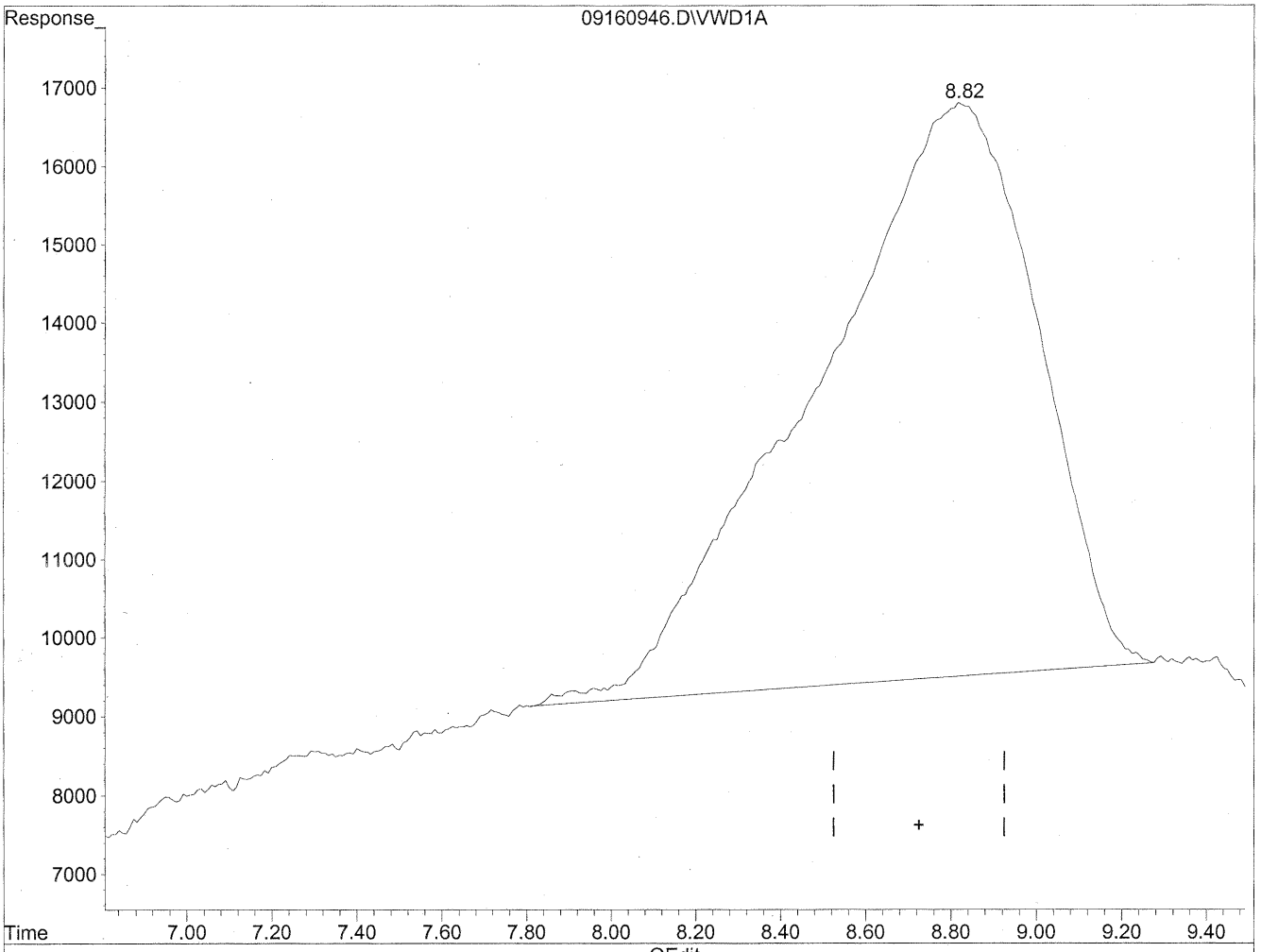
9/22/09
LRC

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160946.D Vial: 128
Acq On : 16-Sep-2009, 19:49 Operator: MD
Sample : P0903147-006 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:42 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

8.82min 1321.524ng/ml

response 2637090

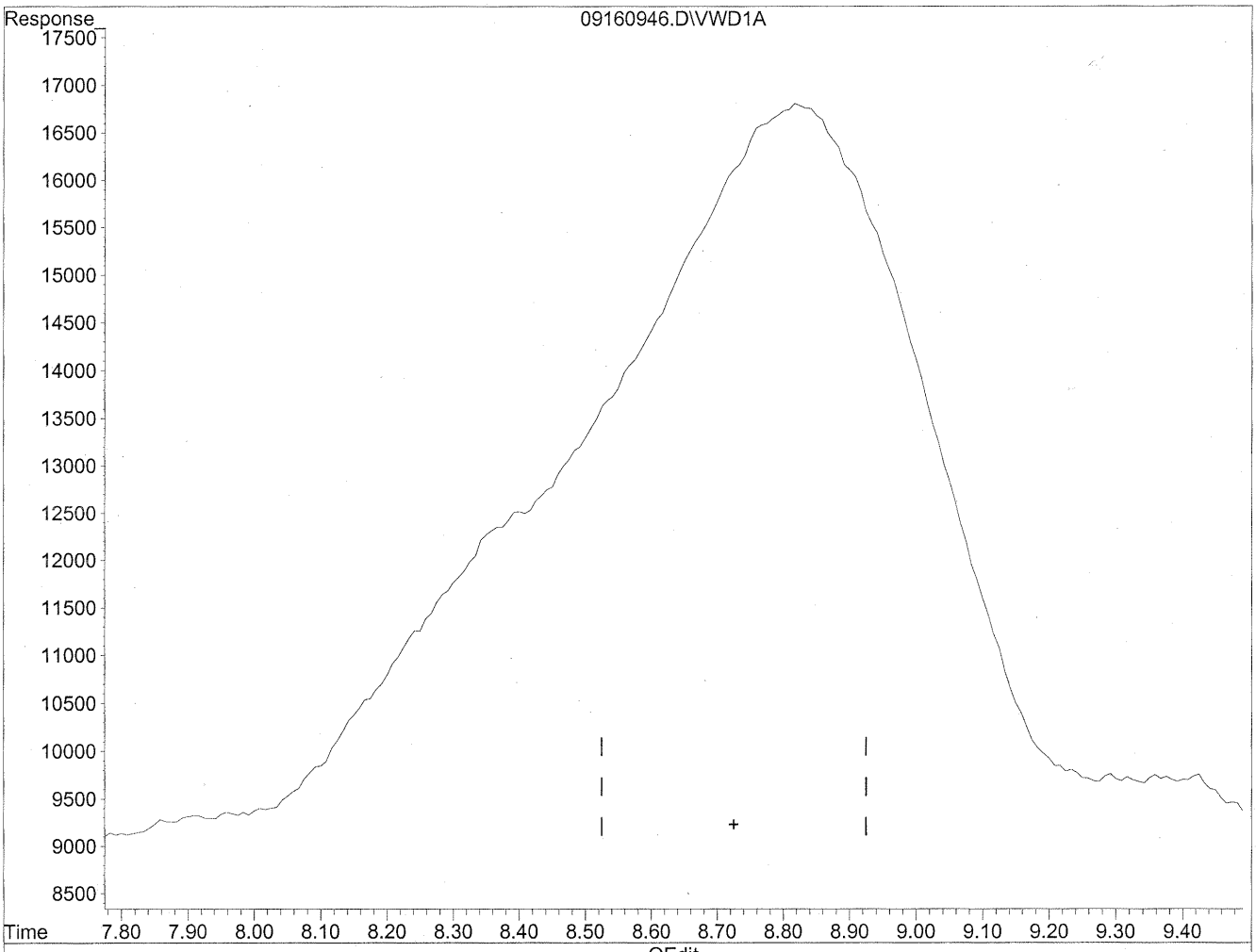
(+) = Expected Retention Time

09160946.D TO110909.M Mon Sep 21 16:43:04 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160946.D Vial: 128
Acq On : 16-Sep-2009, 19:49 Operator: MD
Sample : P0903147-006 front 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:42 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(12) 2,5-Dimethylbenzaldehyde

0.00min 0.000ng/ml d

response 0

HC 9/22/09

MW 9/22/09 not real

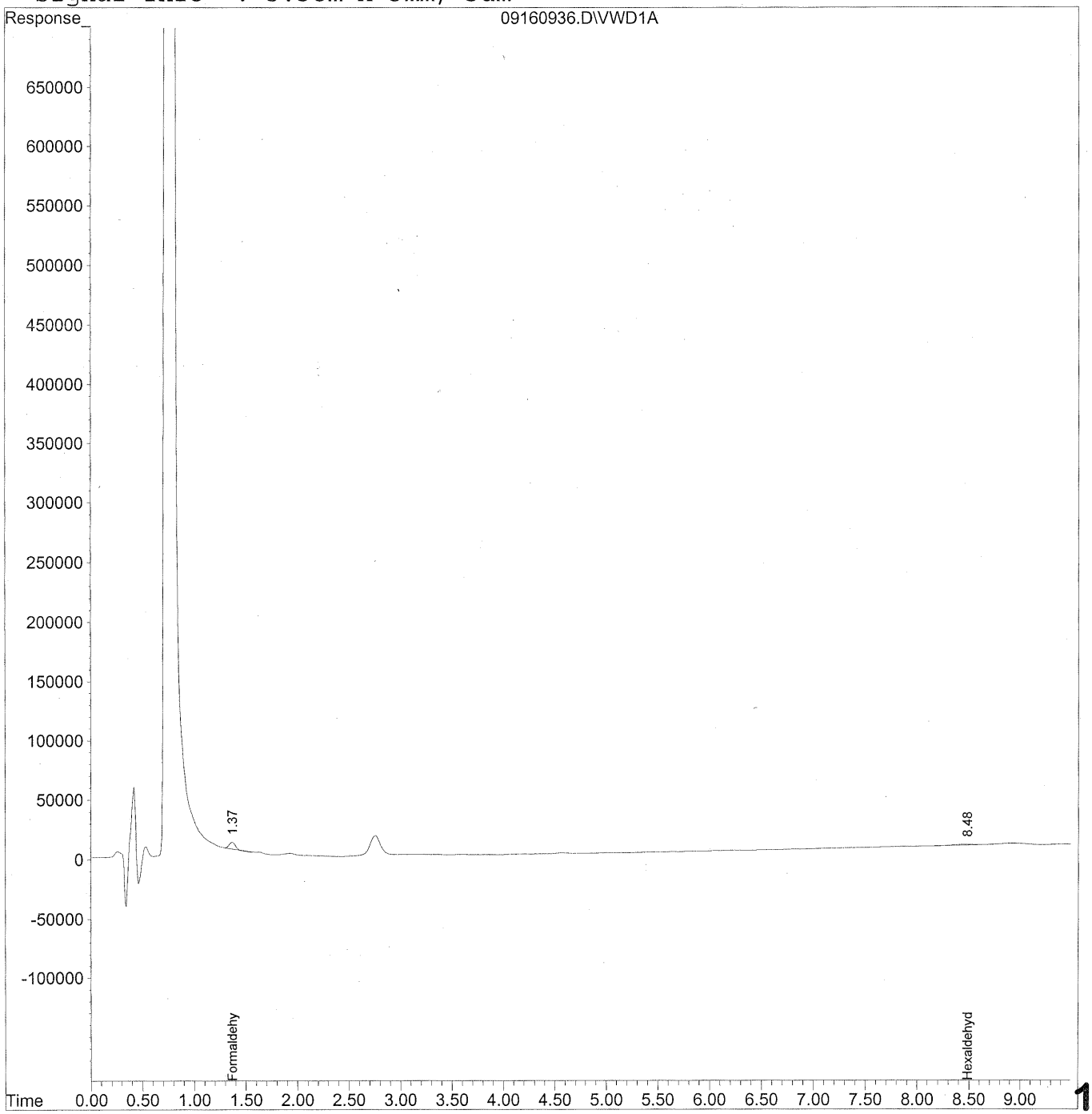
(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160936.D Vial: 120
Acq On : 16-Sep-2009, 17:50 Operator: MD
Sample : P0903147-006 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:31 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



100

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160936.D Vial: 120
Acq On : 16-Sep-2009, 17:50 Operator: MD
Sample : P0903147-006 back 1.0ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:31 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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	214356	23.989	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	8.48	77873	26.302	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 (13:37)**
Client Project ID: **16512**

CAS Project ID: P0903147
CAS Sample ID: P090916-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: 09/16/09
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	

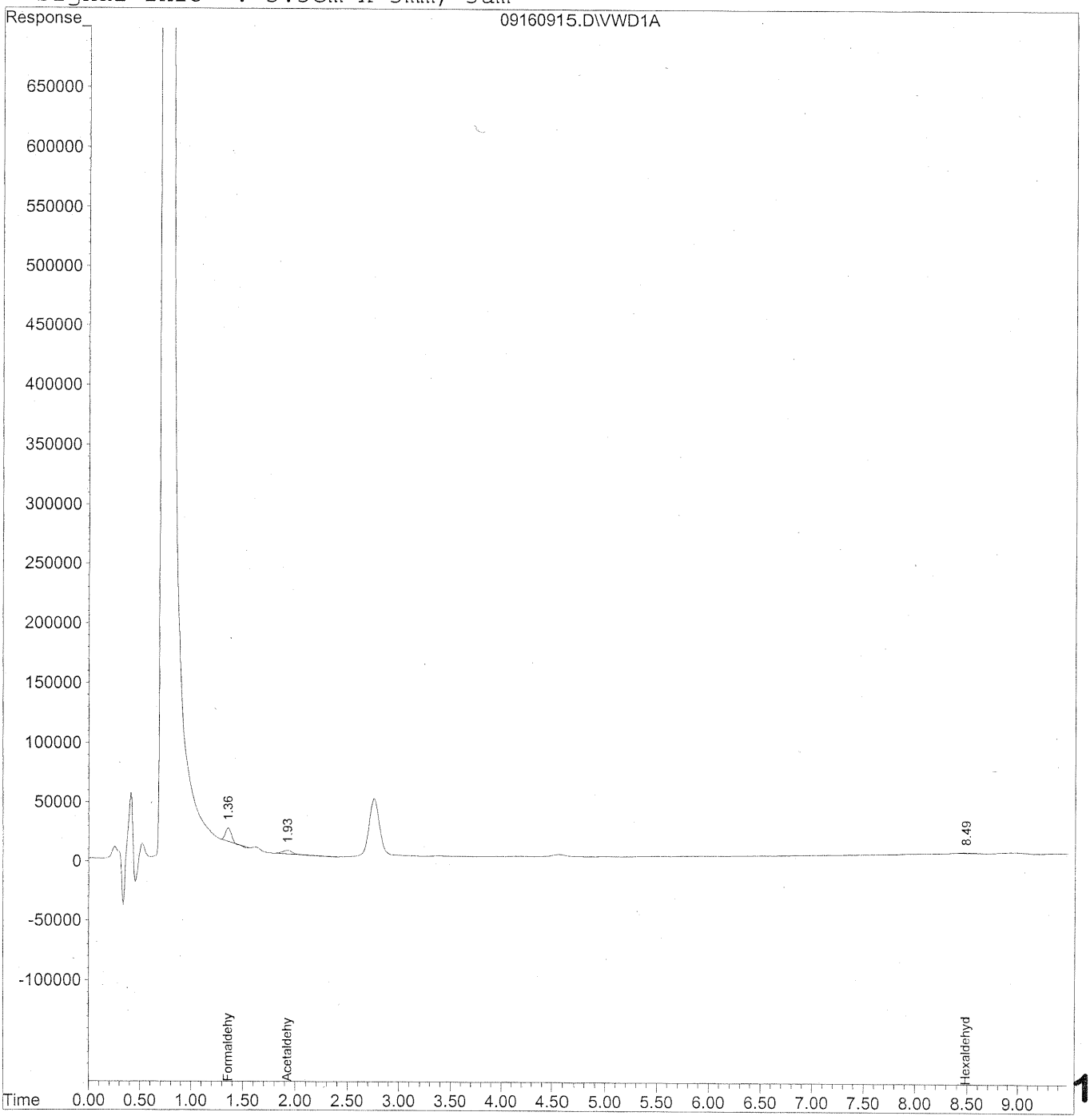
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
BC = Results reported are not blank corrected.
NA = Not applicable.

Verified By: Re Date: 9/23/09

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160915.D Vial: 101
Acq On : 16-Sep-2009, 13:37 Operator: MD
Sample : MB-1 front 1.0ml lot 5855/5994 Inst : VWD
Misc : 9/15 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:05 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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\16\09160915.D Vial: 101
Acq On : 16-Sep-2009, 13:37 Operator: MD
Sample : MB-1 front 1.0ml lot 5855/5994 Inst : VWD
Misc : 9/15 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:05 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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

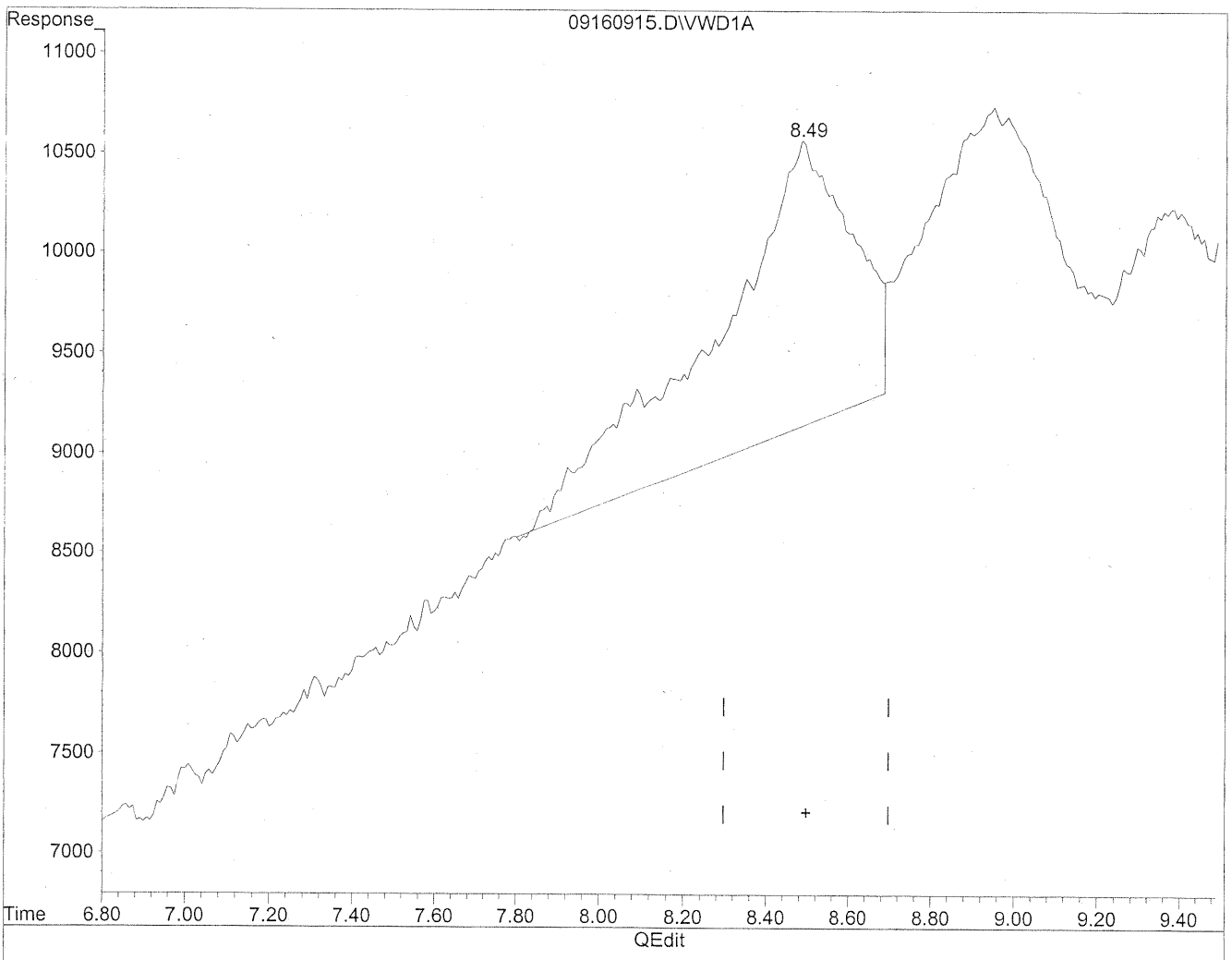
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.36	429707	48.090	ng/ml
2)	Acetaldehyde	1.93	162241	24.957	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	0.00	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	8.49	64931	21.931	ng/mlm
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\16\09160915.D Vial: 101
Acq On : 16-Sep-2009, 13:37 Operator: MD
Sample : MB-1 front 1.0ml lot 5855/5994 Inst : VWD
Misc : 9/15 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:05 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.49min 109.220ng/ml

response 323369

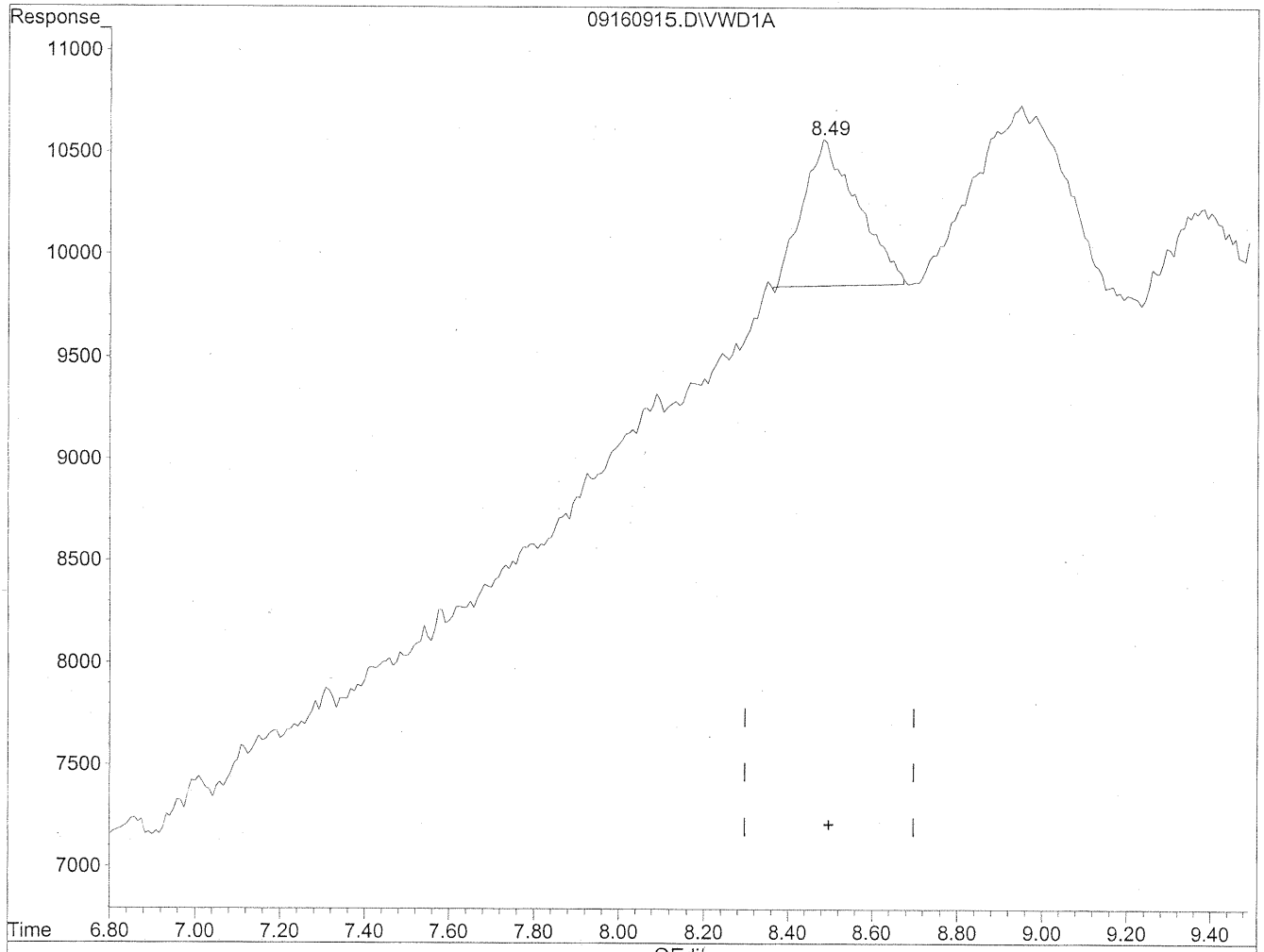
105

(+) = Expected Retention Time

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160915.D Vial: 101
Acq On : 16-Sep-2009, 13:37 Operator: MD
Sample : MB-1 front 1.0ml lot 5855/5994 Inst : VWD
Misc : 9/15 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:05 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.49min 21.931ng/ml m

response 64931

9/21/09

ic

(+) = Expected Retention Time

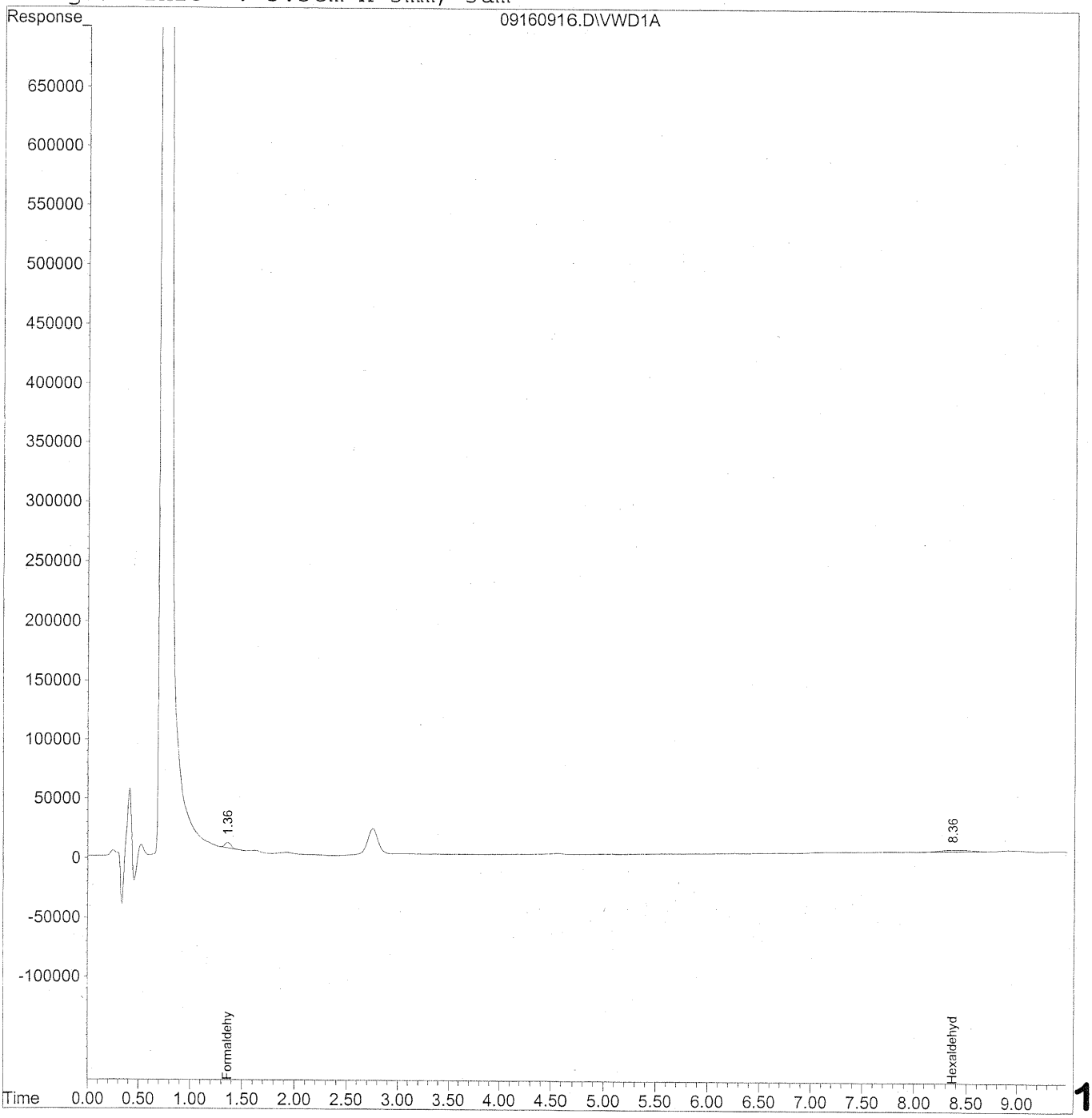
09160915.D TO110909.M Mon Sep 21 16:05:21 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160916.D Vial: 102
Acq On : 16-Sep-2009, 13:50 Operator: MD
Sample : MB-1 back 1.0ml lot 5855/5994 Inst : VWD
Misc : 9/15 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:05 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



107

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160916.D Vial: 102
Acq On : 16-Sep-2009, 13:50 Operator: MD
Sample : MB-1 back 1.0ml lot 5855/5994 Inst : VWD
Misc : 9/15 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:05 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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	178183	19.941	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	8.37f	284258	96.010	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 (18:25)**
Client Project ID: **16512**

CAS Project ID: P0903147
CAS Sample ID: P090916-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: 09/16/09
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.

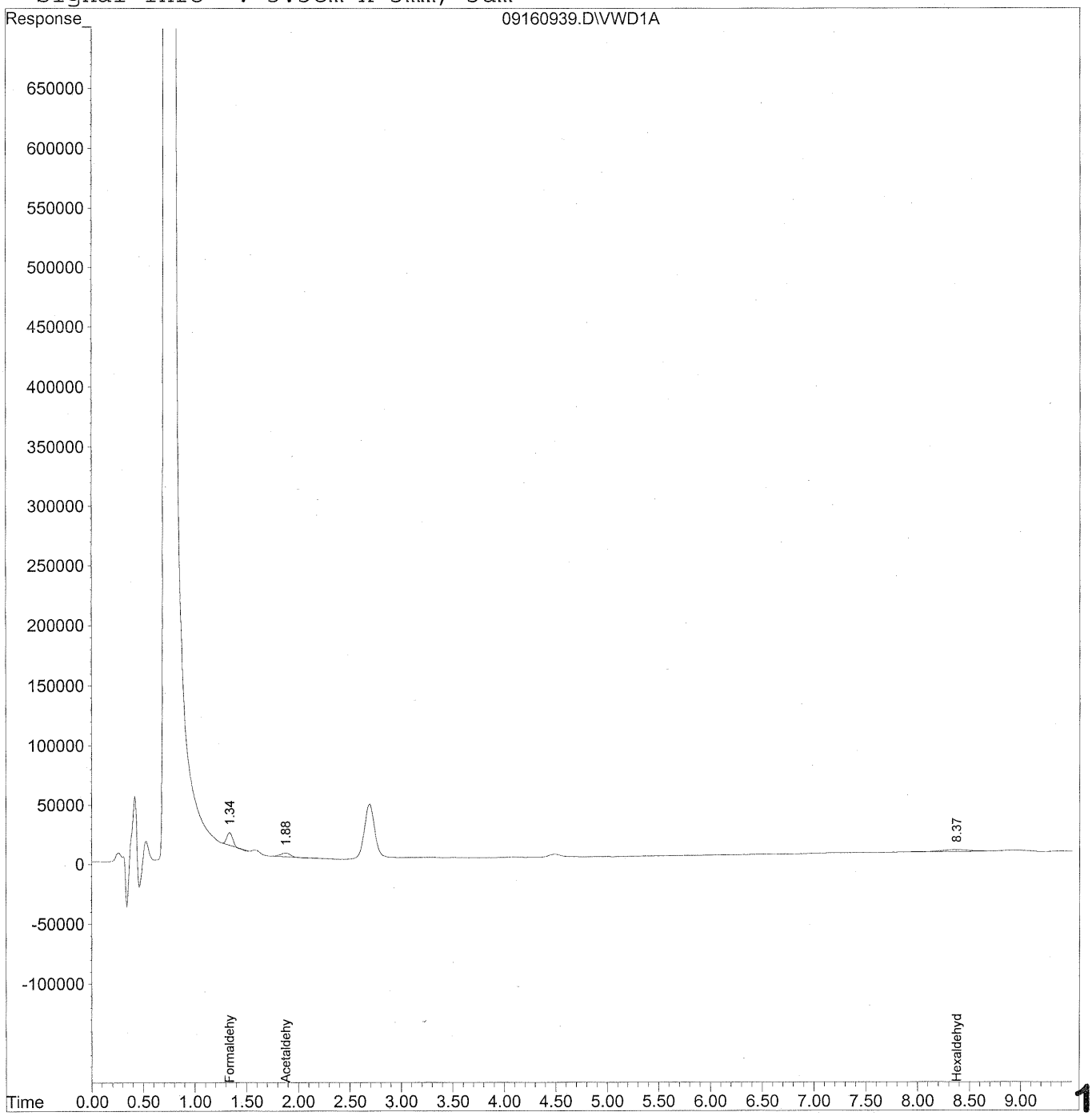
Verified By: Re Date: 9/23/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160939.D Vial: 121
Acq On : 16-Sep-2009, 18:25 Operator: MD
Sample : MB-2 front 1.0ml lot 5855/5994 Inst : VWD
Misc : 9/15 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:32 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



110

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160939.D Vial: 121
Acq On : 16-Sep-2009, 18:25 Operator: MD
Sample : MB-2 front 1.0ml lot 5855/5994 Inst : VWD
Misc : 9/15 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:32 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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

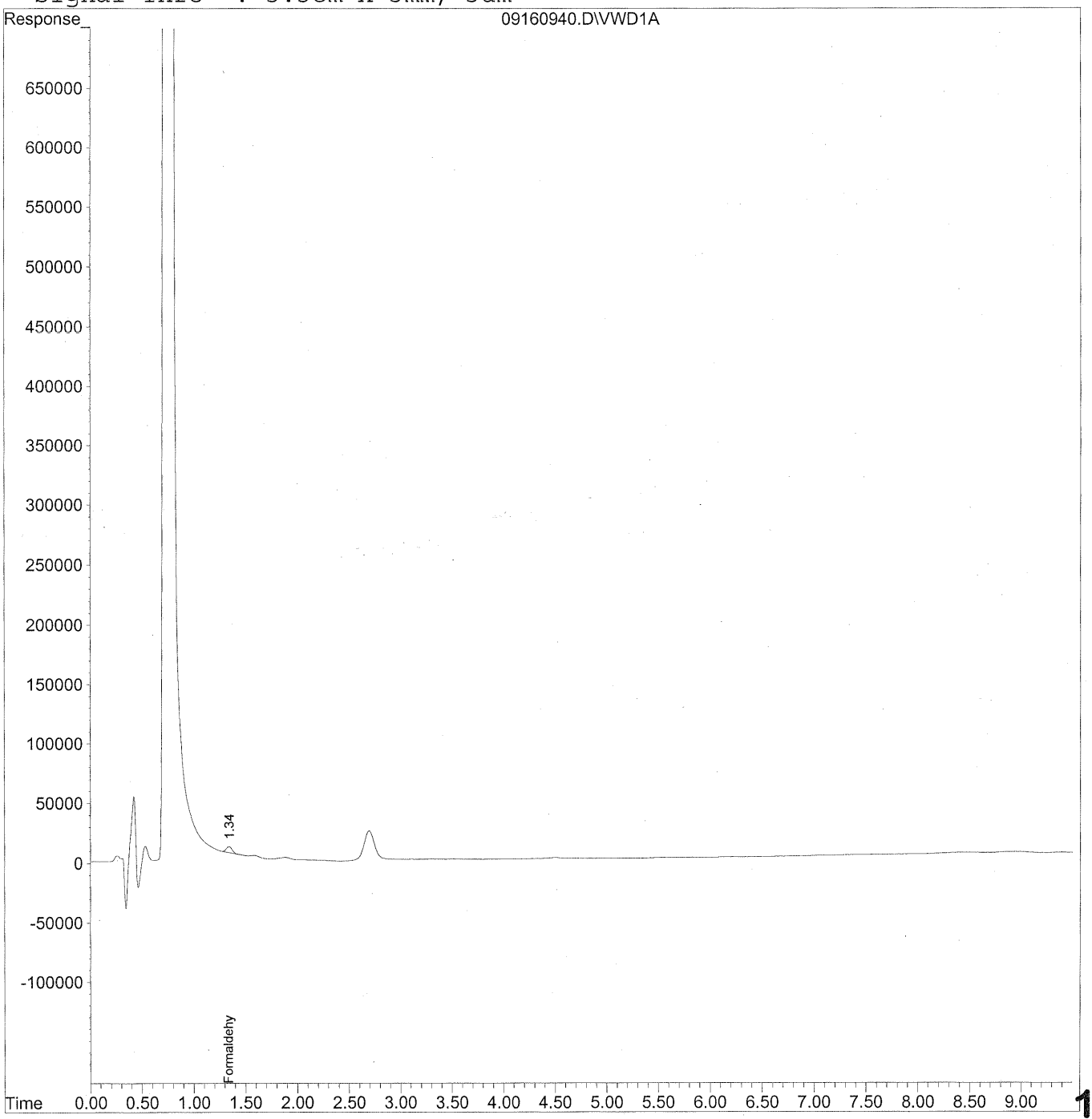
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	410929	45.989	ng/ml
2)	Acetaldehyde	1.88	171137	26.325	ng/ml
3)	Propionaldehyde	0.00	0	N.D.	ng/ml
4)	Crotonaldehyde	0.00	0	N.D.	ng/ml
5)	Butyraldehyde	0.00	0	N.D.	ng/ml
6)	Benzaldehyde	0.00	0	N.D.	ng/ml
7)	Isovaleraldehyde	0.00	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	8.38f	277684	93.789	ng/ml
12)	2,5-Dimethylbenzaldehyde	0.00	0	N.D.	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160940.D Vial: 122
Acq On : 16-Sep-2009, 18:37 Operator: MD
Sample : MB-2 back 1.0ml lot 5855/5994 Inst : VWD
Misc : 9/15 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:32 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



112

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160940.D Vial: 122
Acq On : 16-Sep-2009, 18:37 Operator: MD
Sample : MB-2 back 1.0ml lot 5855/5994 Inst : VWD
Misc : 9/15 Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:32 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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	189333	21.189	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

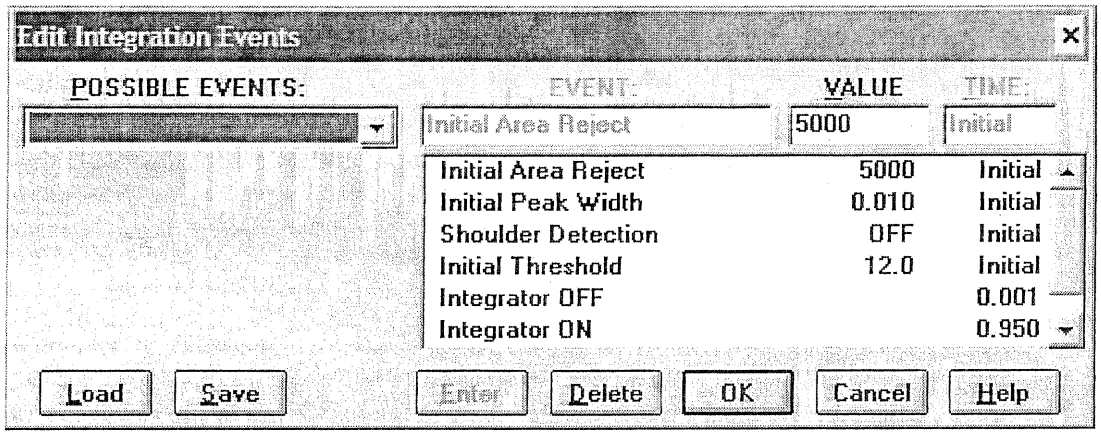
Calibration Status Report VWD

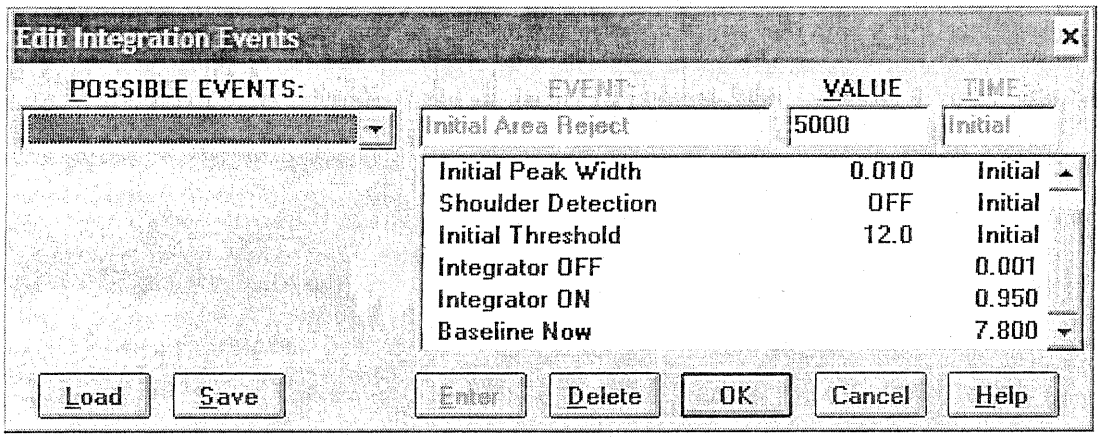
Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Wed Sep 09 16:02:22 2009
Response via : Initial Calibration

#	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


Edit Integration Events
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-11A	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%

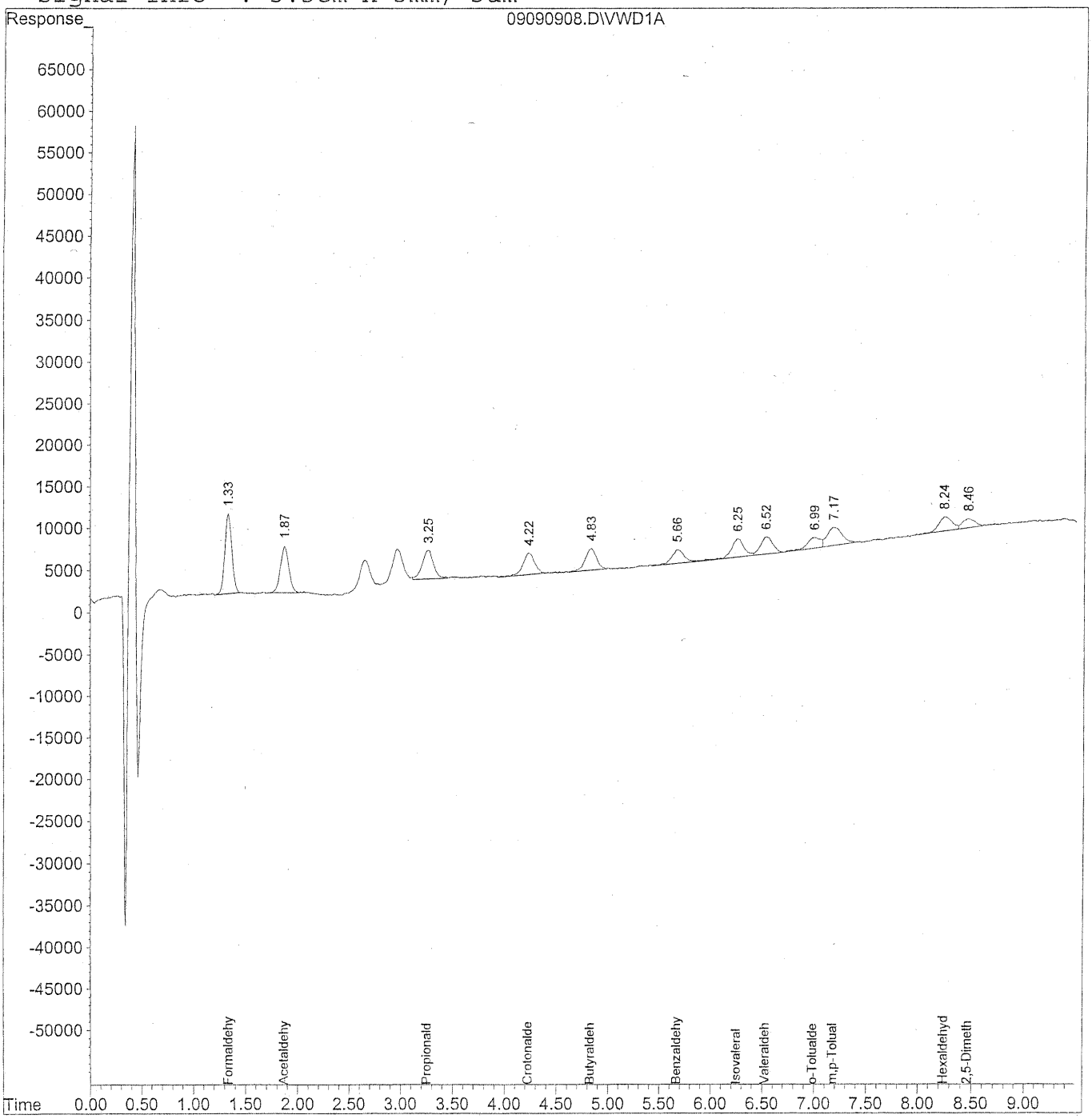
TO-11A CALIBRATION STANDARDS LIST						
50ng/ml TO-11A S21-09080905						
100ng/ml TO-11A S21-09080904						
500ng/ml TO-11A S21-09080903						
1500ng/ml TO-11A S21-09090903						
5000ng/ml TO-11A S21-09080902						
10000ng/ml TO-11A S21-09080901						

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



125

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

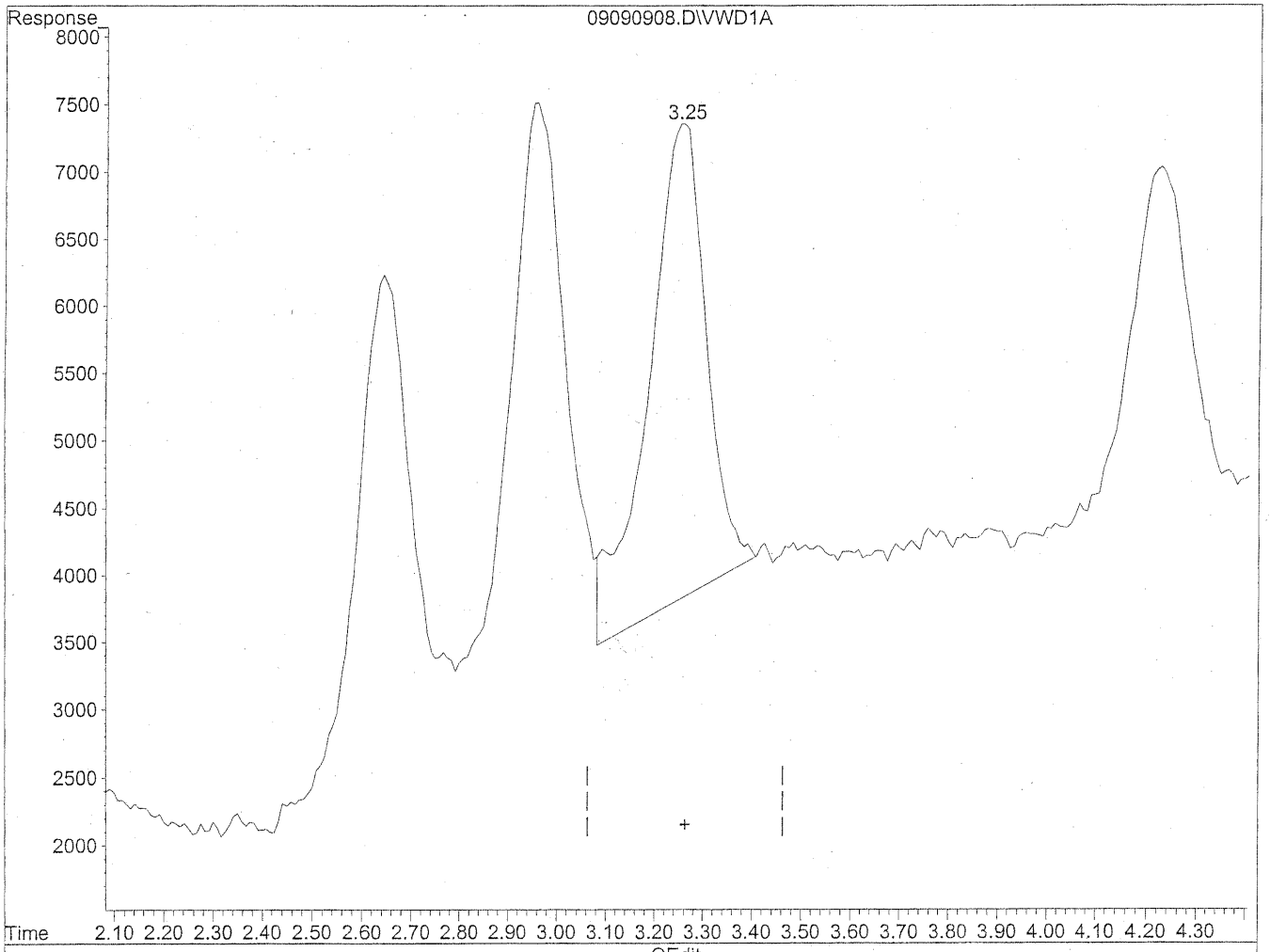
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.33	443088	48.300	ng/ml
2)	Acetaldehyde	1.87	311721	47.262	ng/ml
3)	Propionaldehyde	3.25	257497	49.595	ng/mlm
4)	Crotonaldehyde	4.23	205520	50.553	ng/ml
5)	Butyraldehyde	4.83	199284	48.165	ng/ml
6)	Benzaldehyde	5.67	136041	50.640	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

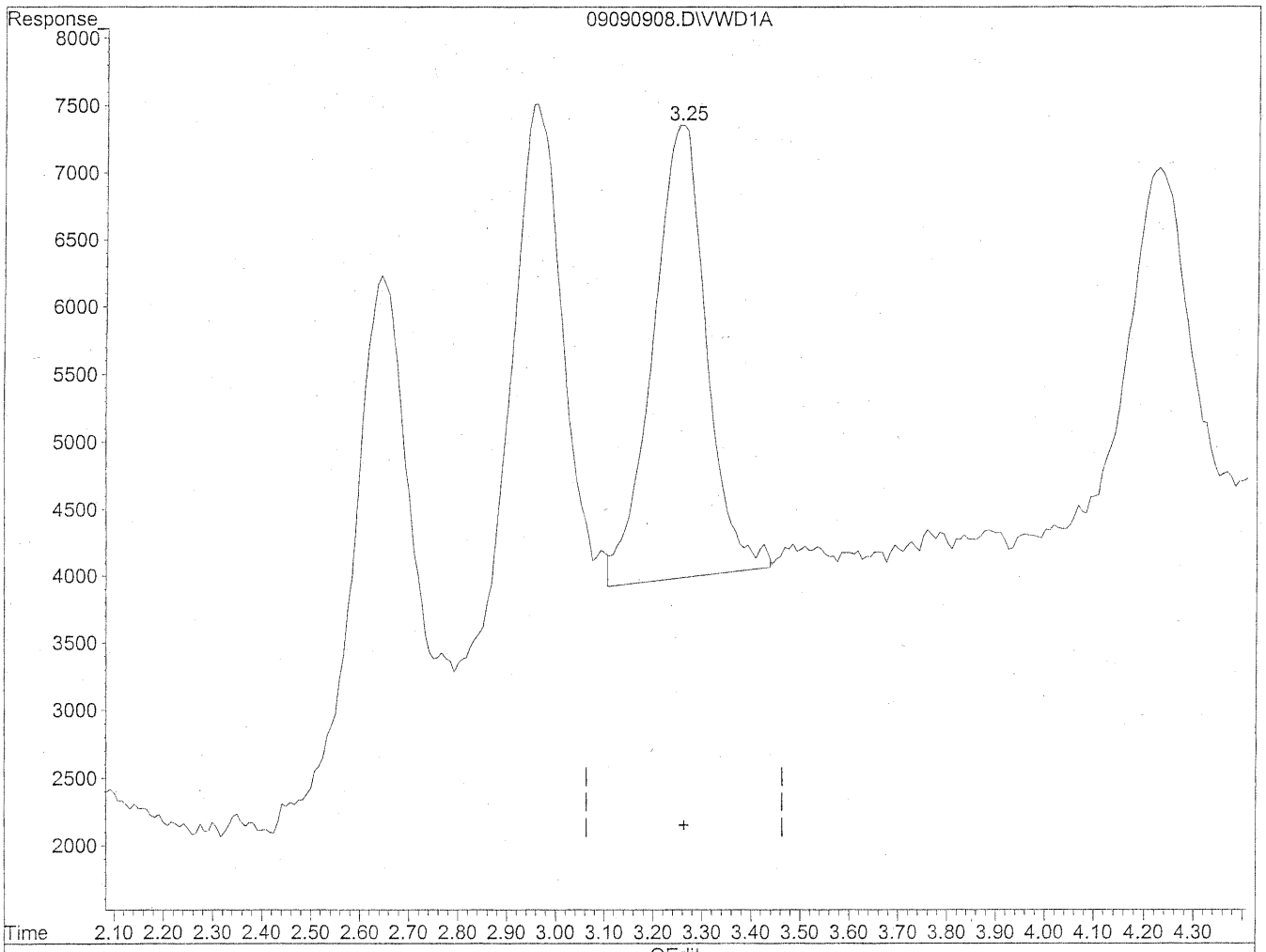
response 292995

(+) = 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



(3) Propionaldehyde

3.25min 49.595ng/ml m

response 257497

9/10/09

9/10/09

128

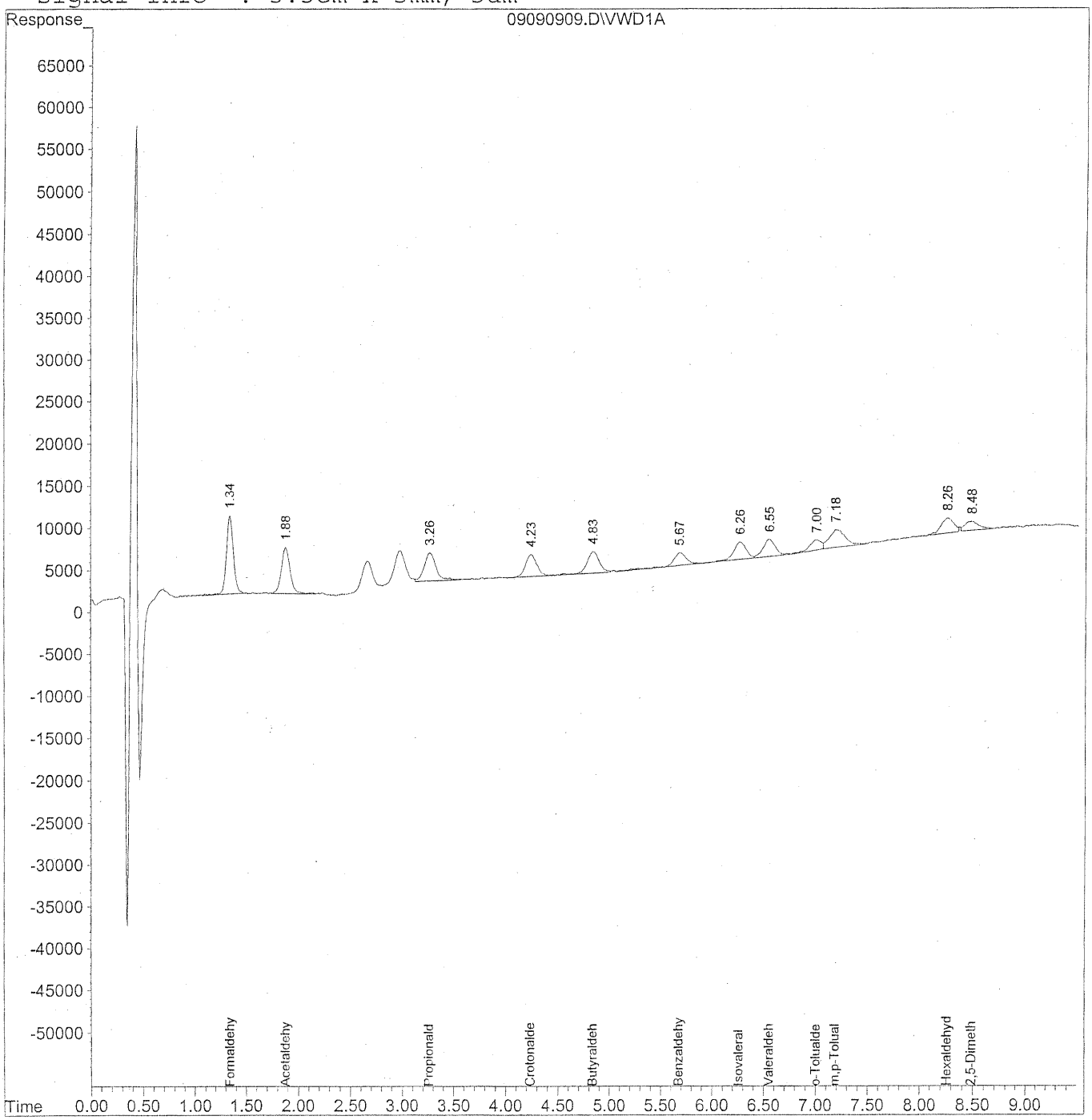
(+) = Expected Retention Time

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 8:48 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



129

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

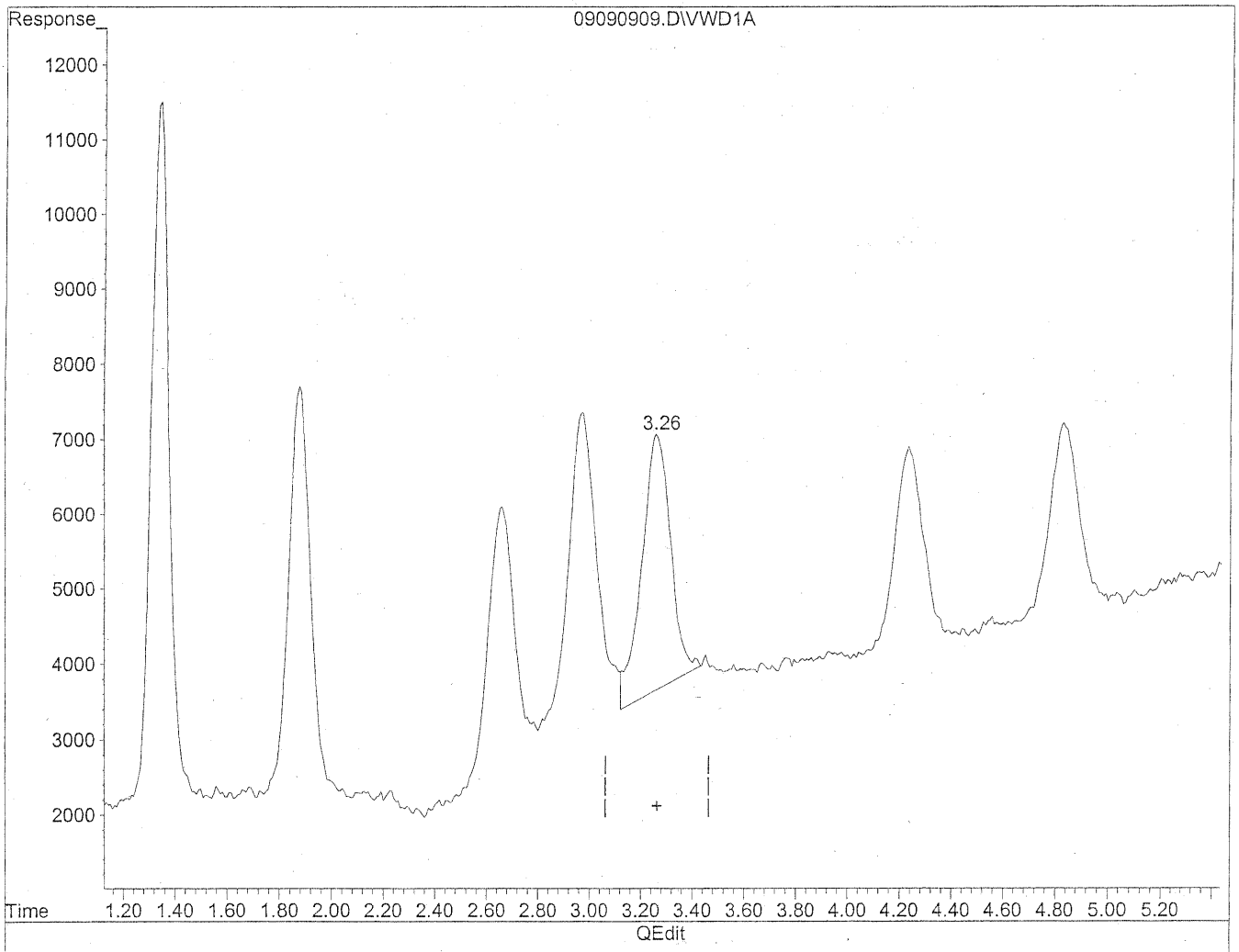
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	447251	48.810	ng/ml
2)	Acetaldehyde	1.88	327663	49.697	ng/ml
3)	Propionaldehyde	3.26	268082	51.767	ng/mlm
4)	Crotonaldehyde	4.24	200887	48.943	ng/ml
5)	Butyraldehyde	4.84	217482	52.896	ng/ml
6)	Benzaldehyde	5.68	140658	52.629	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

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

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

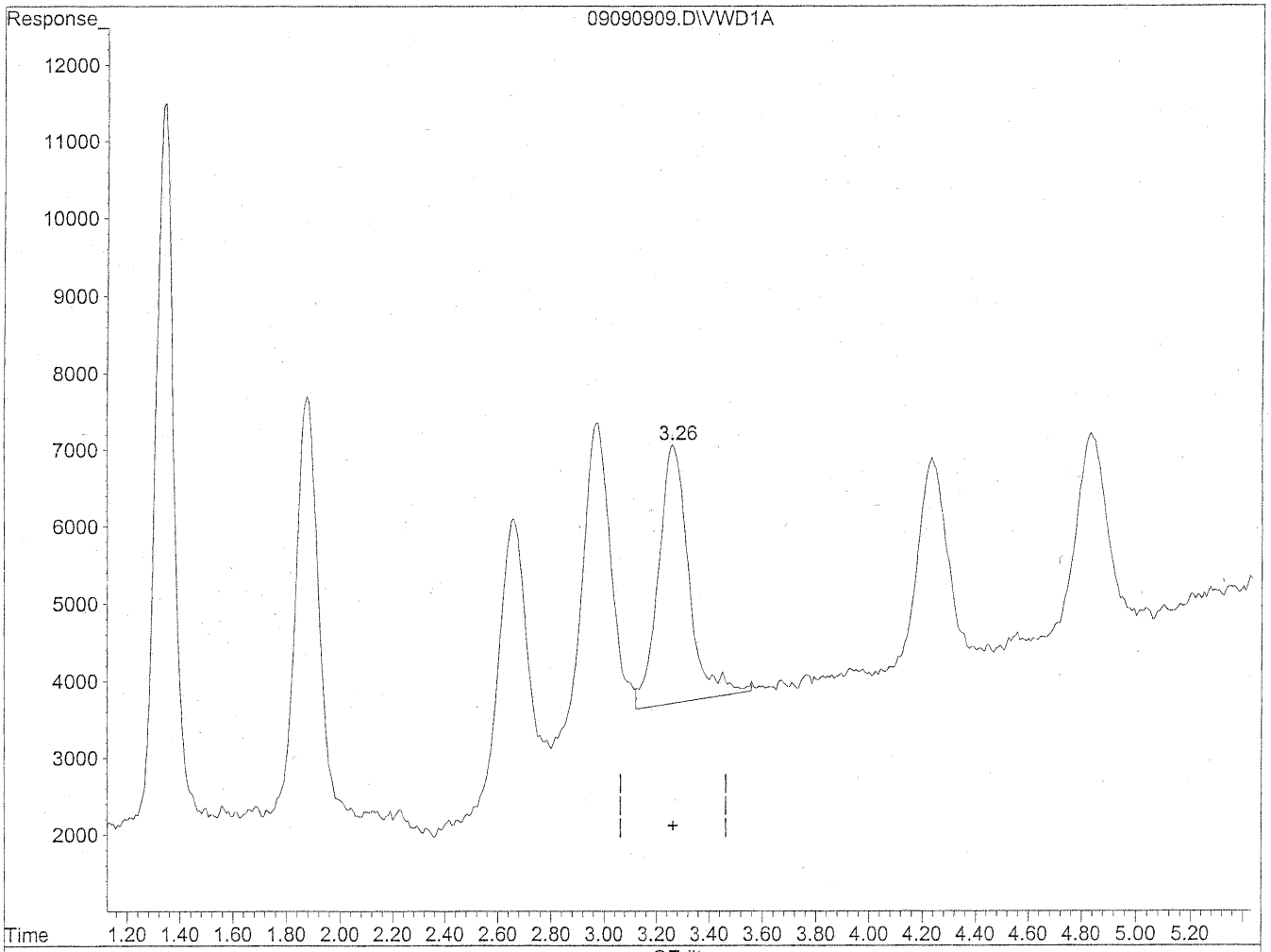
response 265532

(+) = 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



(3) Propionaldehyde

3.26min 51.767ng/ml m

response 268082

9/10/09

9/10/09

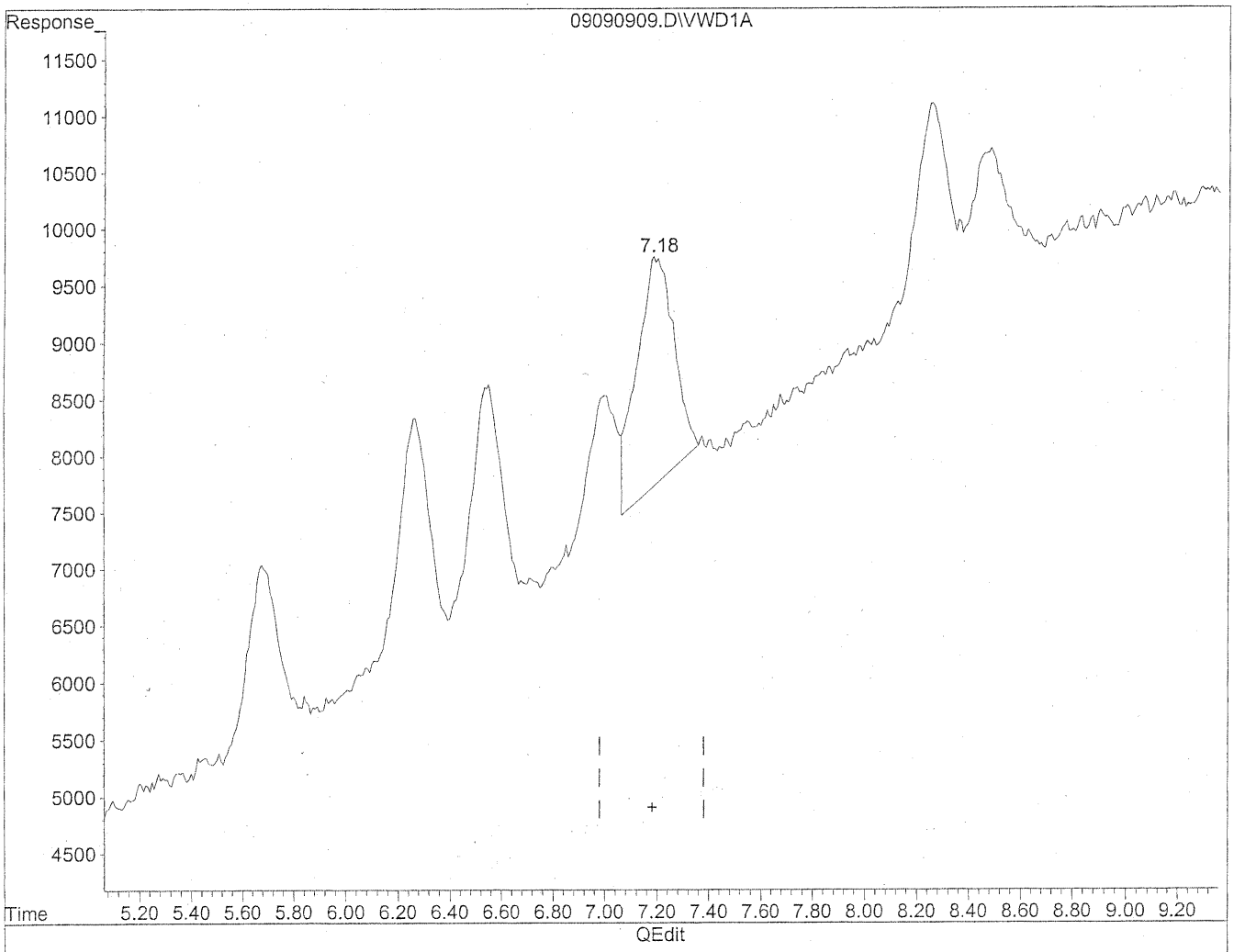
132

(+) = 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



(10) m,p-Tolualdehyde

7.19min 86.656ng/ml

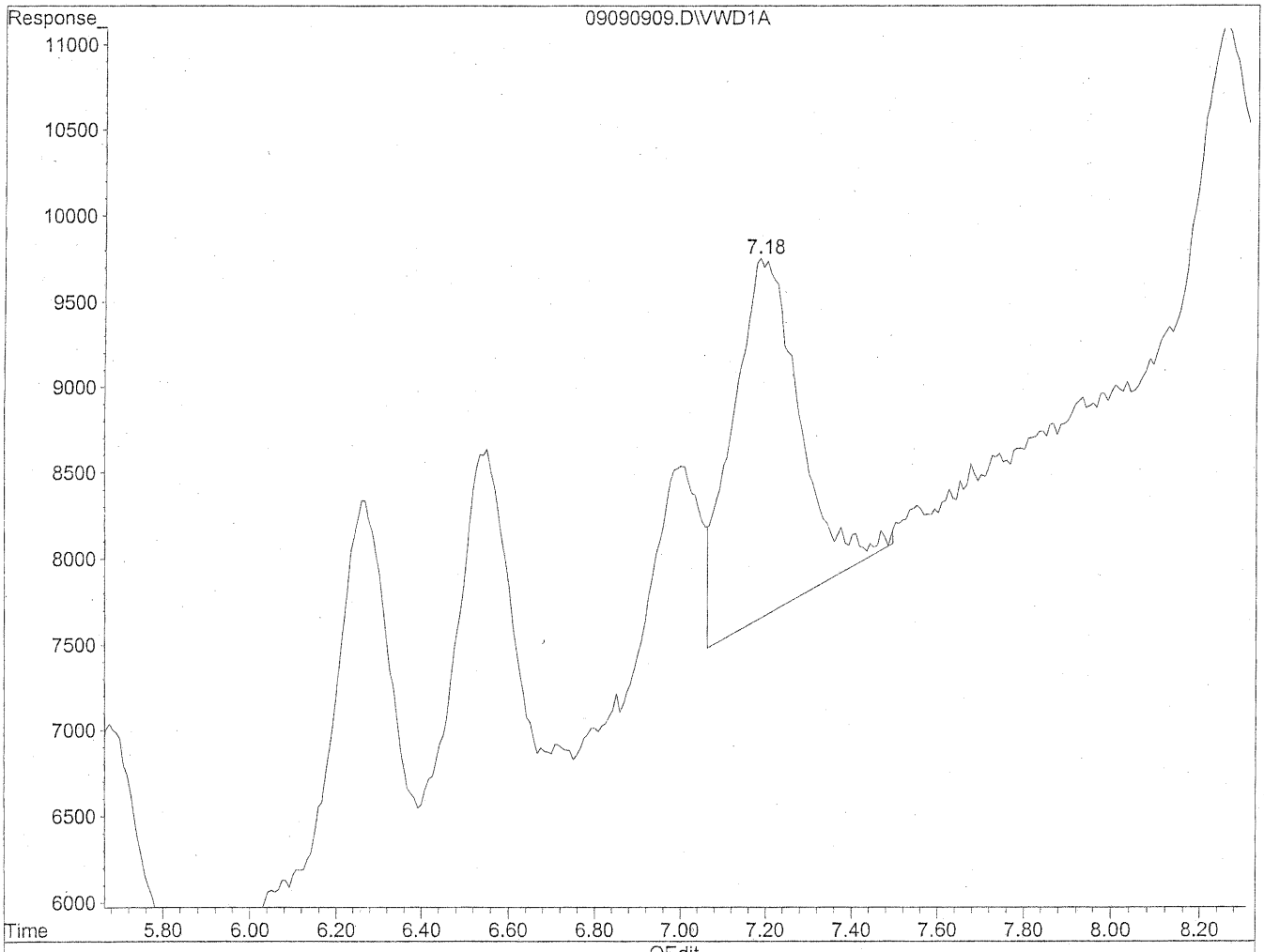
response 200799

(+) = 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



(10) m,p-Tolualdehyde

7.18min 98.156ng/ml m

response 227448

9/10/09

KP 9/10/09

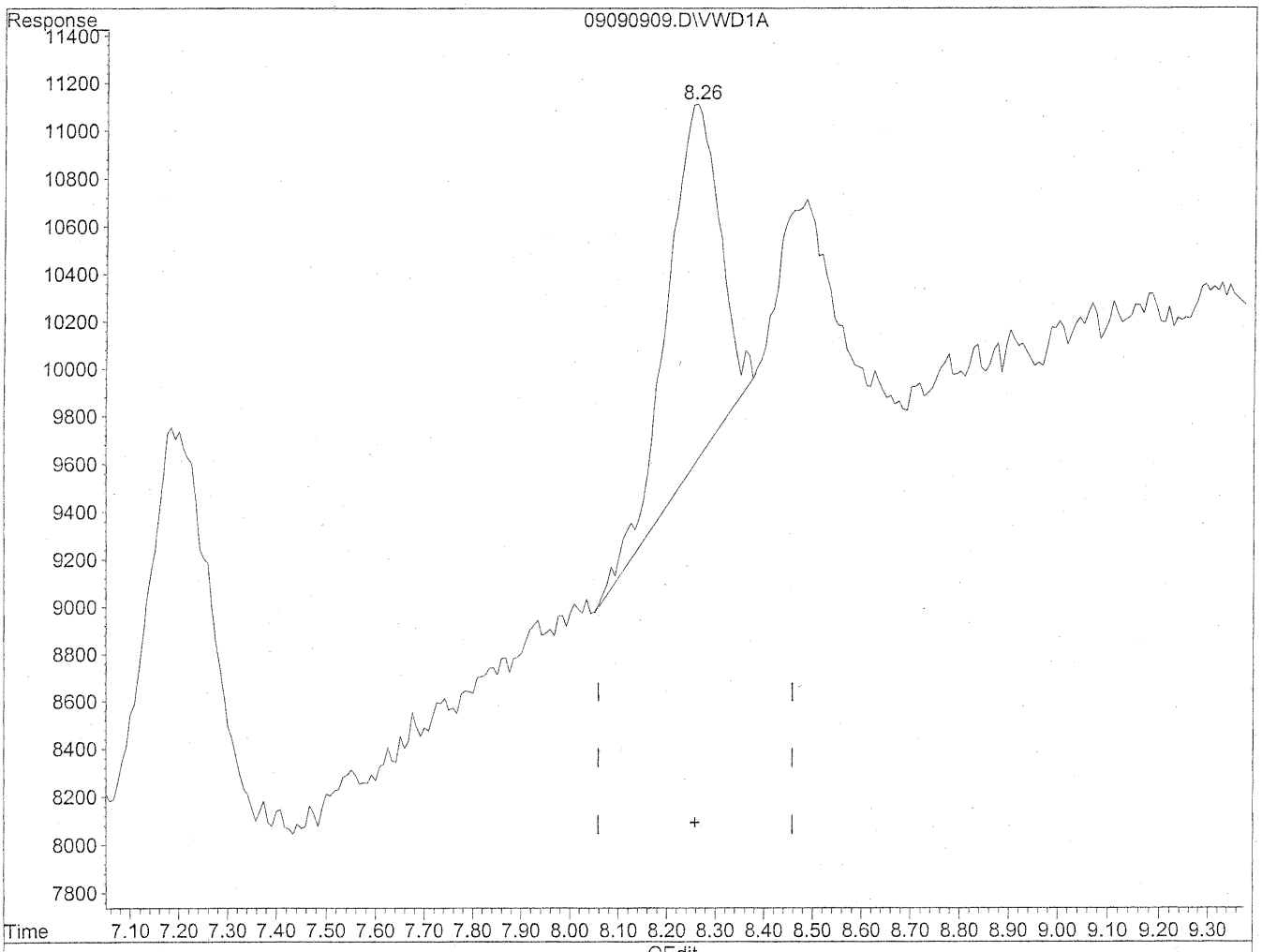
(+) = Expected Retention Time

09090909.D TO110909.M Thu Sep 10 08:47:57 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 38.176ng/ml

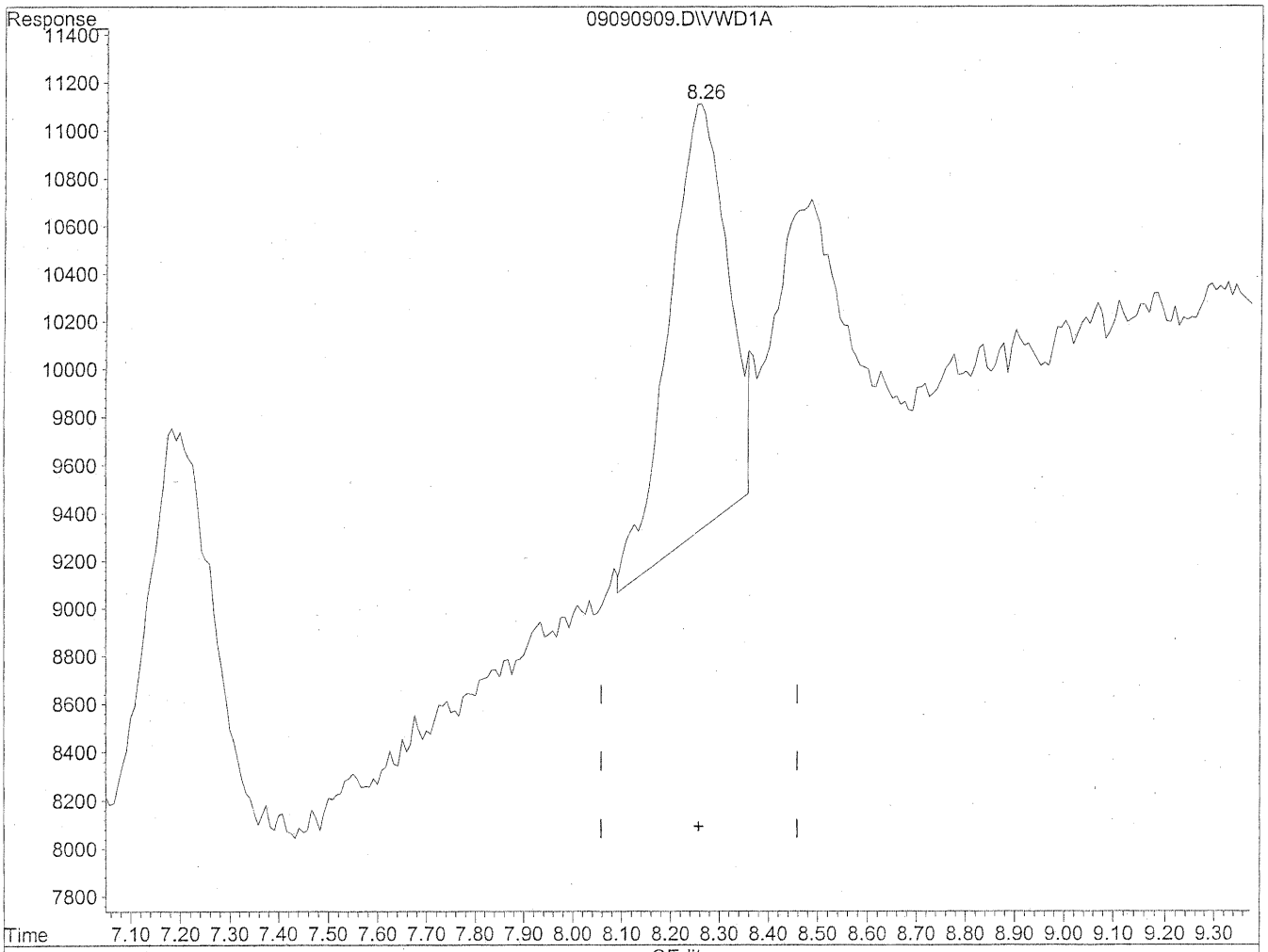
response 111365

(+) = 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 49.945ng/ml m

response 145697

9/10/09

9/10/09

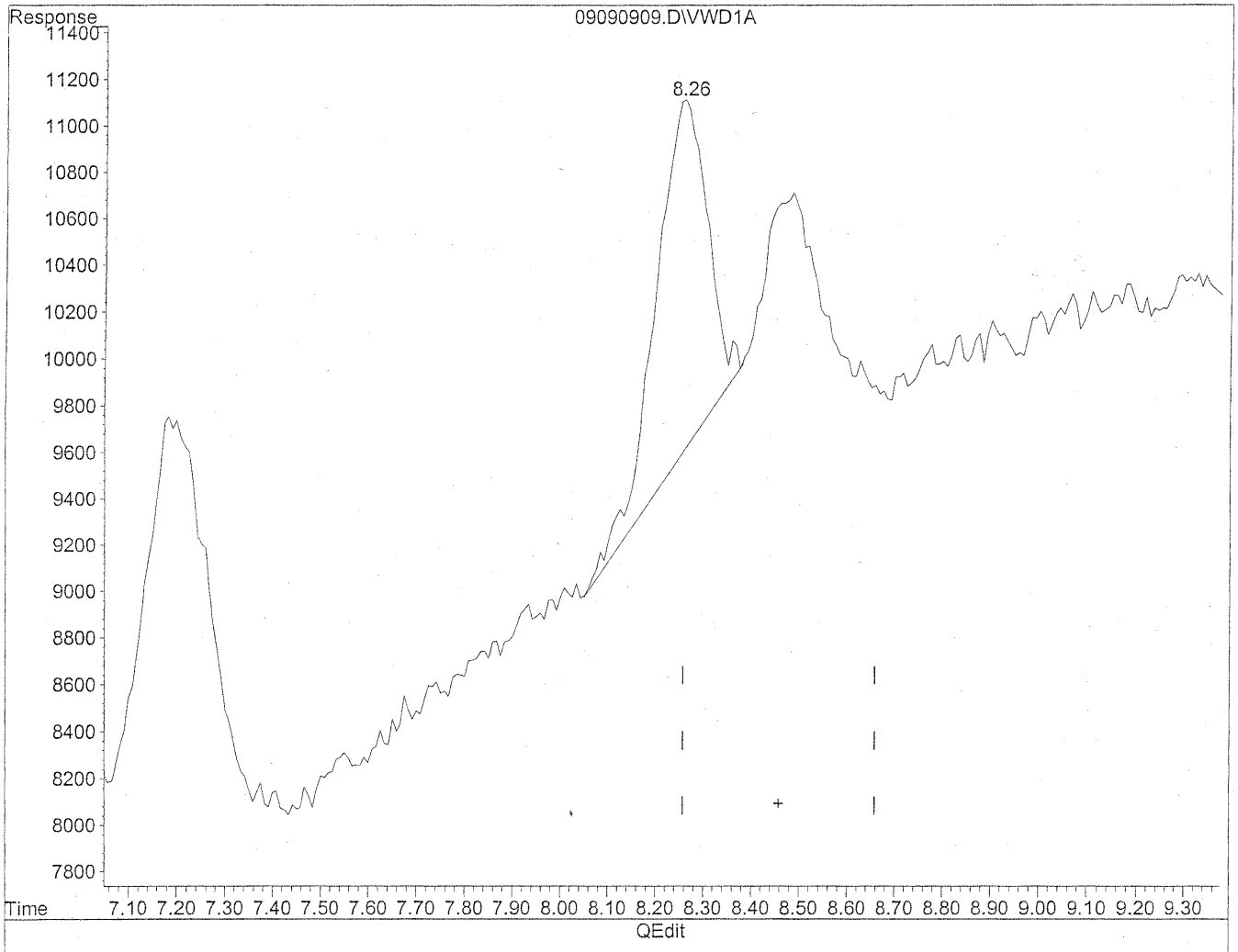
(+) = Expected Retention Time

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

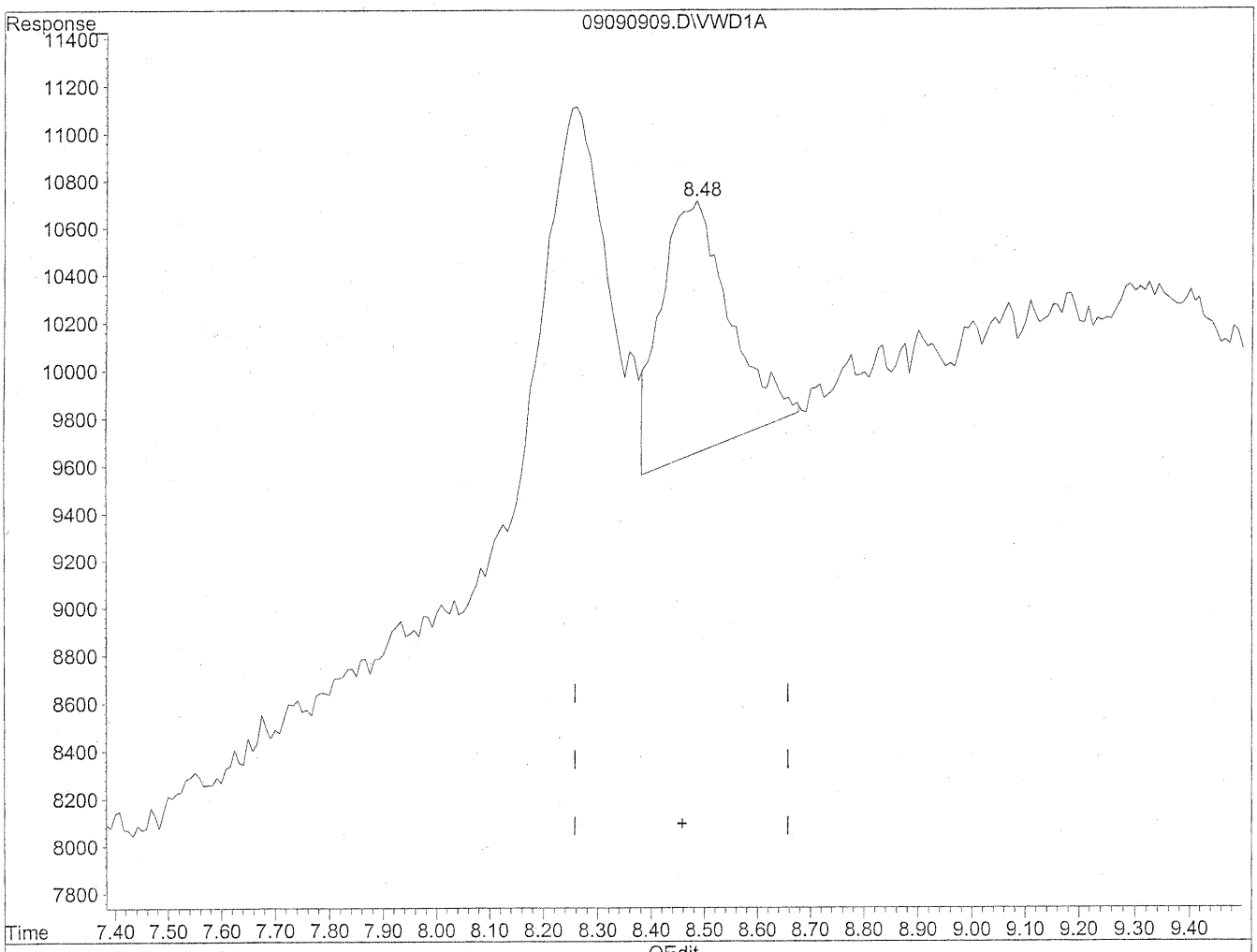
(+) = Expected Retention Time

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

9/10/09

(+) = Expected Retention Time

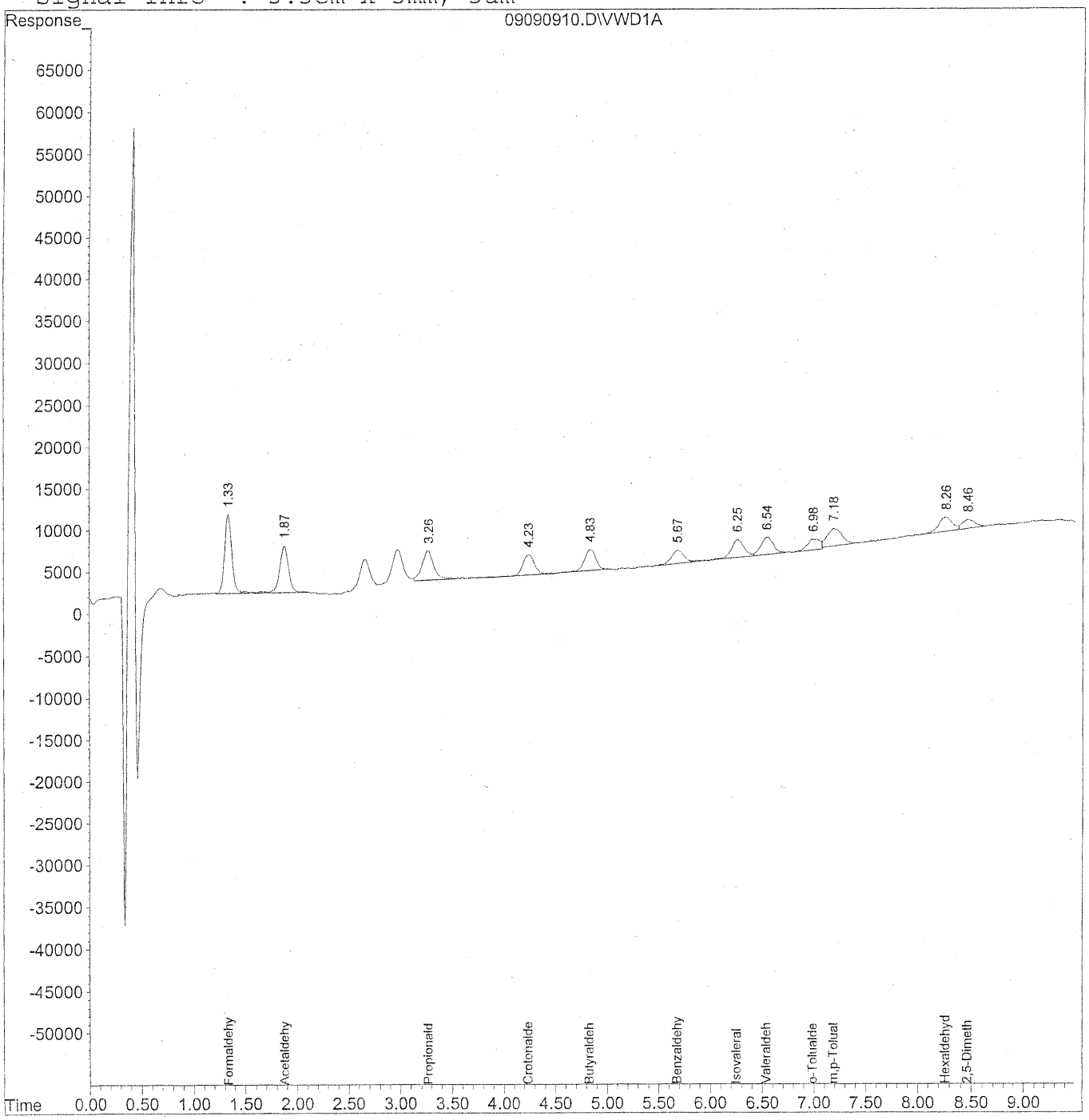
09090909.D TO110909.M Thu Sep 10 11:14:04 2009

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 8:49 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



139

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

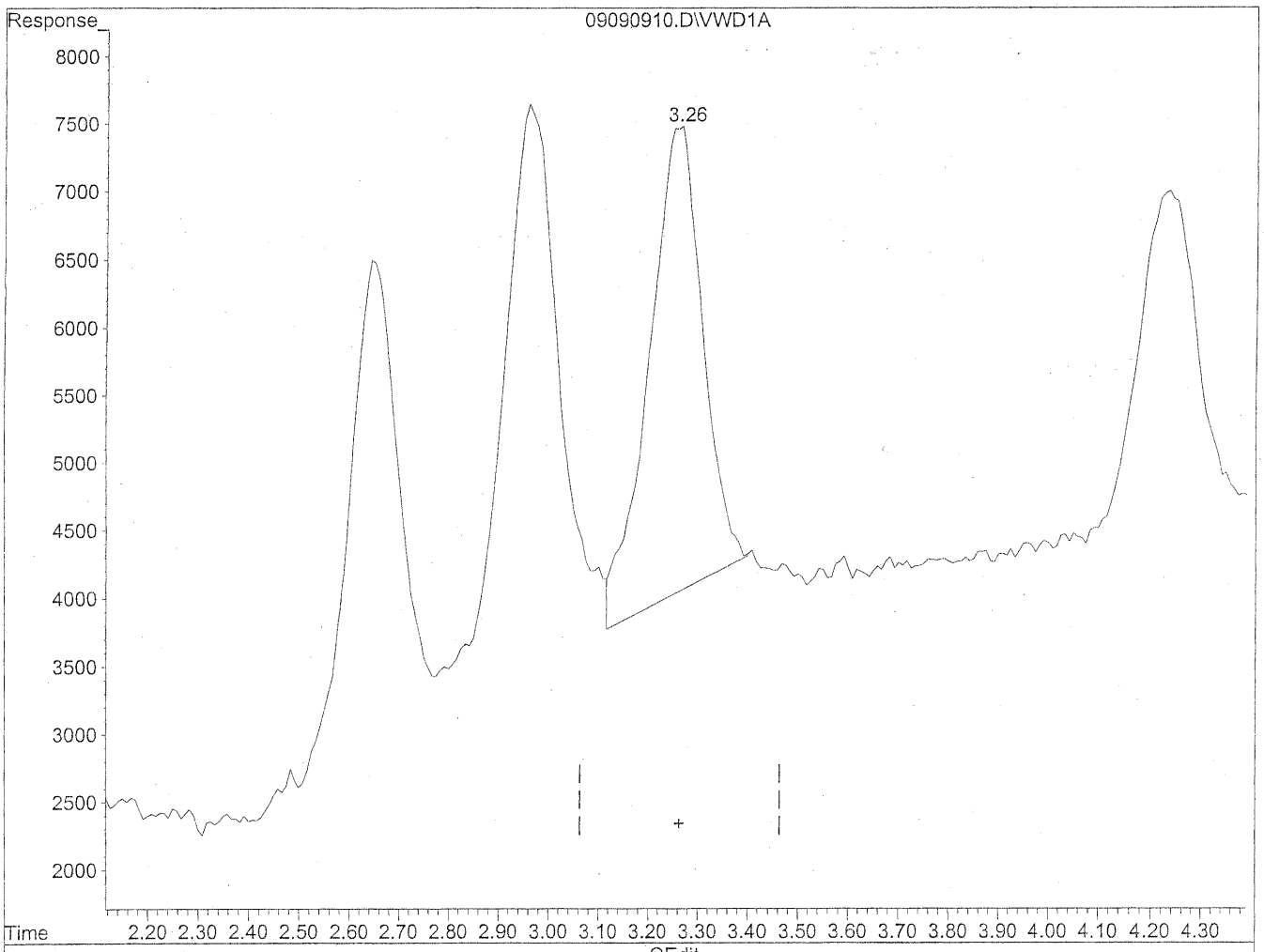
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.33	464552	50.660	ng/ml
2)	Acetaldehyde	1.87	341116	51.530	ng/ml
3)	Propionaldehyde	3.26	281140	54.104	ng/mlm
4)	Crotonaldehyde	4.23	189710	46.307	ng/ml
5)	Butyraldehyde	4.83	193856	46.804	ng/ml
6)	Benzaldehyde	5.67	142307	53.093	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

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

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

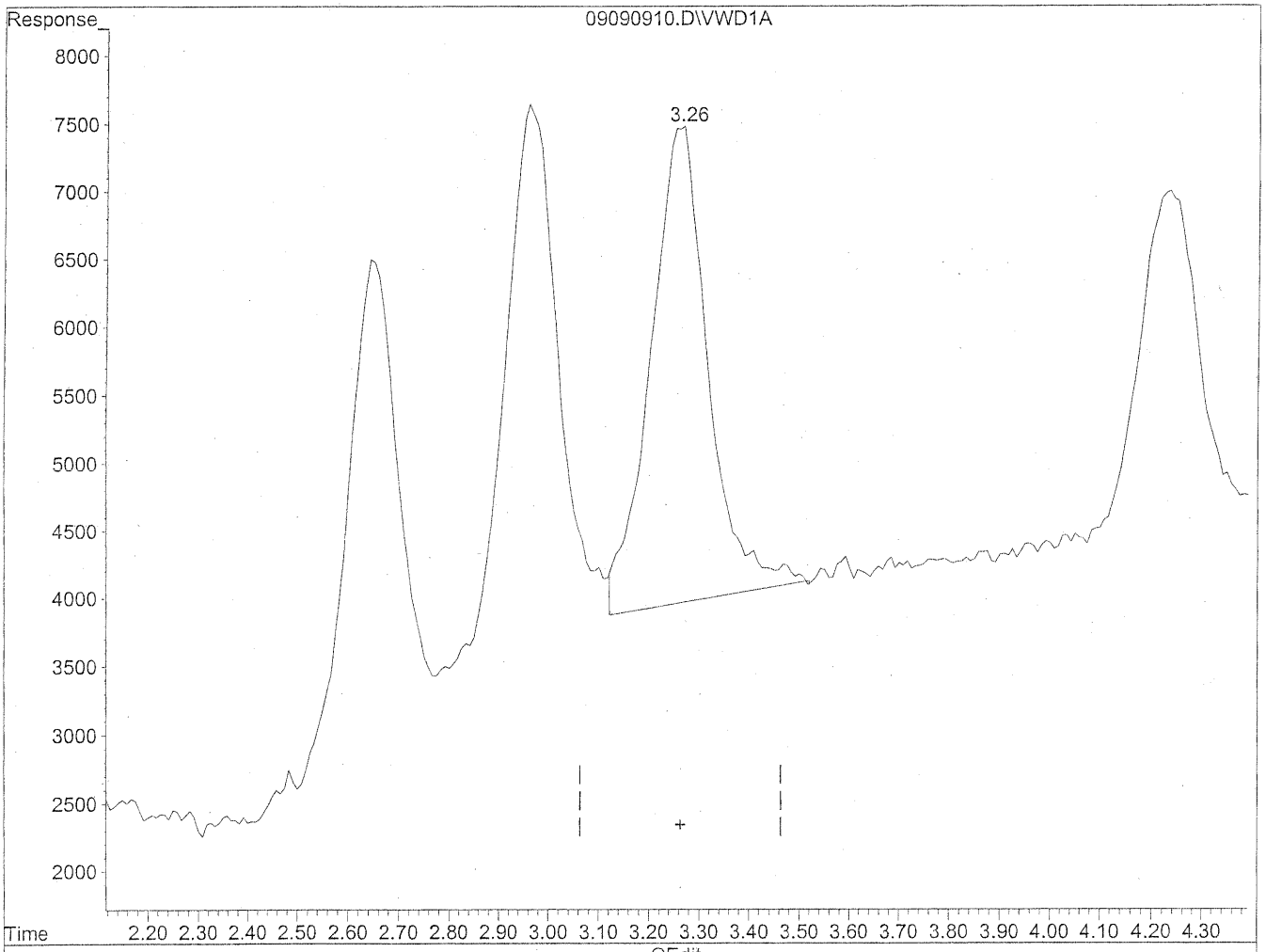
141

(+) = 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



(3) Propionaldehyde

3.26min 54.104ng/ml m

response 281140

9/10/09

9/10/09

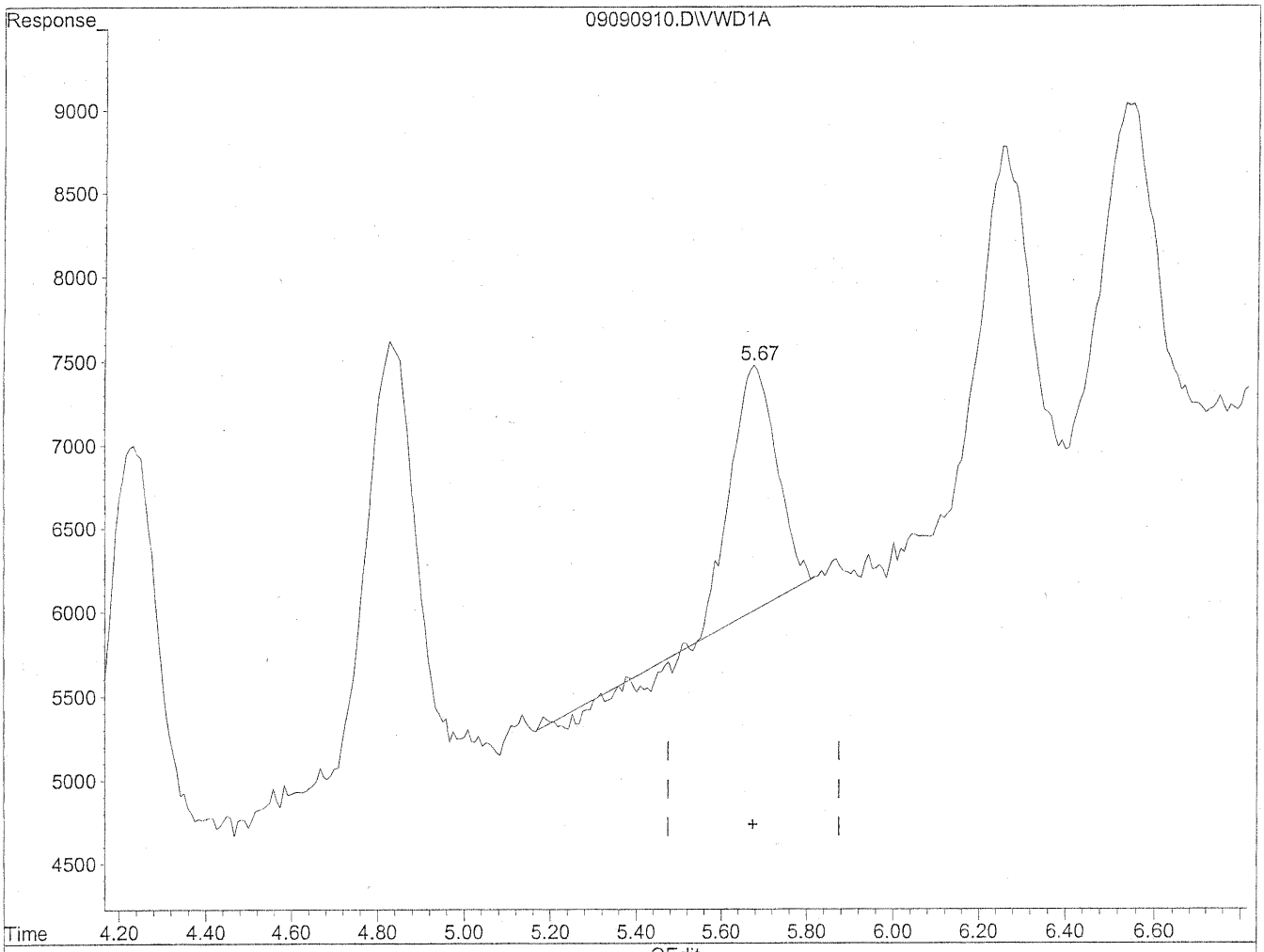
142

(+) = 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

5.68min 37.890ng/ml

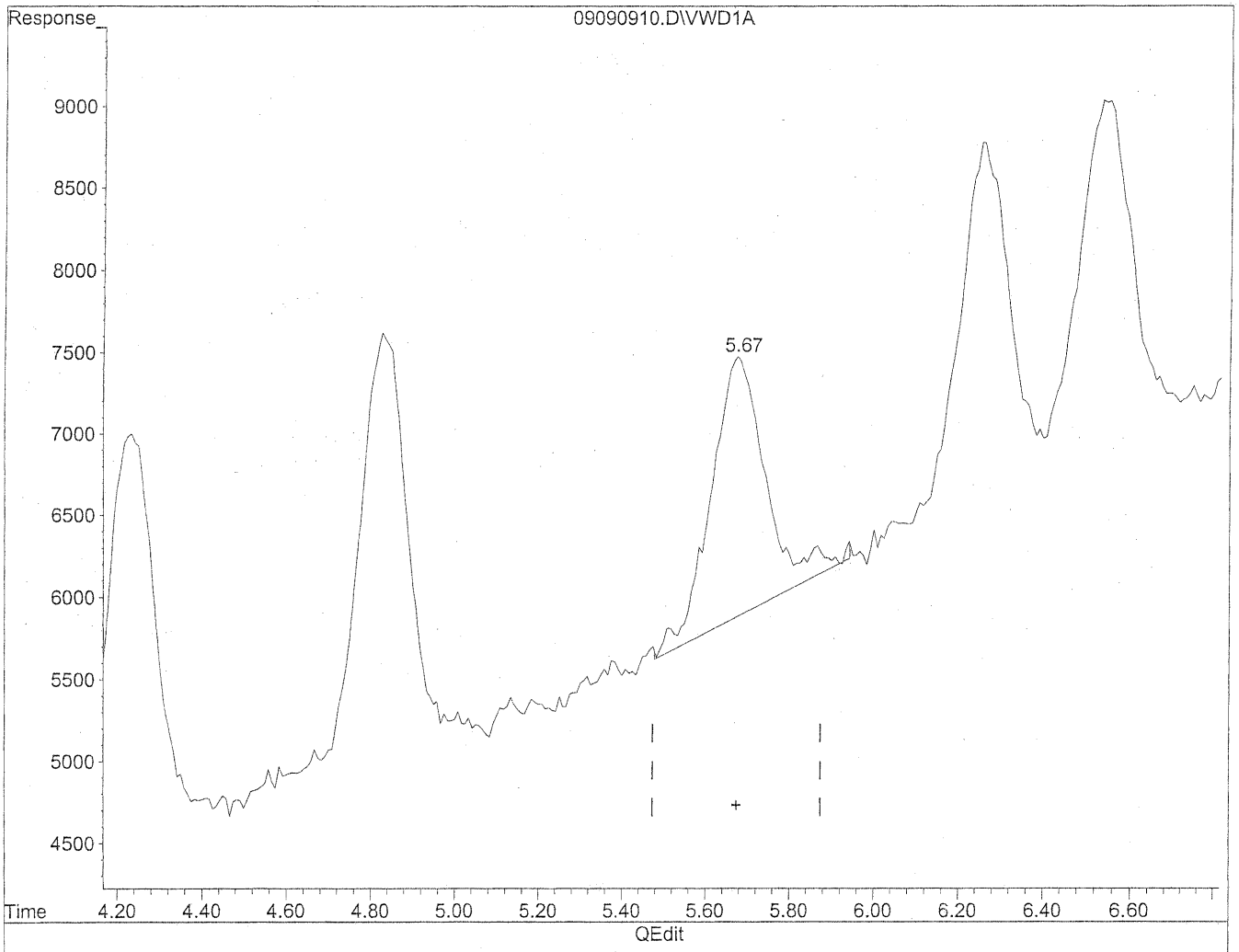
response 101557

(+) = 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

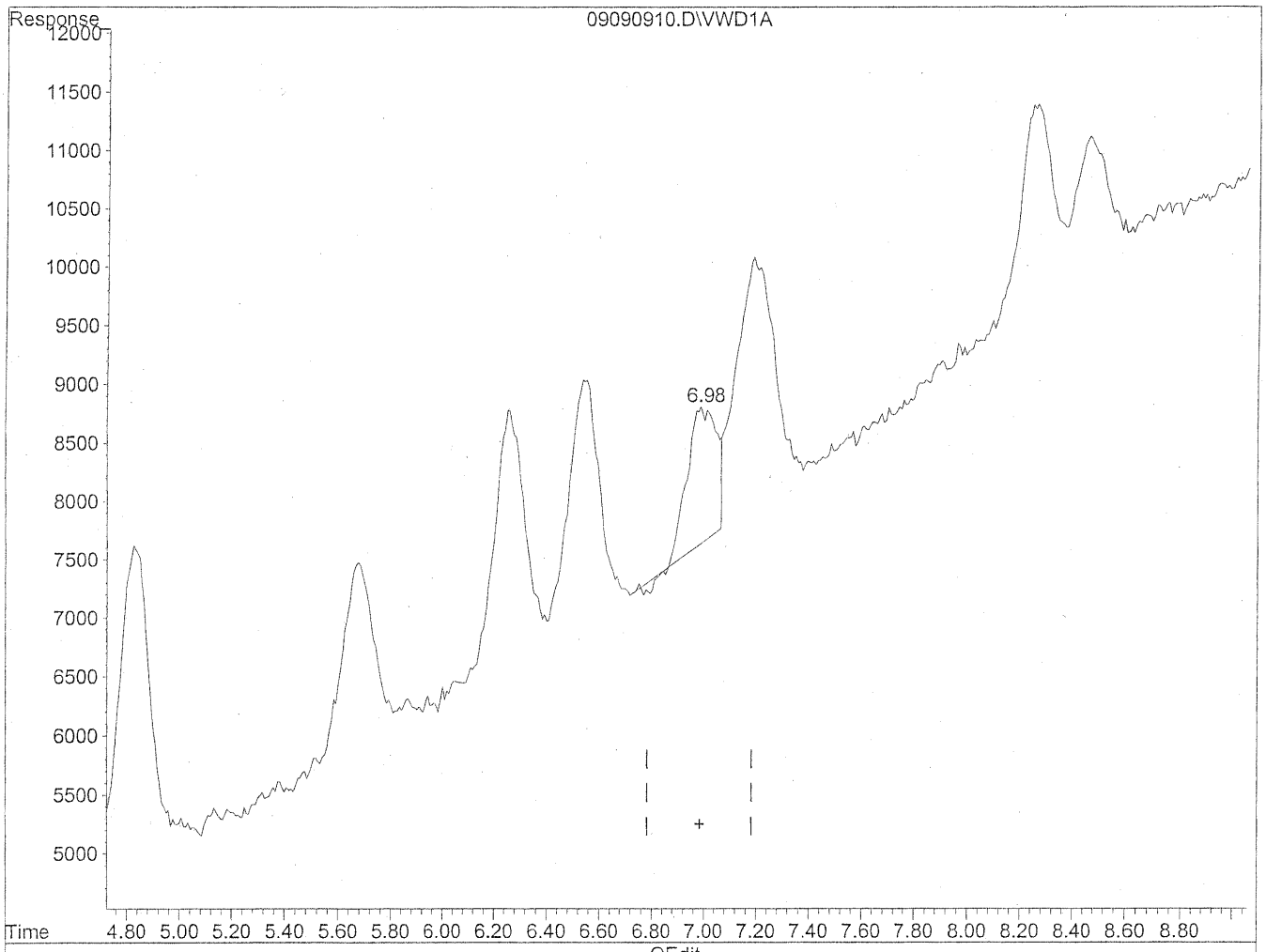
144

(+) = 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



(9) o-Tolualdehyde

6.99min 38.054ng/ml

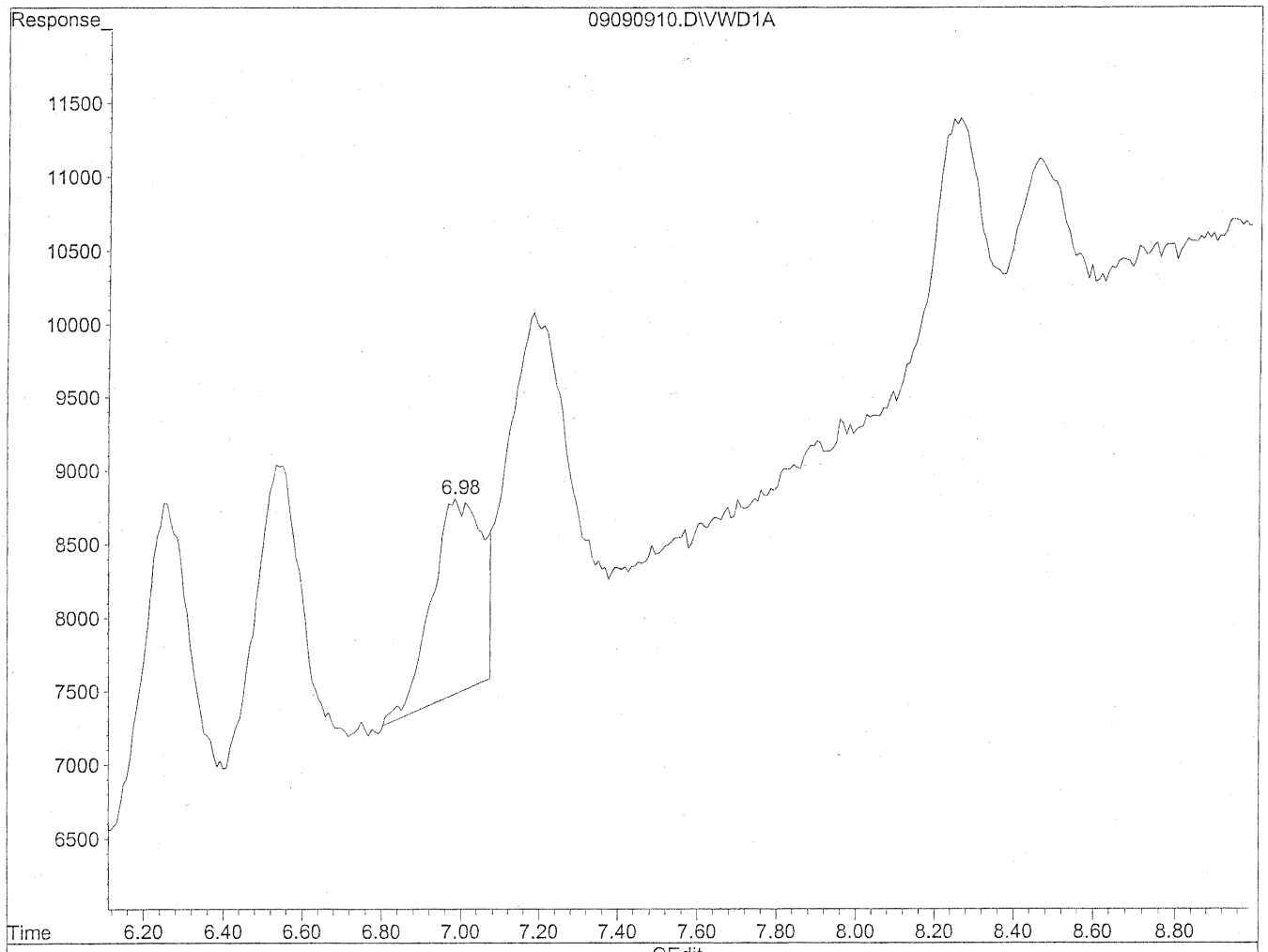
response 86012

(+) = 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



(9) o-Tolualdehyde

6.98min 50.342ng/ml m

response 113786

9/10/09

9/10/09

(+) = Expected Retention Time

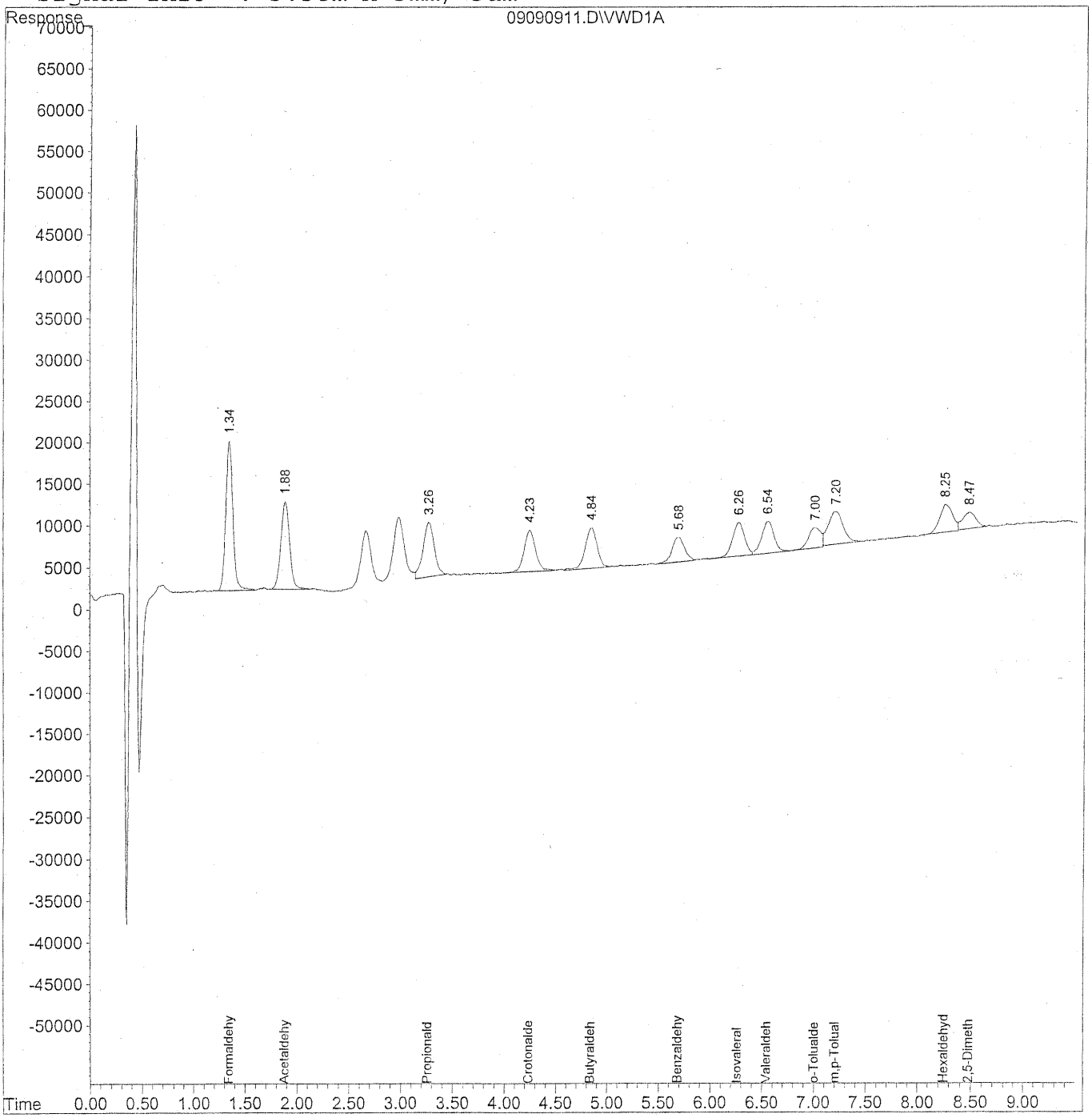
09090910.D TO110909.M Thu Sep 10 08:49:36 2009

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



147

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

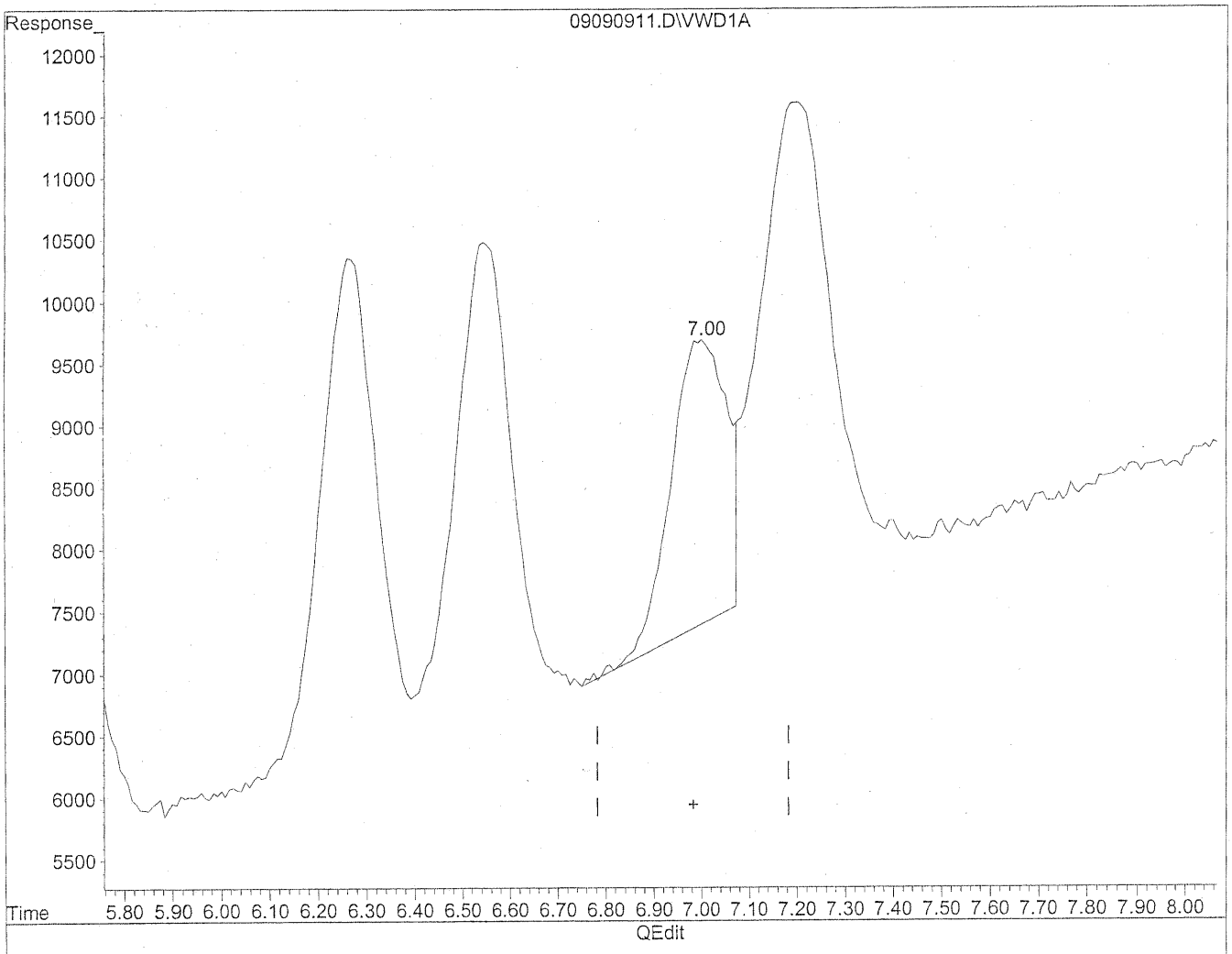
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	857936	93.340	ng/ml
2)	Acetaldehyde	1.88	602866	90.745	ng/ml
3)	Propionaldehyde	3.26	495705	95.023	ng/ml
4)	Crotonaldehyde	4.24	389577	95.443	ng/ml
5)	Butyraldehyde	4.84	390139	94.563	ng/ml
6)	Benzaldehyde	5.68	249897	93.081	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

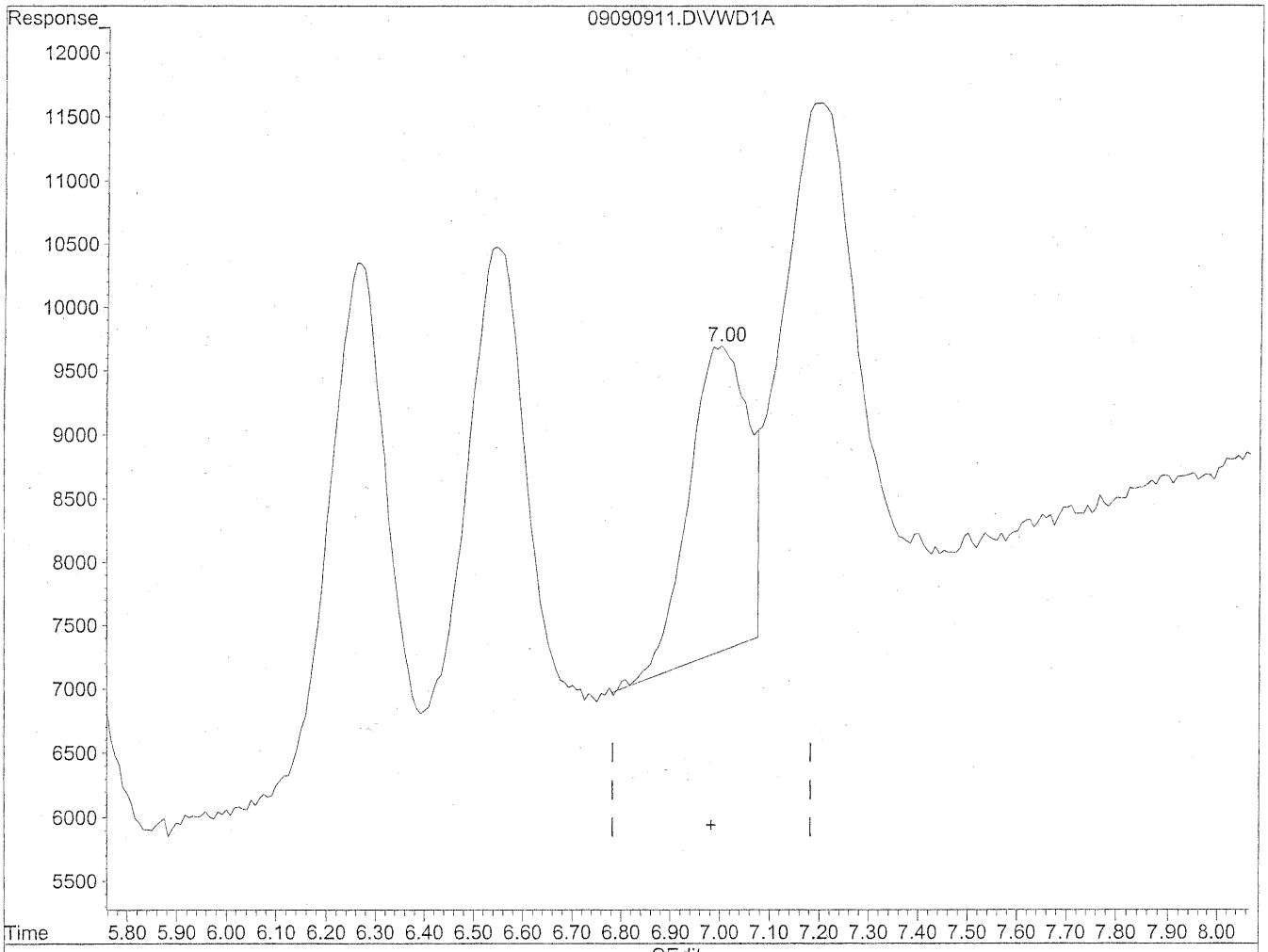
(+) = Expected Retention Time

09090911.D TO110909.M Thu Sep 10 09:01:59 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



(9) o-Tolualdehyde

7.00min 91.087ng/ml m

response 207105

9/10/09

9/10/09

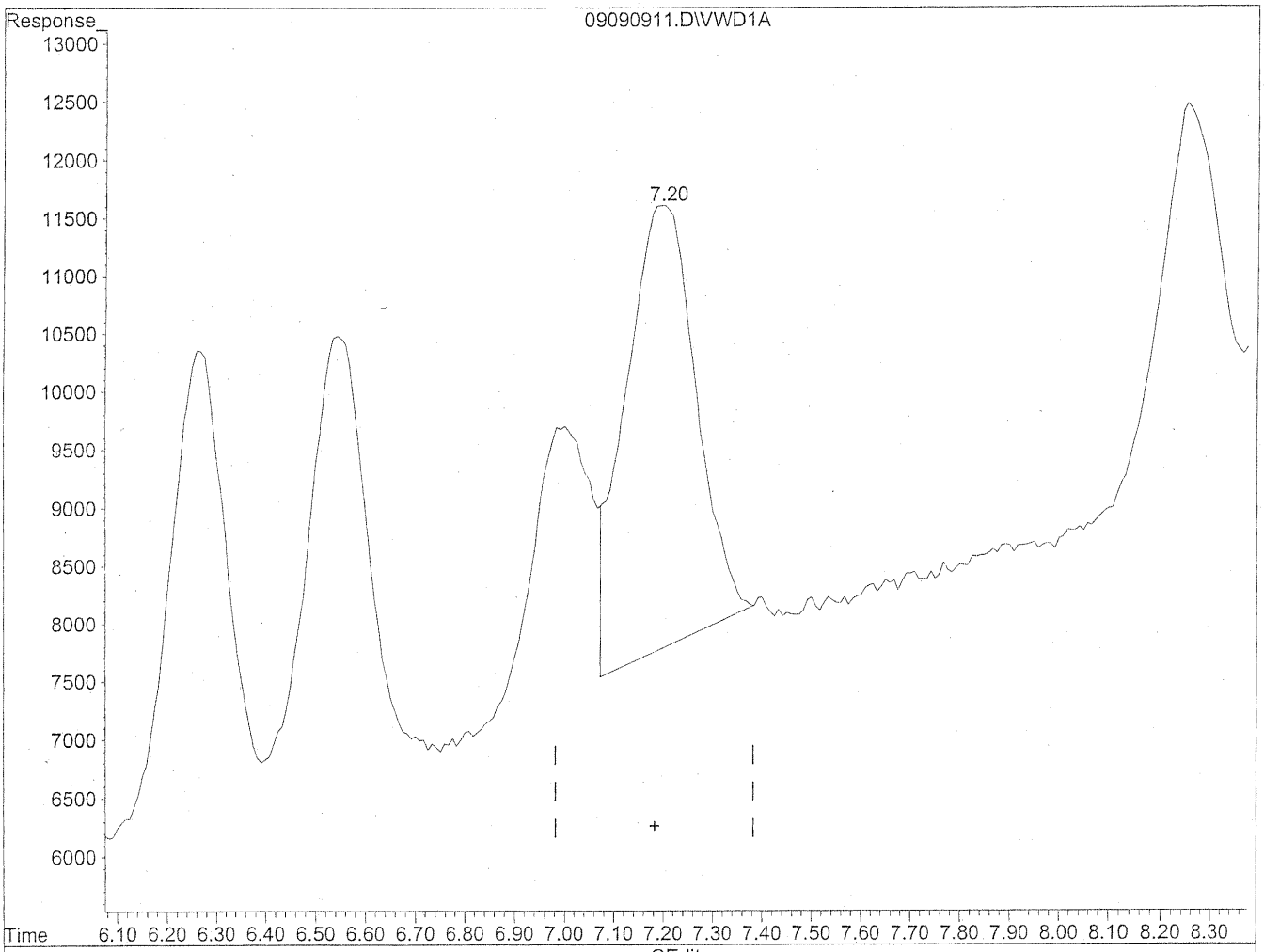
(+) = Expected Retention Time

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



(10) m,p-Tolualdehyde

7.20min 165.581ng/ml

response 384316

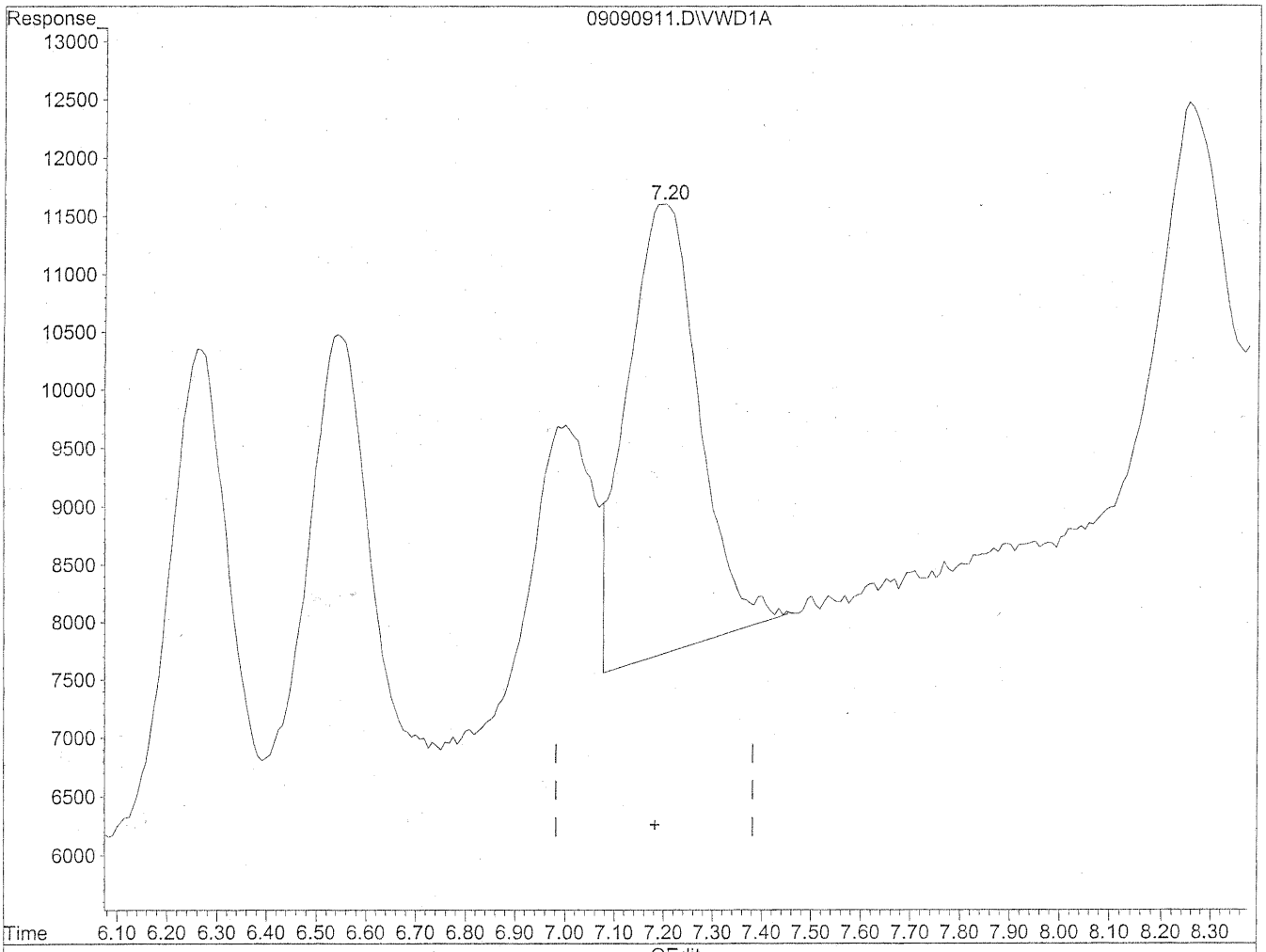
(+) = Expected Retention Time

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

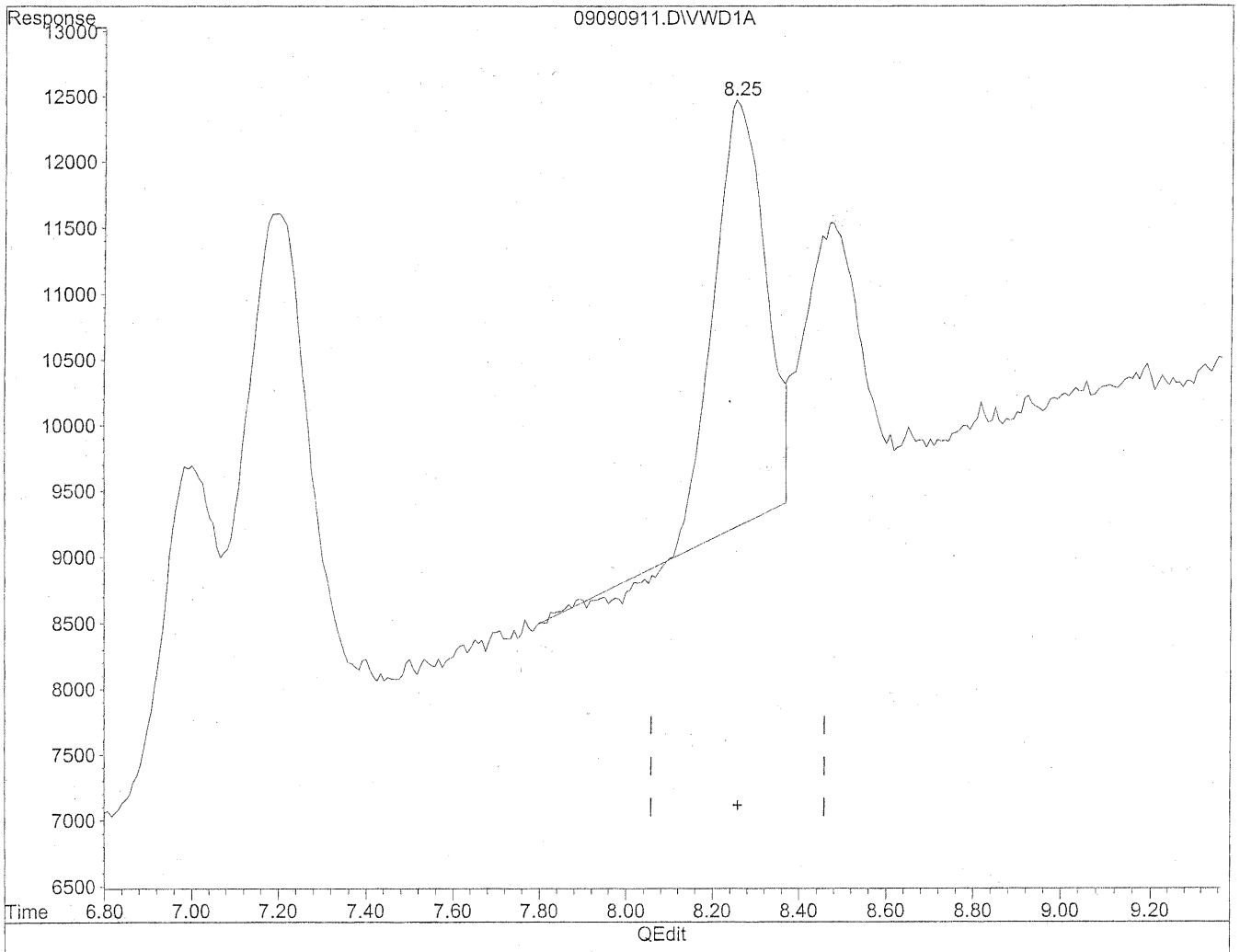
152

(+) = 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

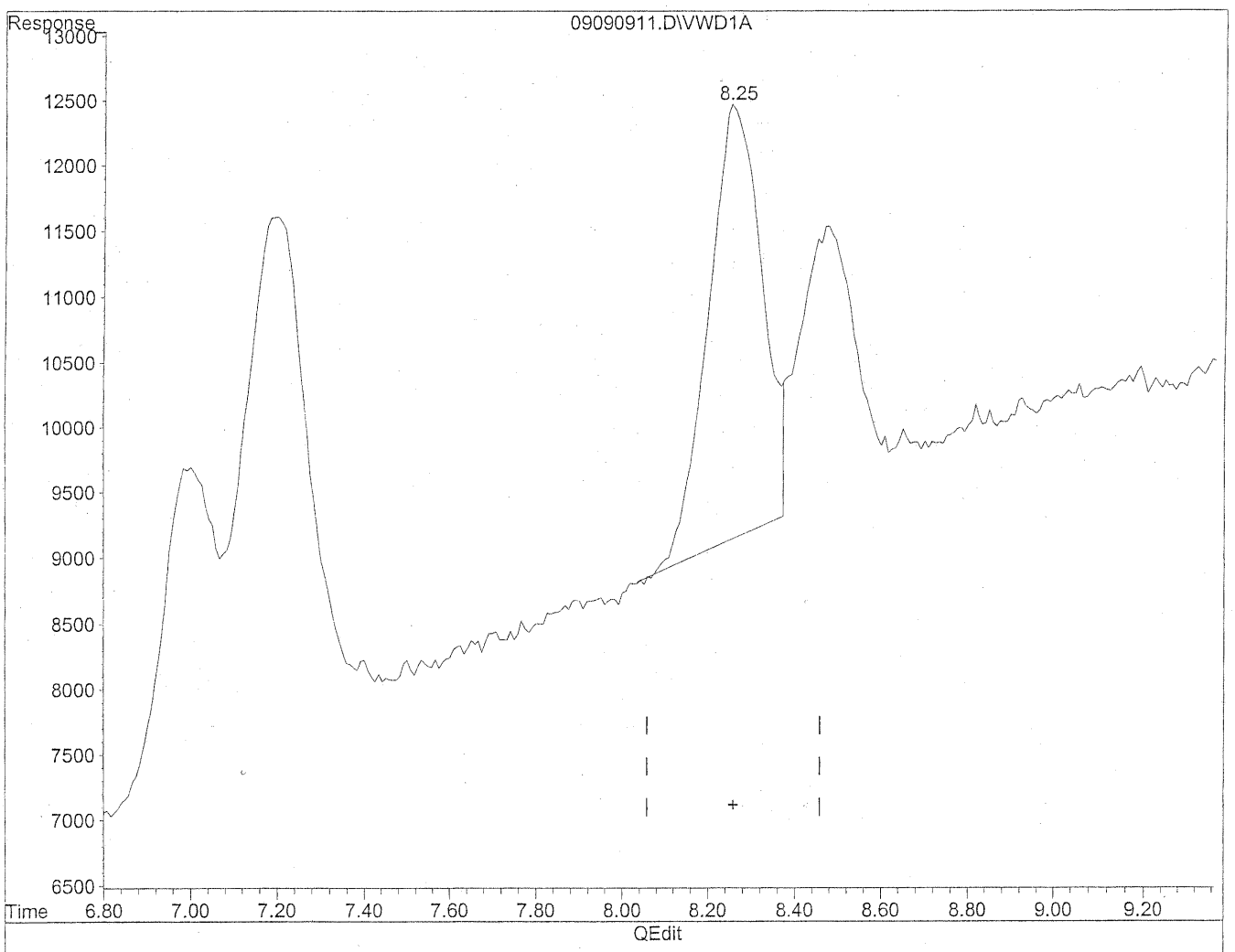
(+) = Expected Retention Time

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



(11) Hexaldehyde

8.25min 96.453ng/ml m

response 282439

9/10/09

9/10/09

(+) = Expected Retention Time

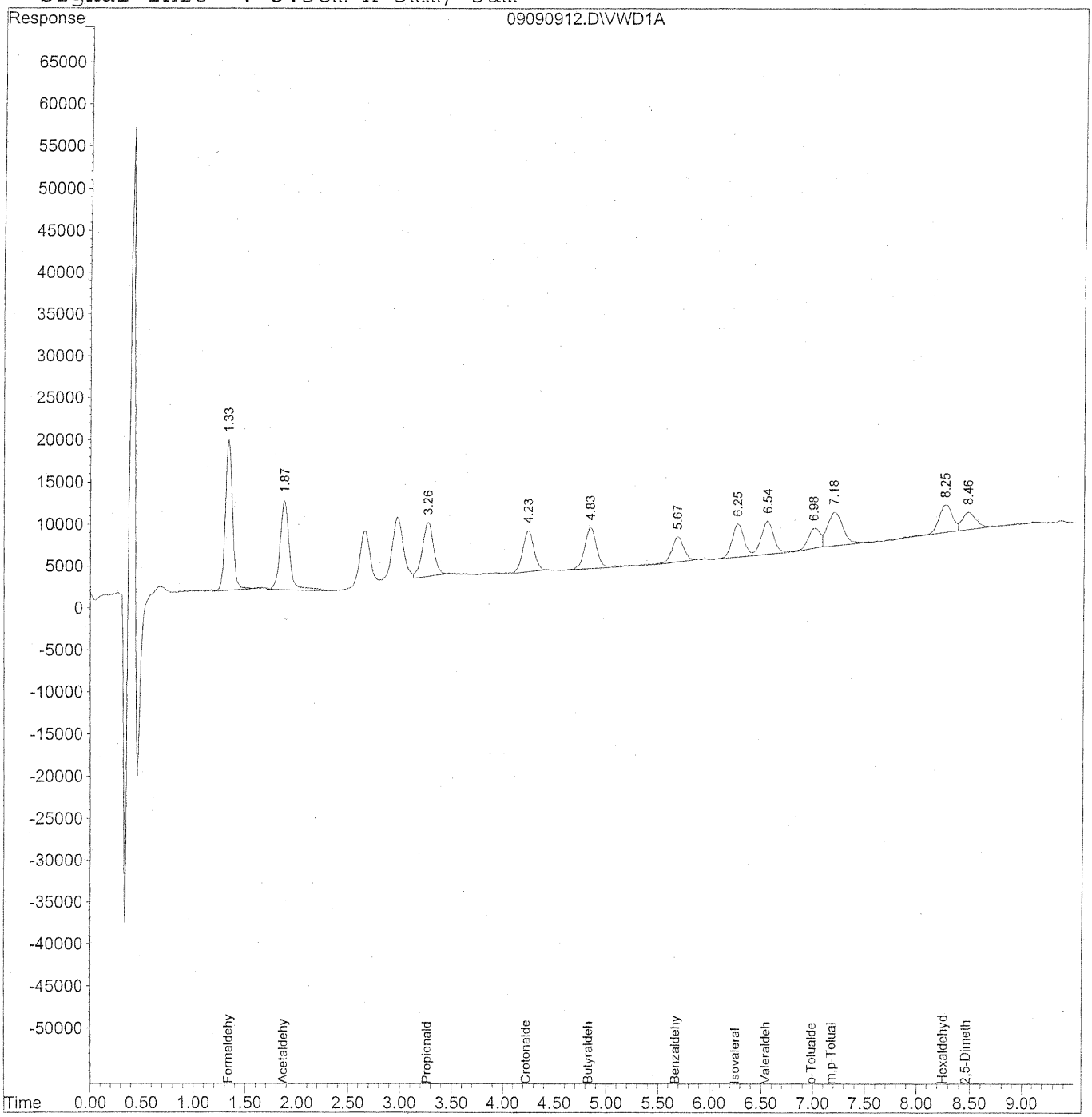
09090911.D TO110909.M Thu Sep 10 08:50:31 2009

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



155

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

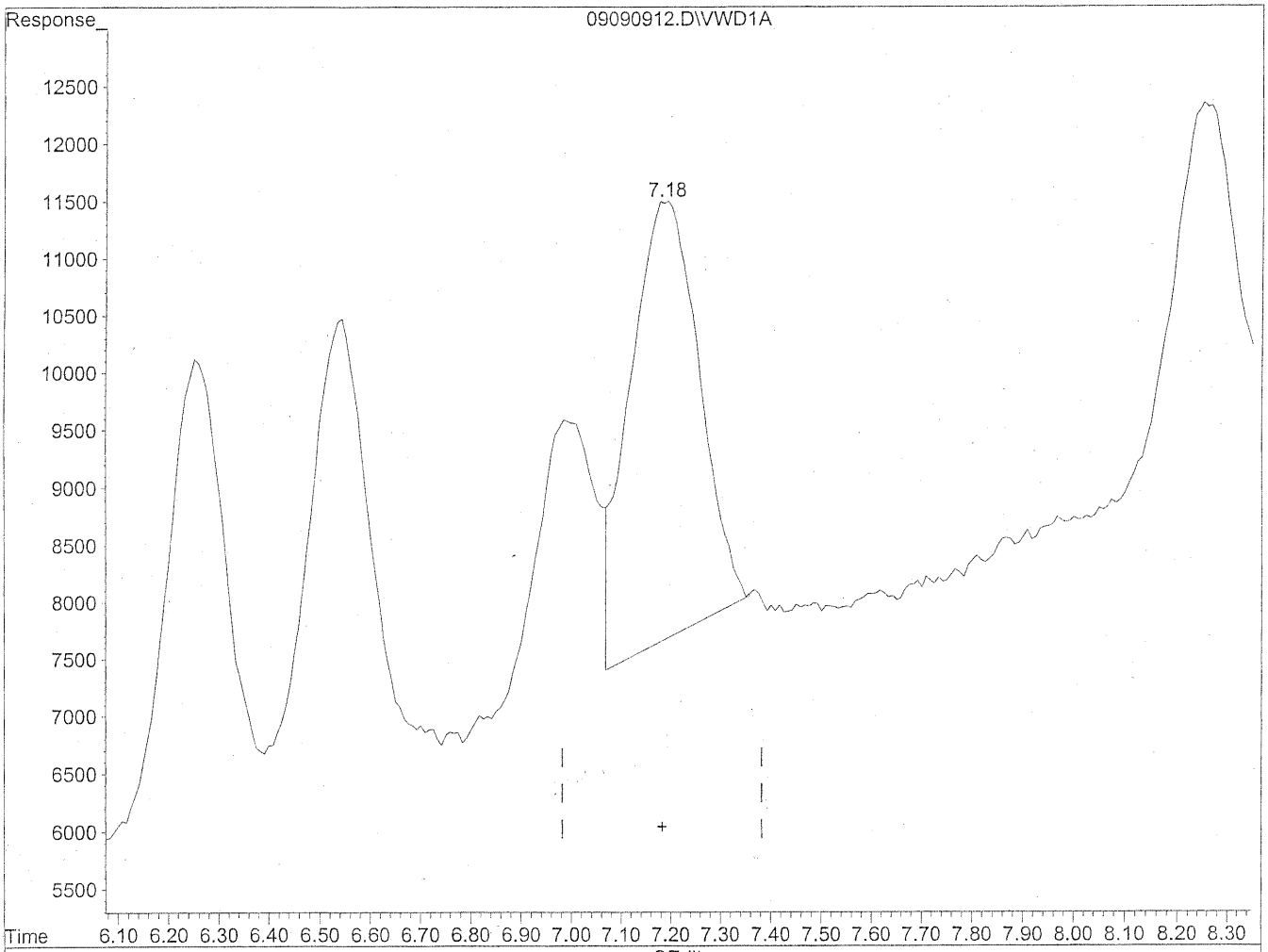
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.33	856527	95.214	ng/ml
2)	Acetaldehyde	1.87	664731	103.021	ng/ml
3)	Propionaldehyde	3.26	489979	96.720	ng/ml
4)	Crotonaldehyde	4.23	375407	93.706	ng/ml
5)	Butyraldehyde	4.83	399611	98.840	ng/ml
6)	Benzaldehyde	5.67	241433	91.160	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

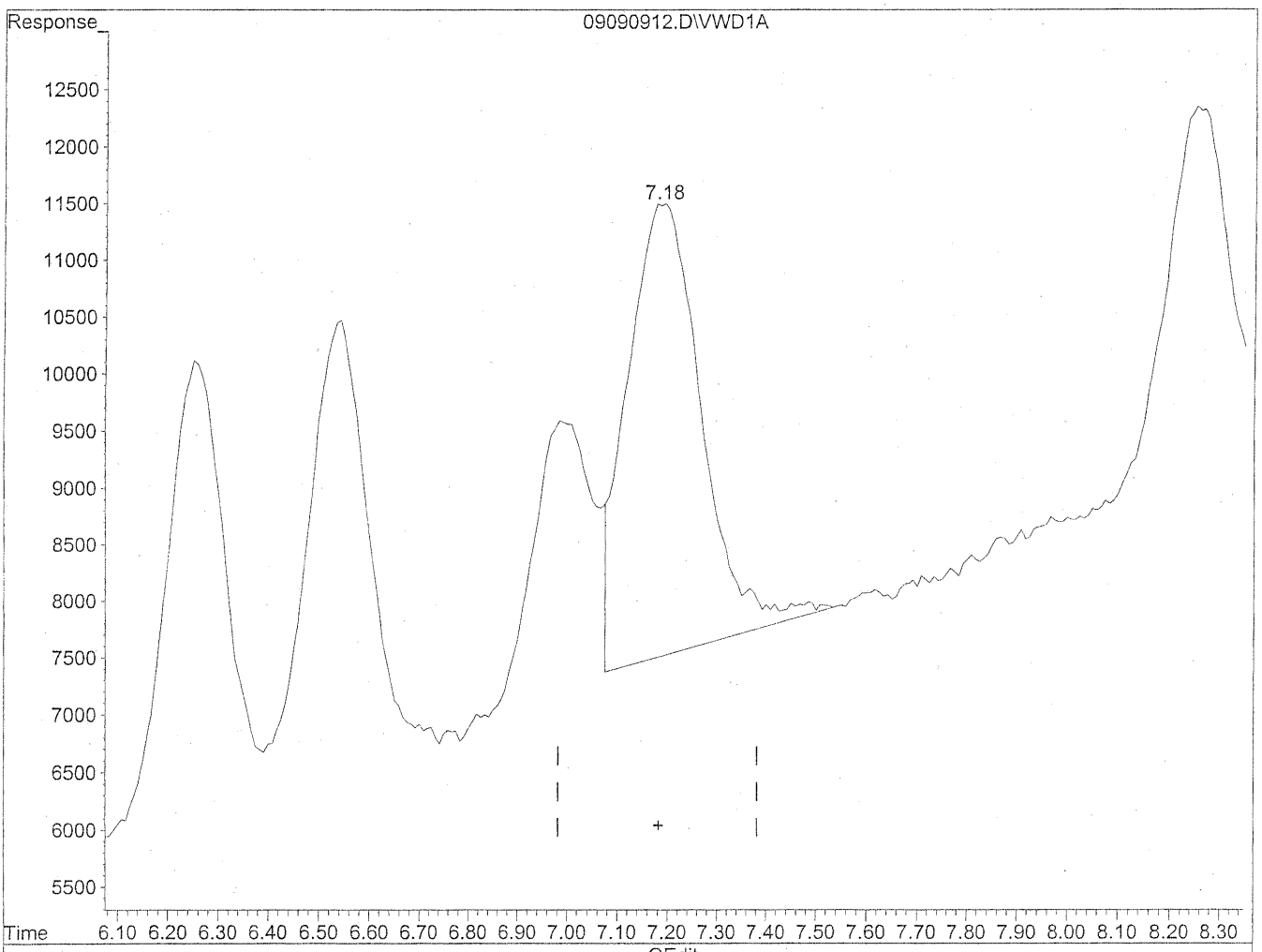
(+) = Expected Retention Time

09090912.D TO110909.M Thu Sep 10 08:51:11 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 8:50 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

7.18min 187.485ng/ml m

response 416110

9/10/09

9/10/09

158

(+) = Expected Retention Time

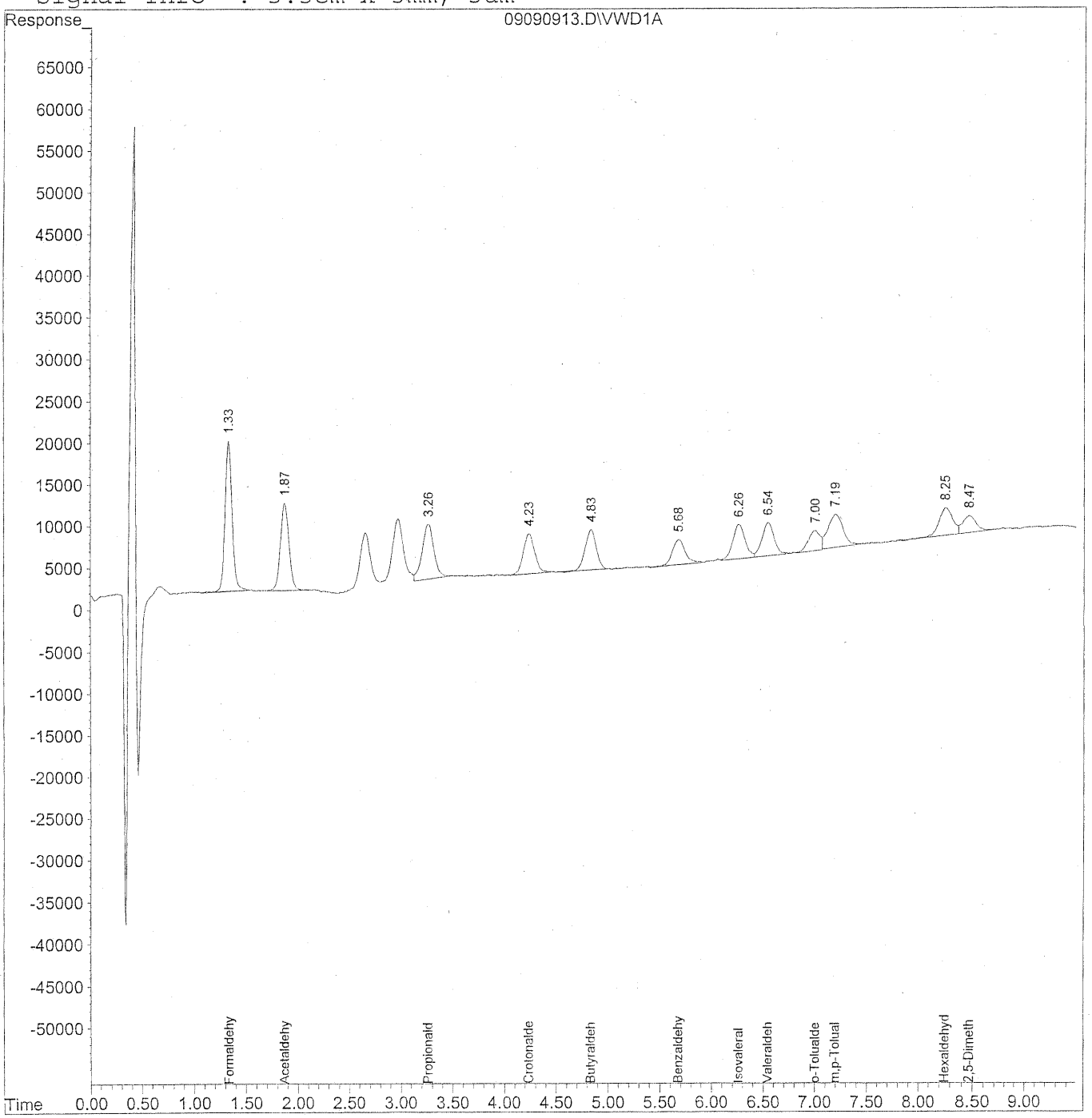
09090912.D TO110909.M Thu Sep 10 08:51:16 2009

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



159

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

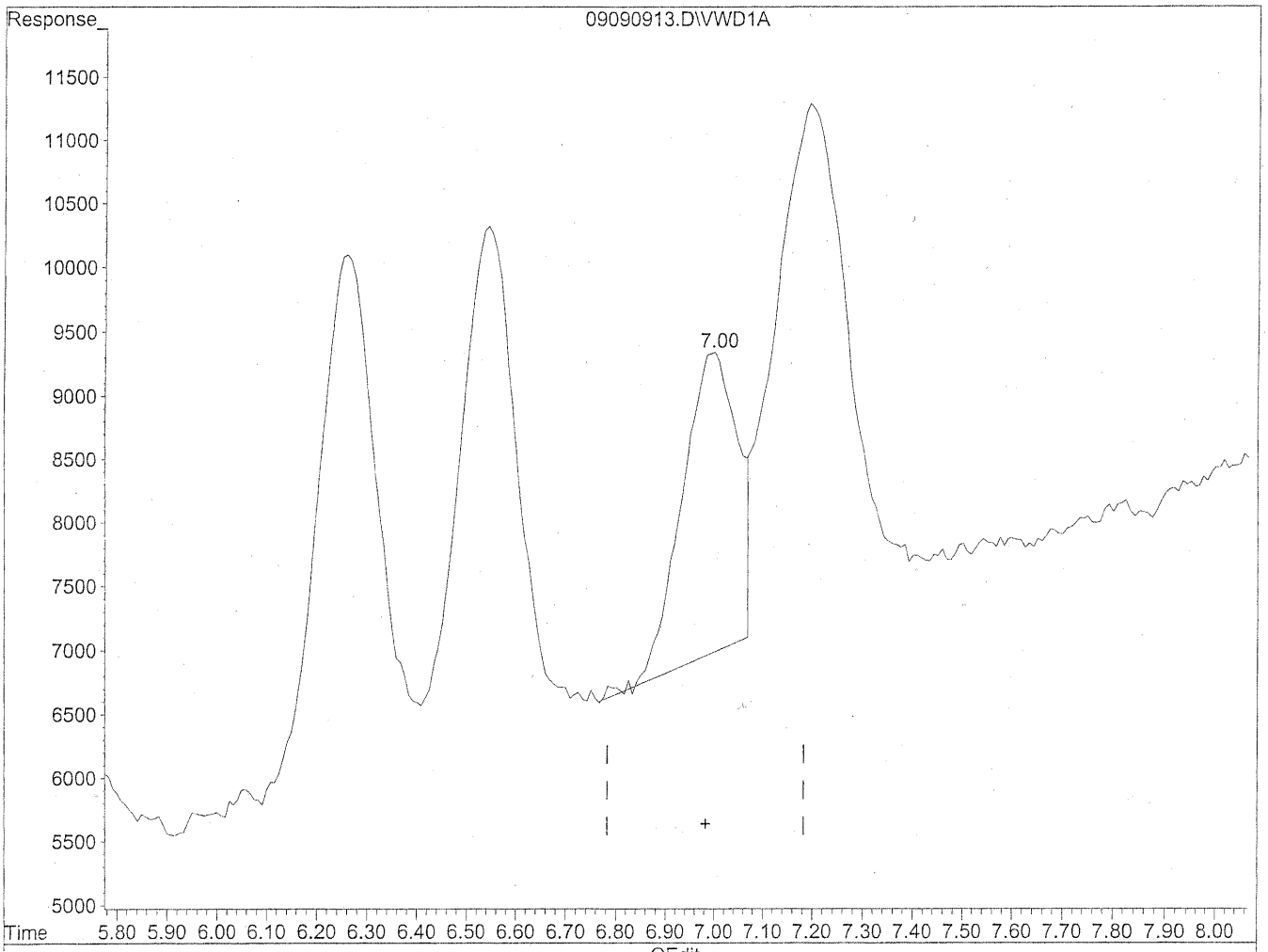
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	864000	96.057	ng/ml
2)	Acetaldehyde	1.87	602096	92.574	ng/ml
3)	Propionaldehyde	3.26	512978	101.355	ng/ml
4)	Crotonaldehyde	4.24	373596	93.529	ng/ml
5)	Butyraldehyde	4.84	358623	88.529	ng/ml
6)	Benzaldehyde	5.68	261486	98.995	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



QEdit

(9) o-Tolualdehyde

7.00min 84.692ng/ml

response 181403

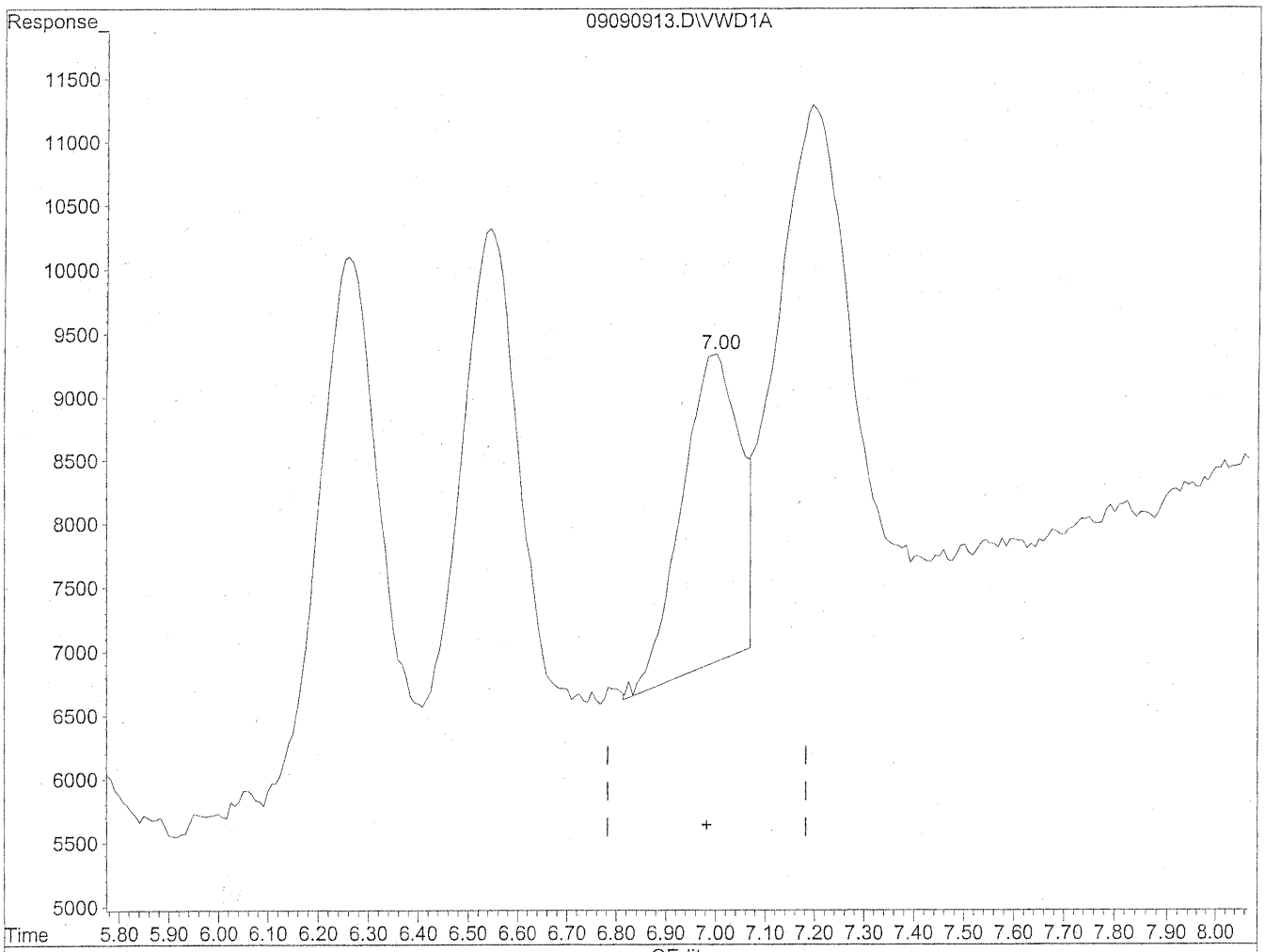
(+) = Expected Retention Time

09090913.D TO110909.M Thu Sep 10 09:02:50 2009

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 92.606ng/ml m

response 198353

9/10/09

KR 9/10/09

(+) = Expected Retention Time

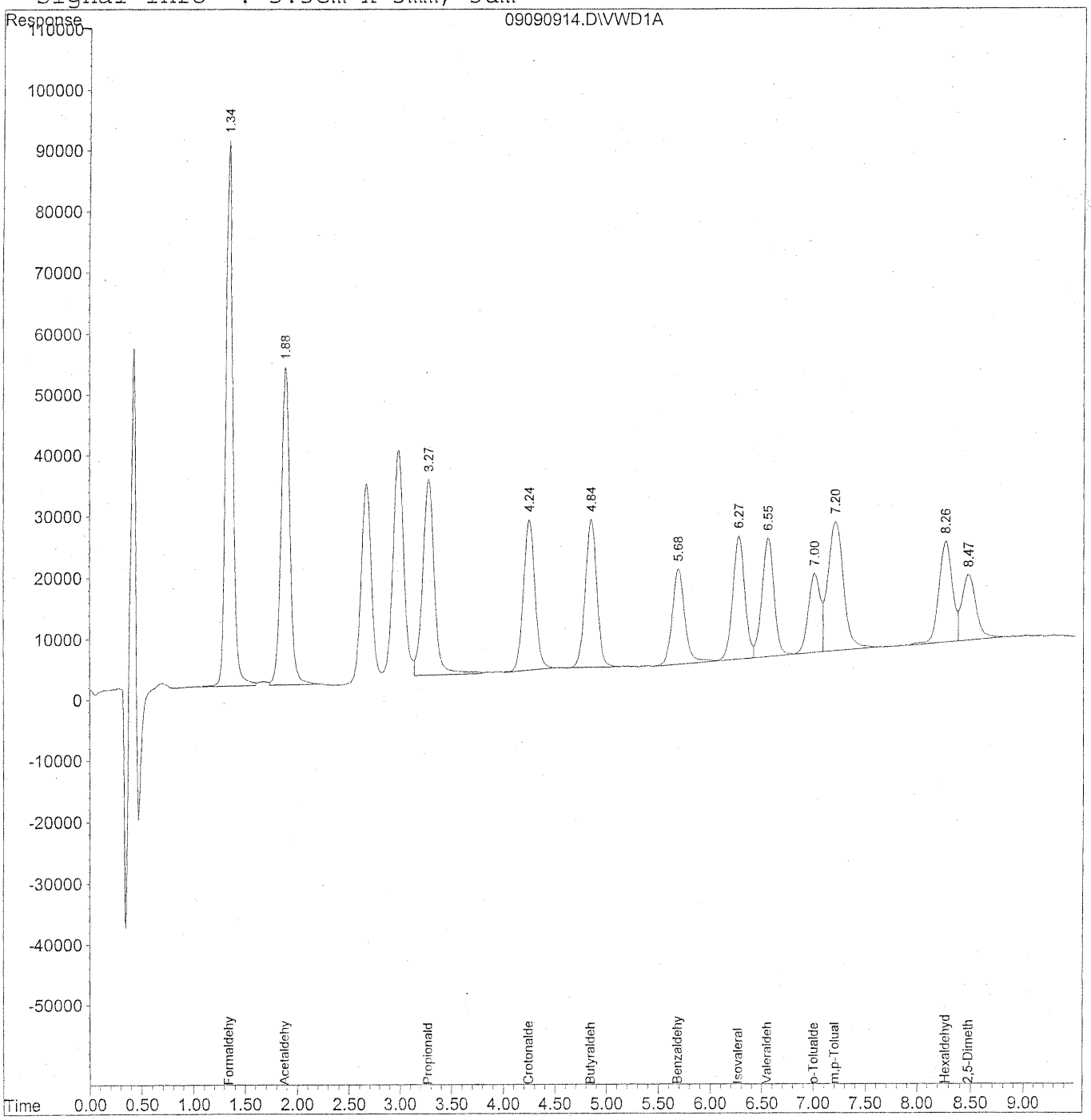
09090913.D TO110909.M Thu Sep 10 09:02:56 2009

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



163

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

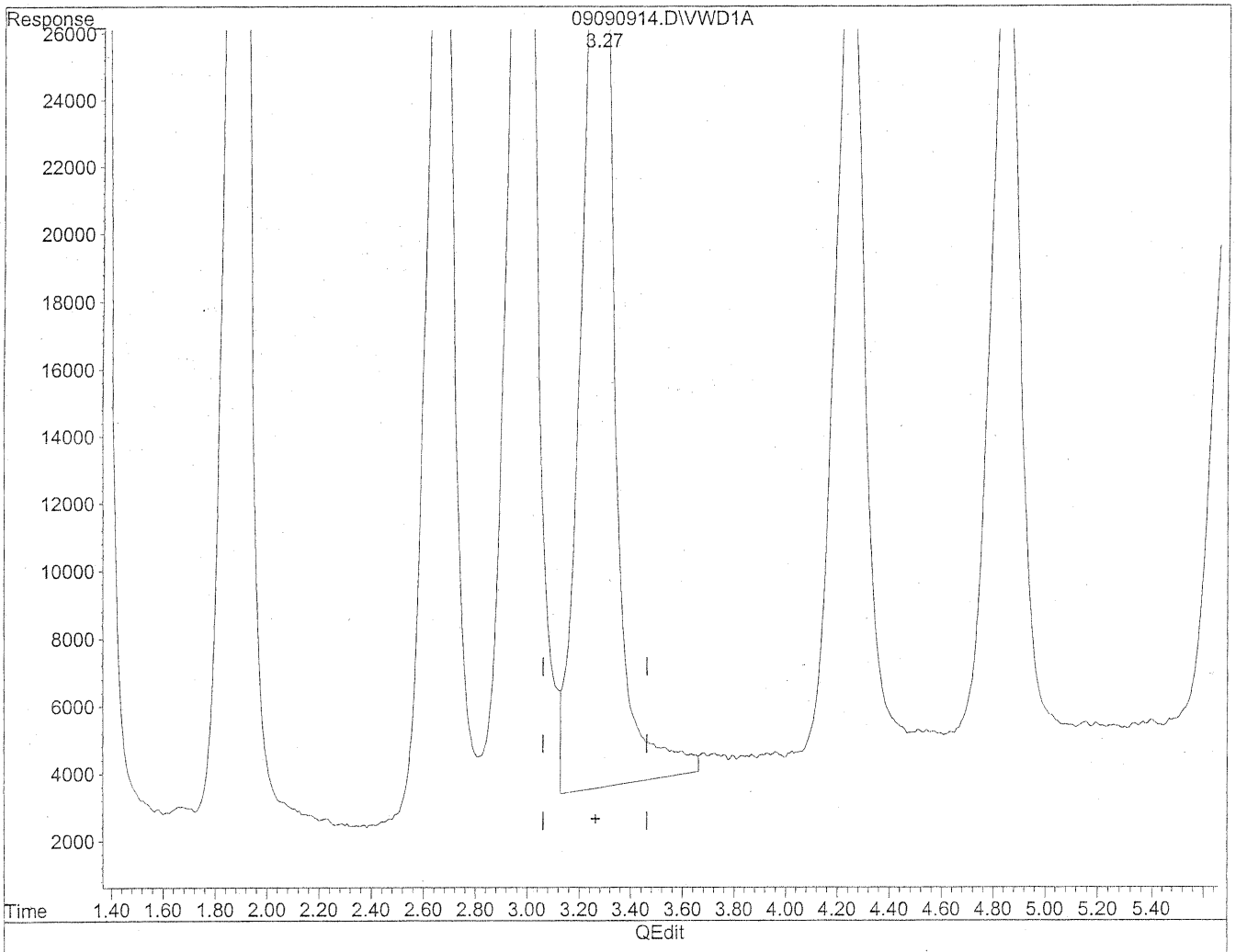
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	4290125	476.763	ng/ml
2)	Acetaldehyde	1.88	3109621	479.414	ng/ml
3)	Propionaldehyde	3.27	2494796	491.839	ng/mlm
4)	Crotonaldehyde	4.24	1900371	476.346	ng/ml
5)	Butyraldehyde	4.84	1886701	468.075	ng/ml
6)	Benzaldehyde	5.69	1323186	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

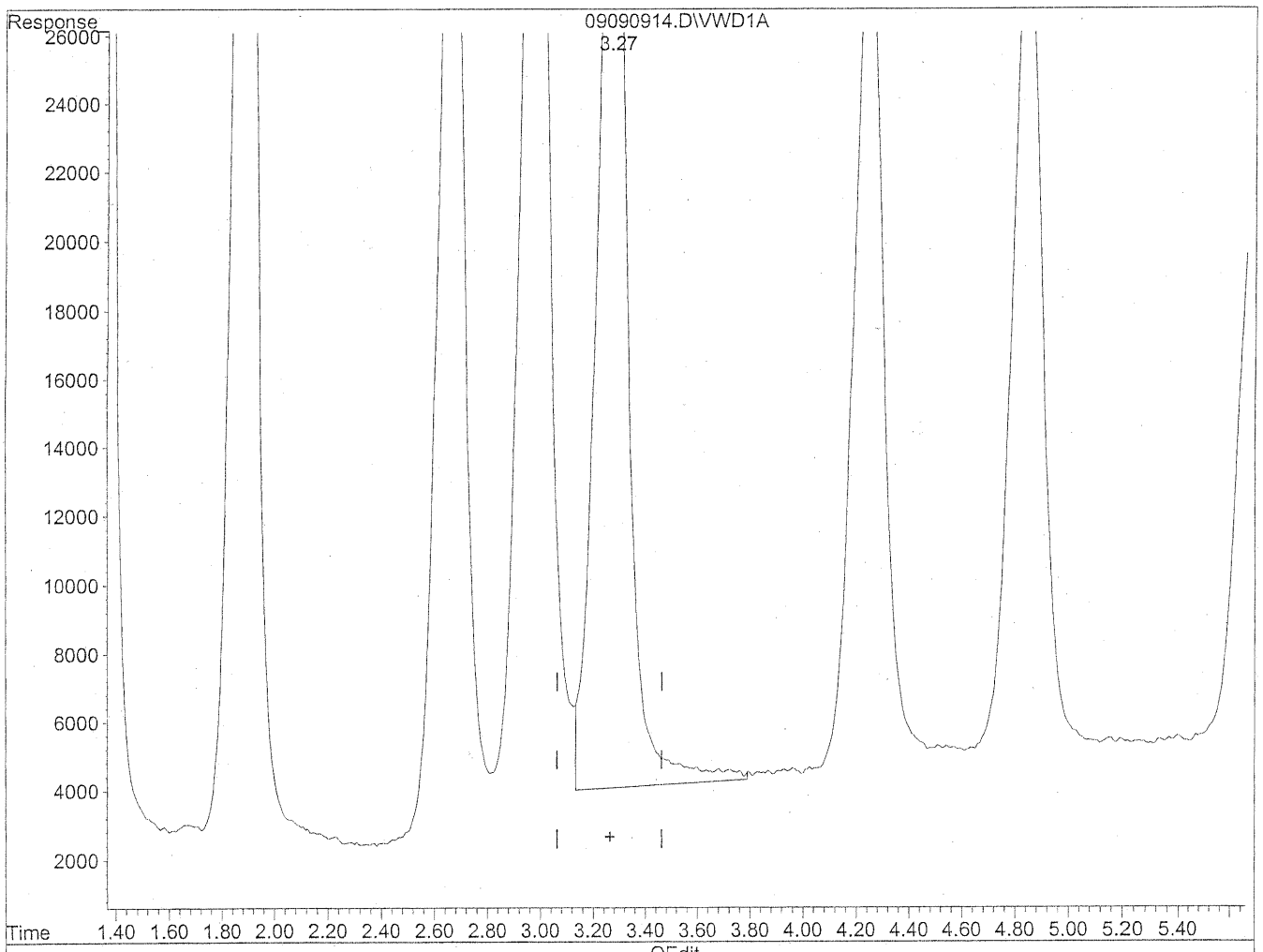
response 2613453

(+) = Expected Retention Time

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

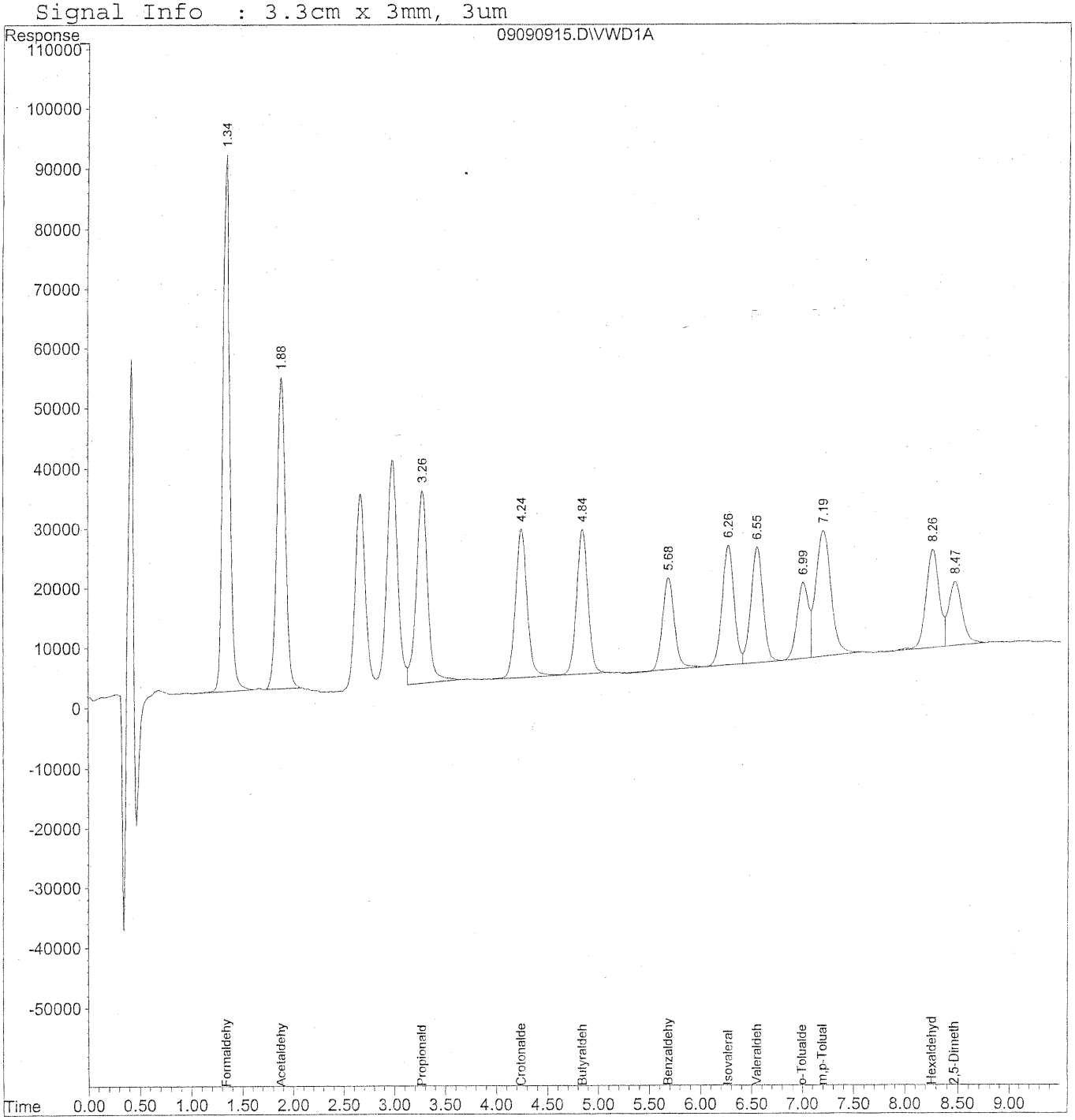
09090914.D TO110909.M Thu Sep 10 08:52:57 2009

Quantitation Report

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



167

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

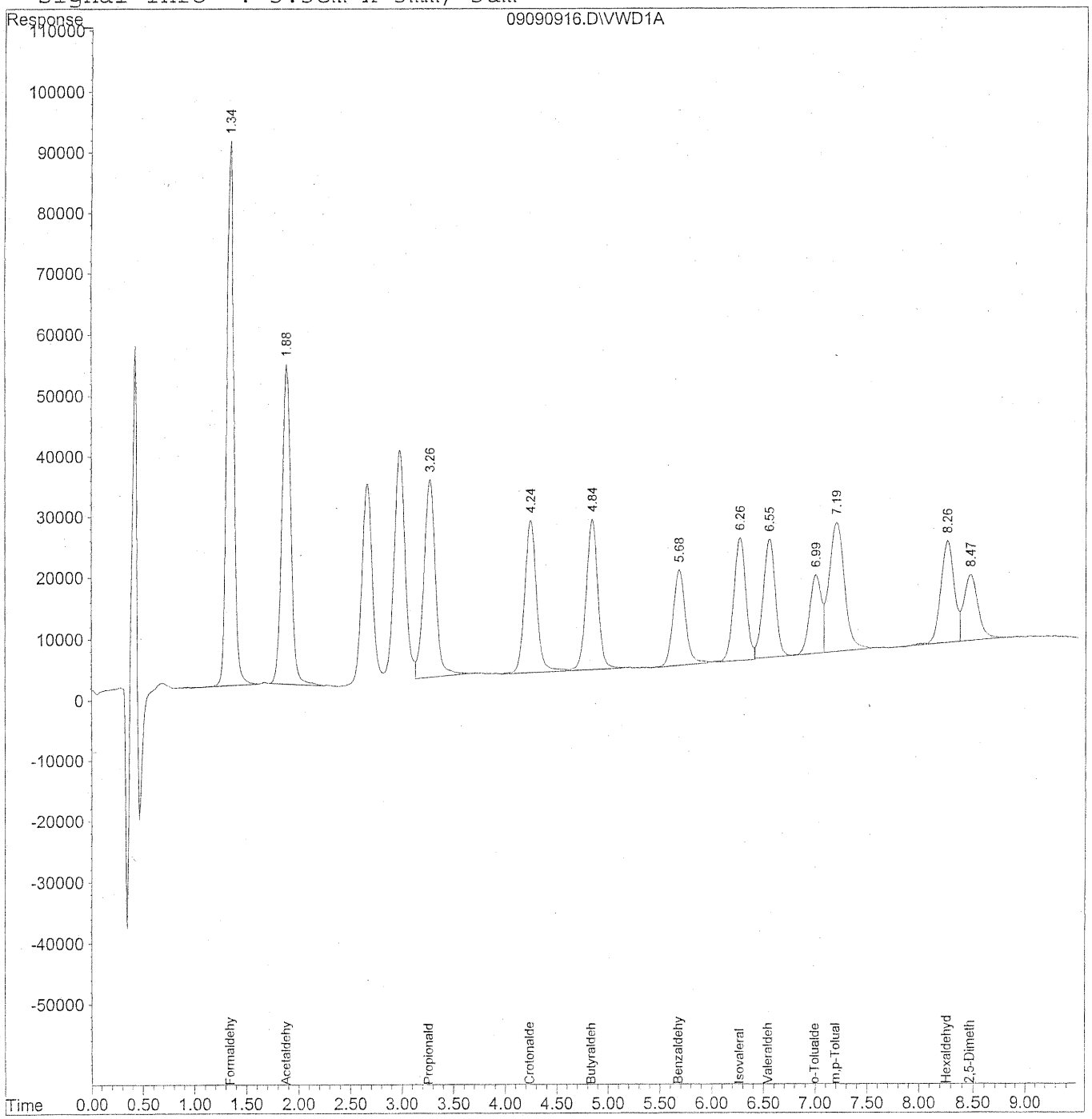
(f)=RT Delta > 1/2 Window (m)=manual int.

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 8:54 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



169

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

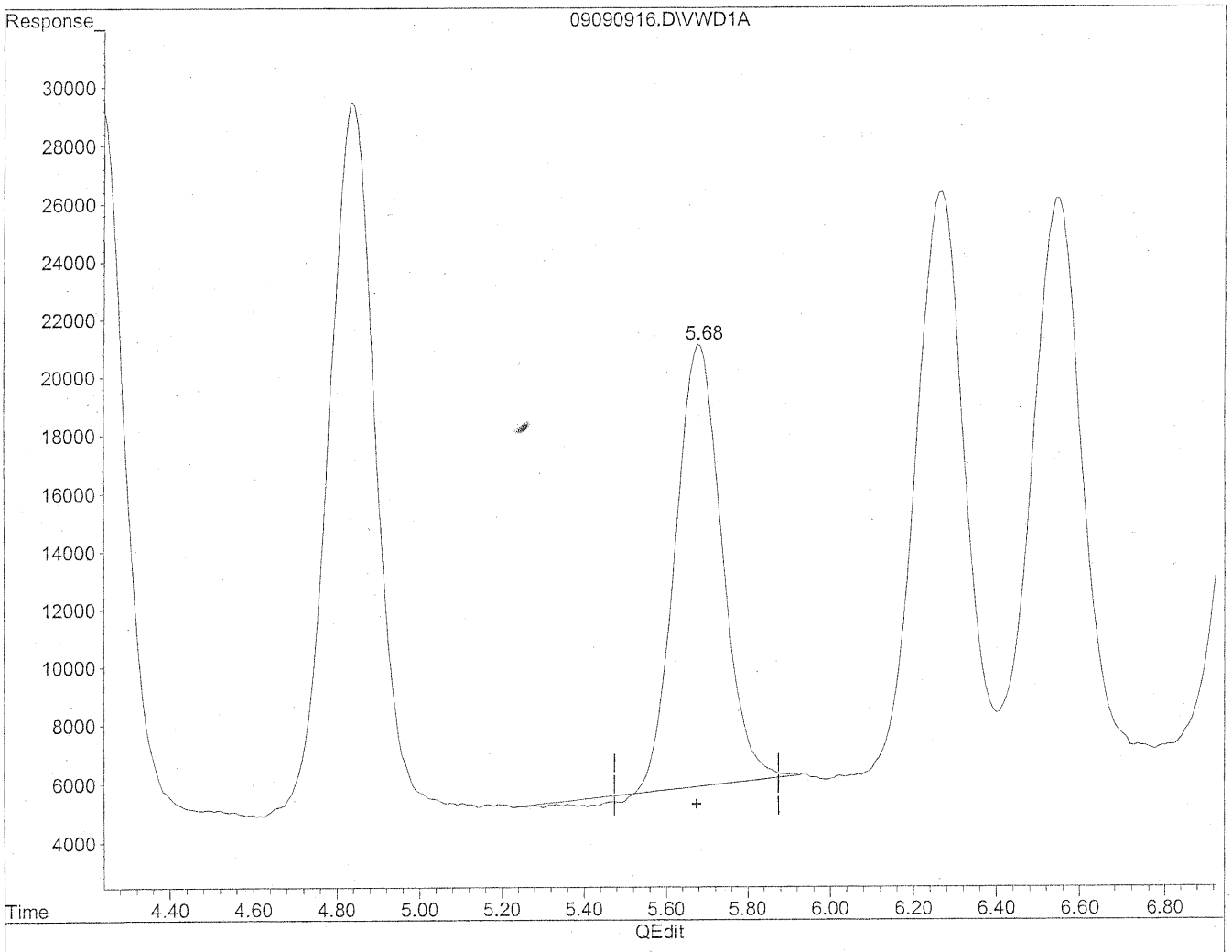
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	4239441	476.706	ng/ml
2)	Acetaldehyde	1.88	3088021	481.187	ng/ml
3)	Propionaldehyde	3.27	2504937	491.959	ng/ml
4)	Crotonaldehyde	4.24	1993623	504.650	ng/ml
5)	Butyraldehyde	4.84	1946571	487.492	ng/ml
6)	Benzaldehyde	5.68	1291253	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

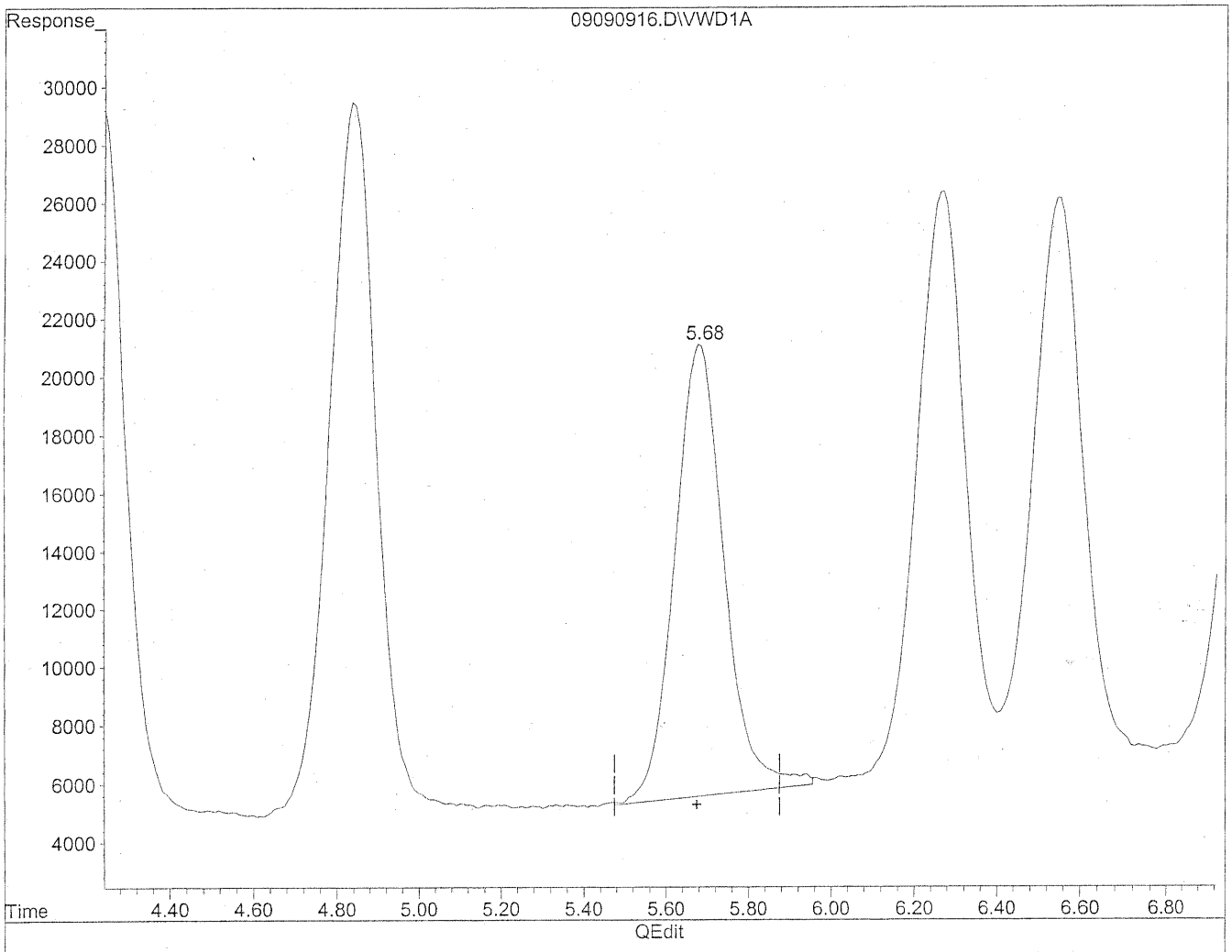
(+) = Expected Retention Time

09090916.D TO110909.M Thu Sep 10 08:54:13 2009

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

KR 9/10/09

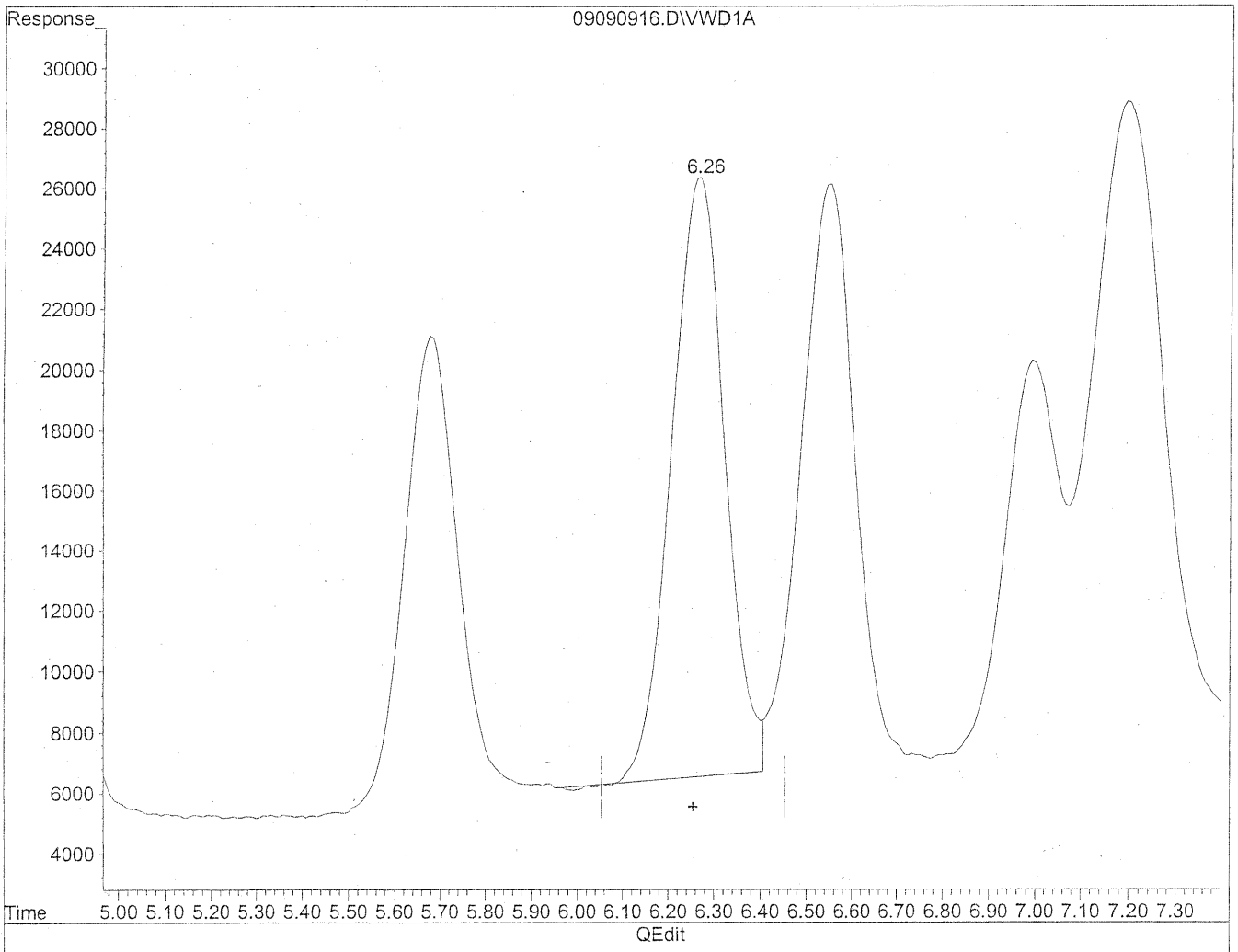
172

(+) = 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

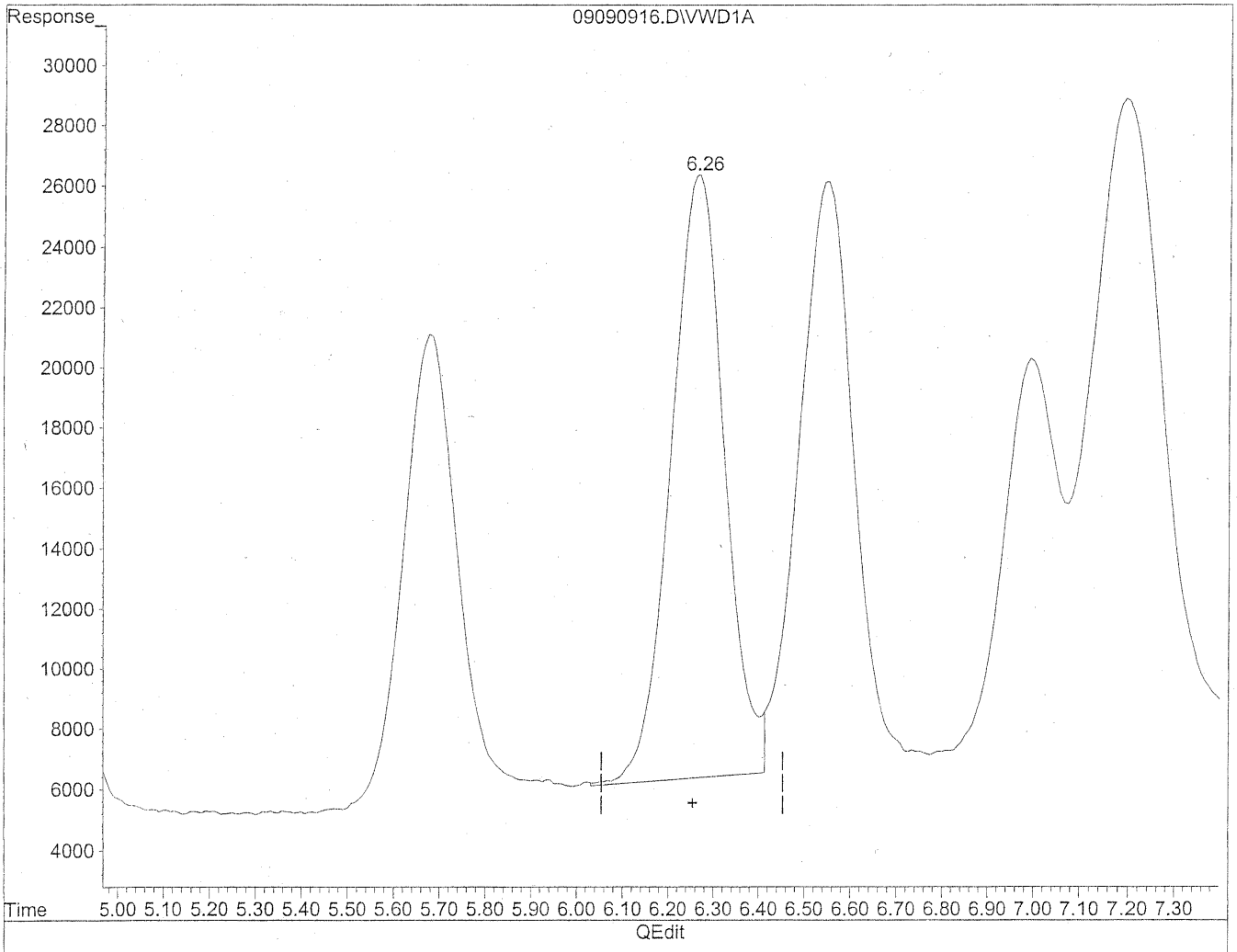
response 1588109

(+) = 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



(7) Isovaleraldehyde

6.26min 481.982ng/ml m

response 1639714

9/10/09

KE 9/10/09

174

(+) = Expected Retention Time

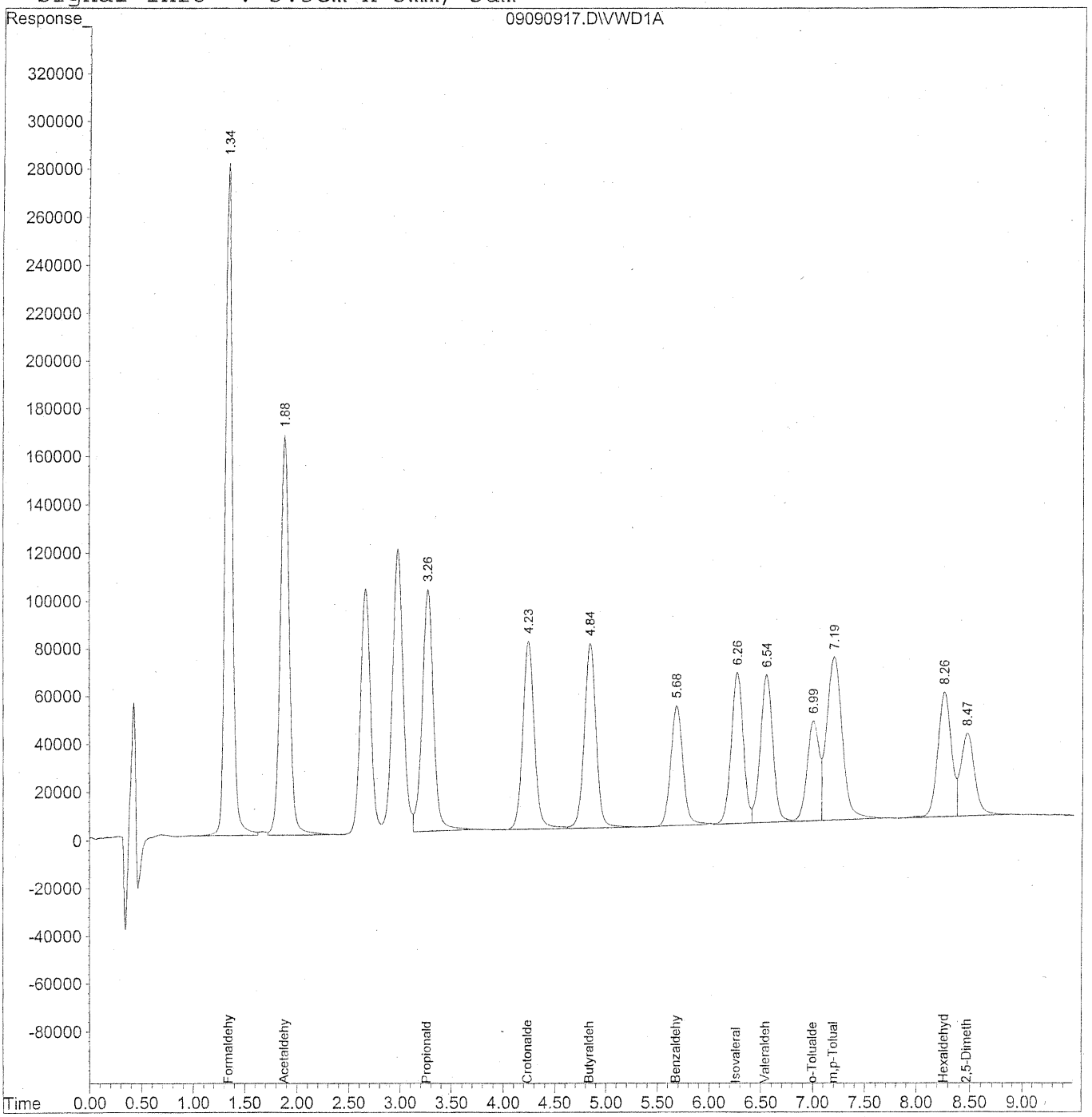
09090916.D TO110909.M Thu Sep 10 08:54:27 2009

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



175

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

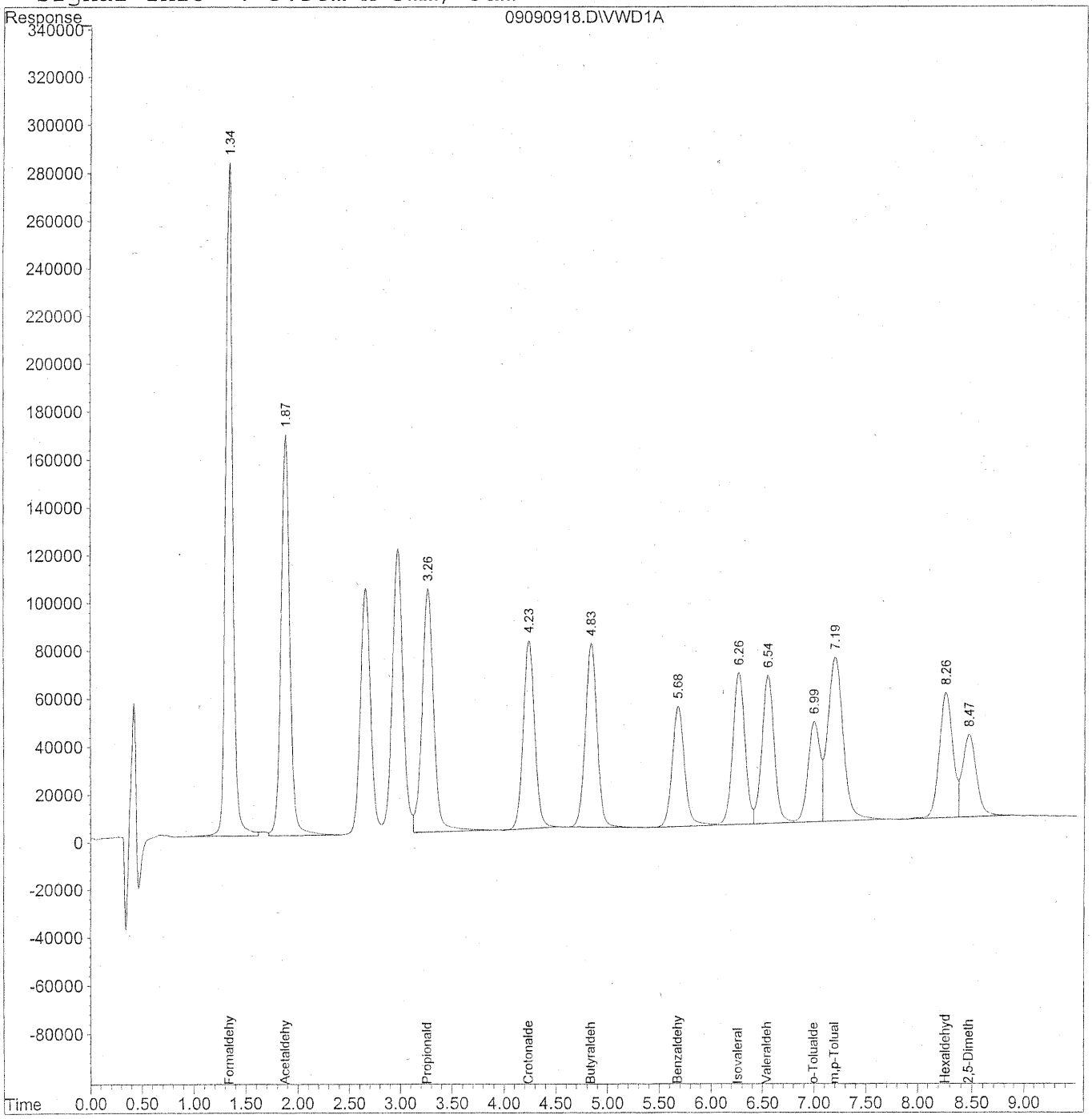
(f)=RT Delta > 1/2 Window (m)=manual int.

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



177

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

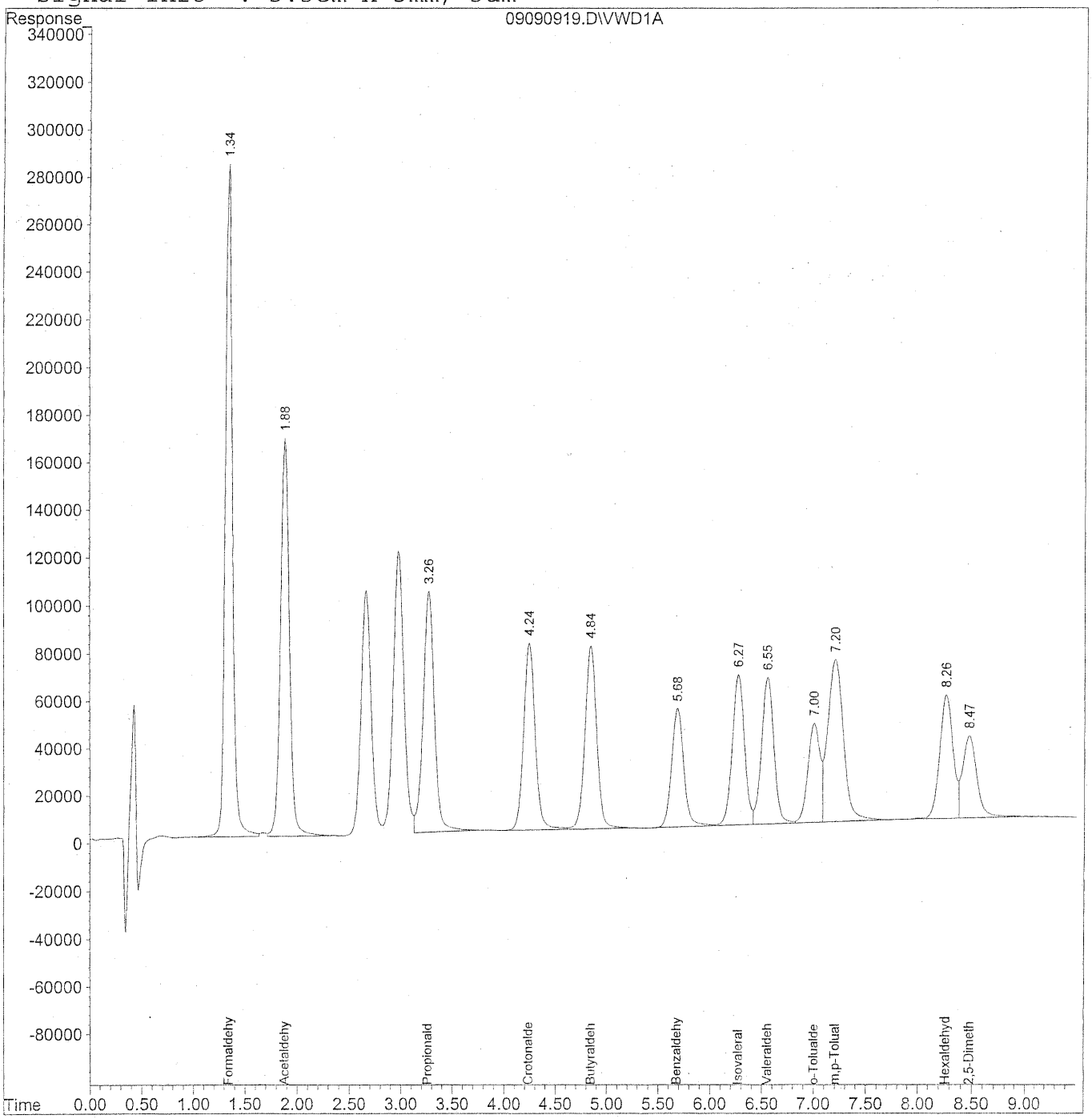
(f)=RT Delta > 1/2 Window (m)=manual int.

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



179

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

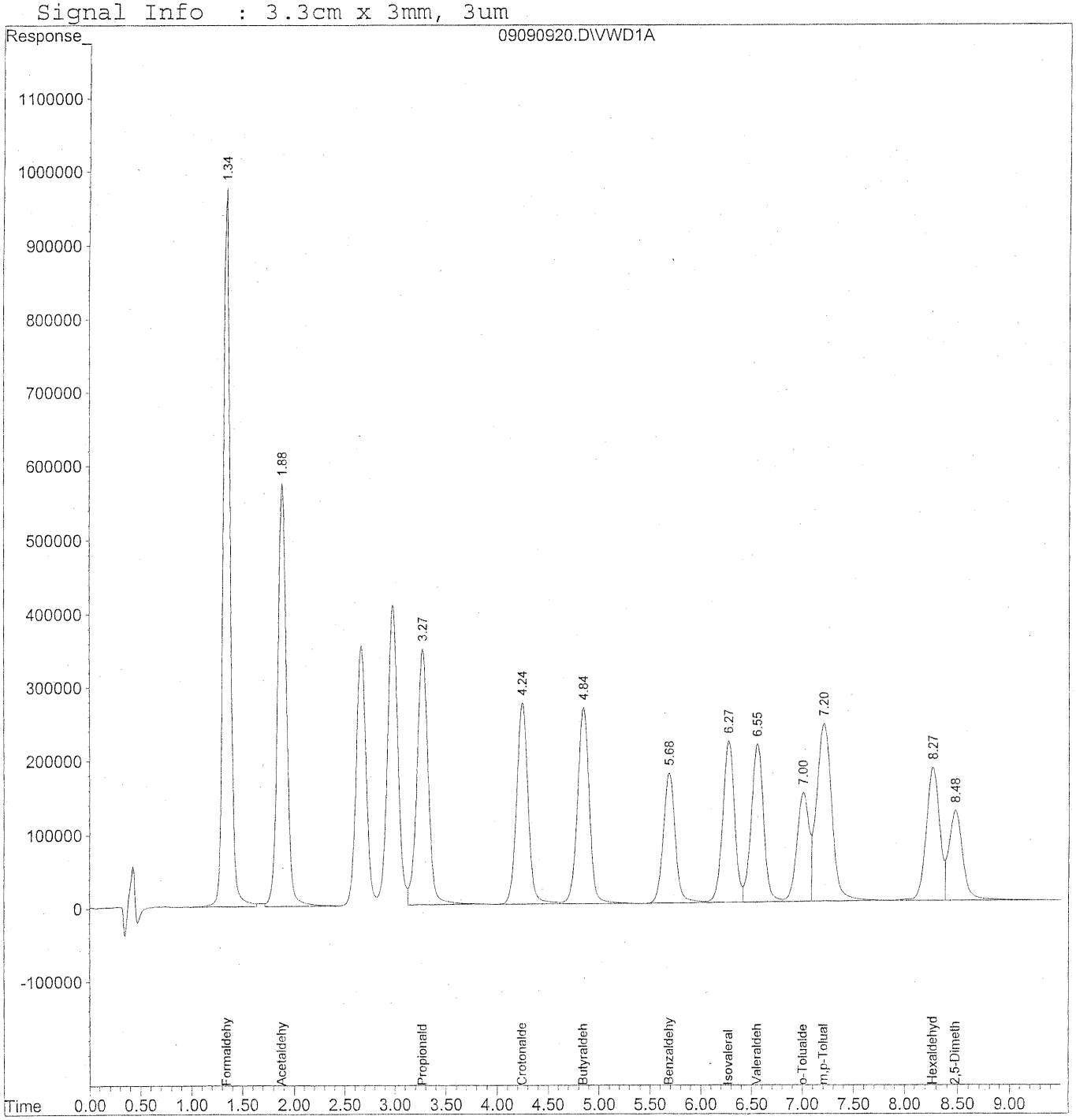
(f)=RT Delta > 1/2 Window (m)=manual int.

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



181

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

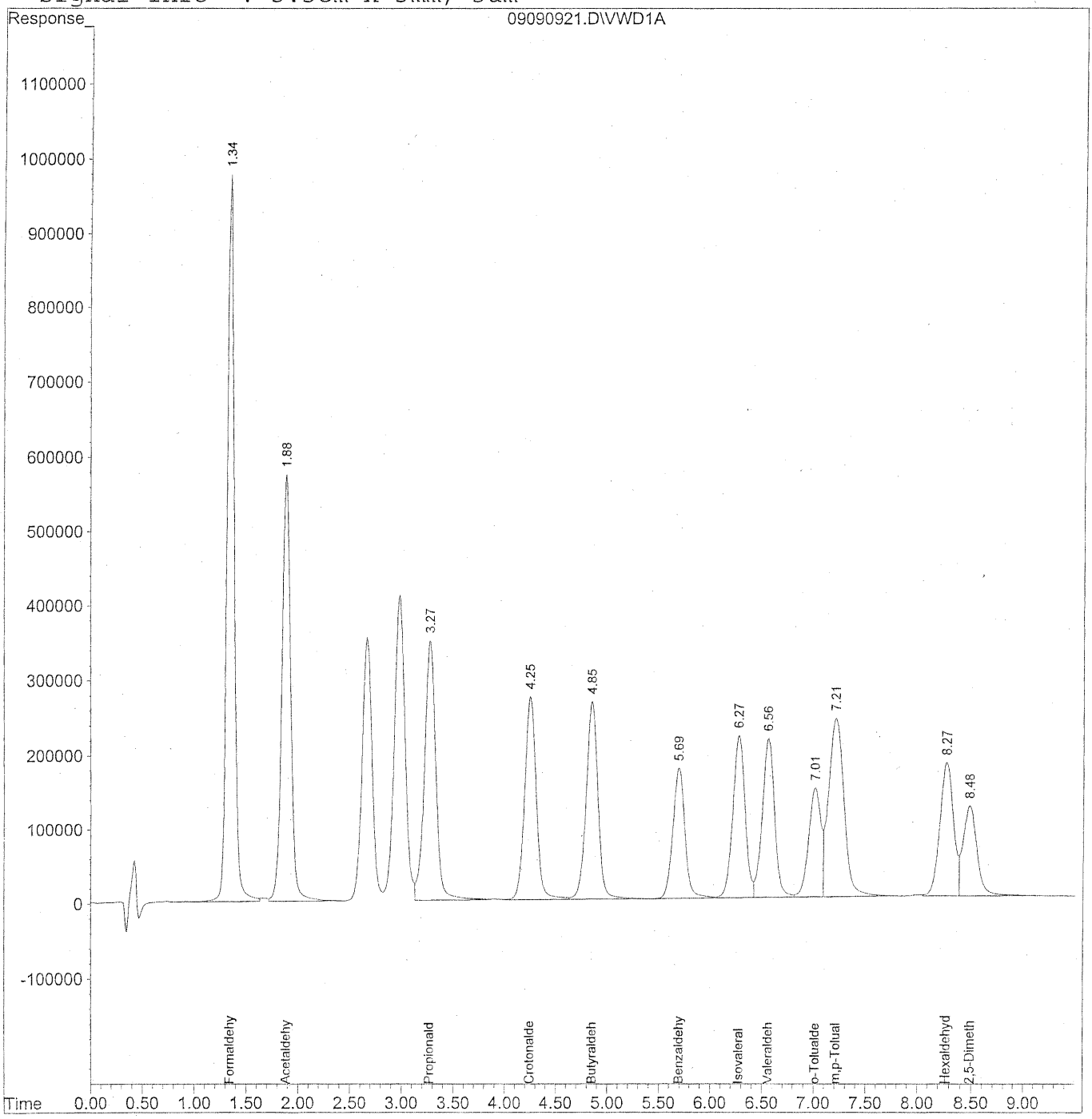
(f)=RT Delta > 1/2 Window (m)=manual int.

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

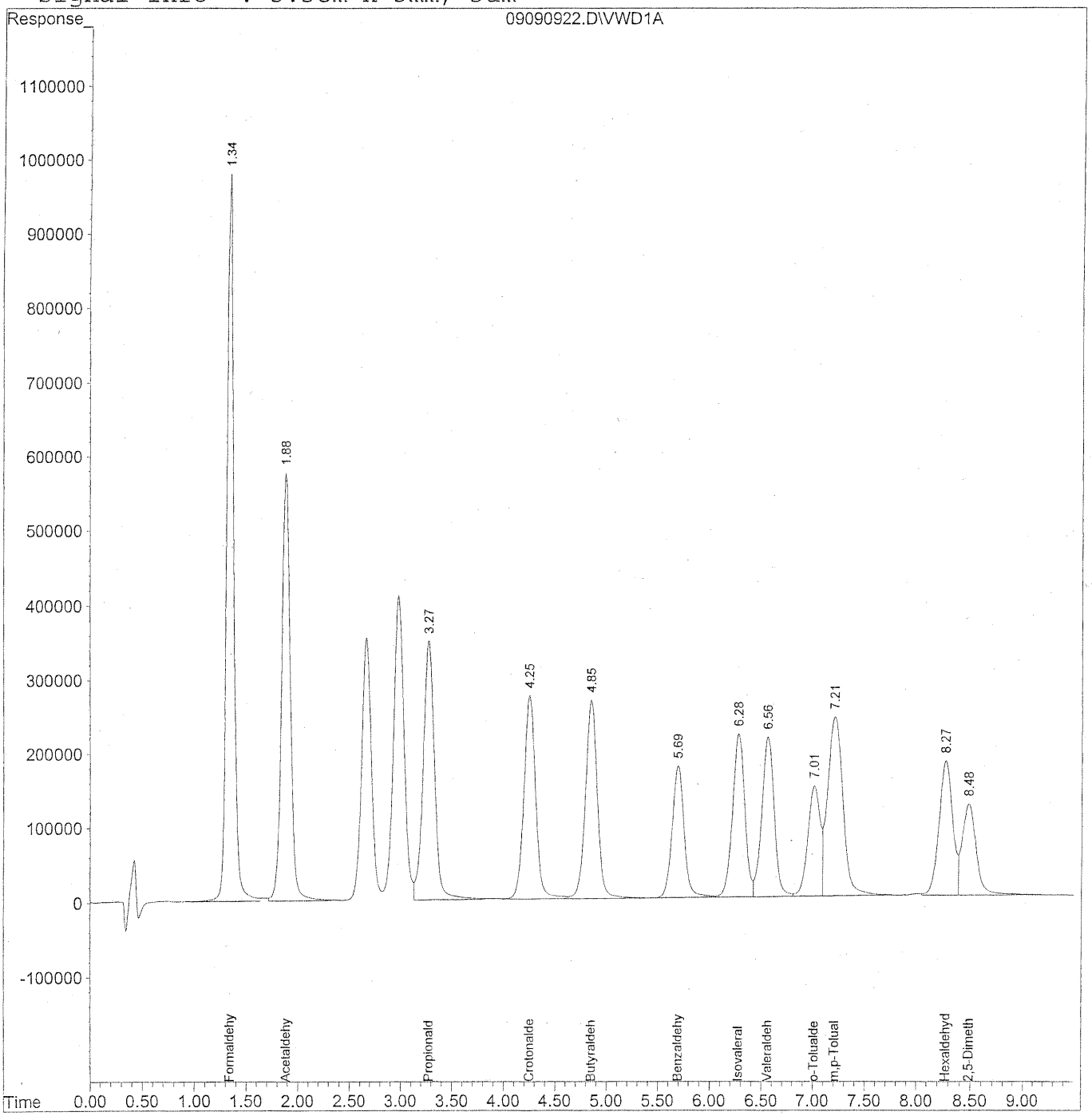
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	46464064	5198.646	ng/ml
2)	Acetaldehyde	1.88	33977292	5236.353	ng/ml
3)	Propionaldehyde	3.27	26758092	5177.051	ng/ml
4)	Crotonaldehyde	4.25	21604348	5366.312	ng/ml
5)	Butyraldehyde	4.85	21444271	5303.711	ng/ml
6)	Benzaldehyde	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.

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



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

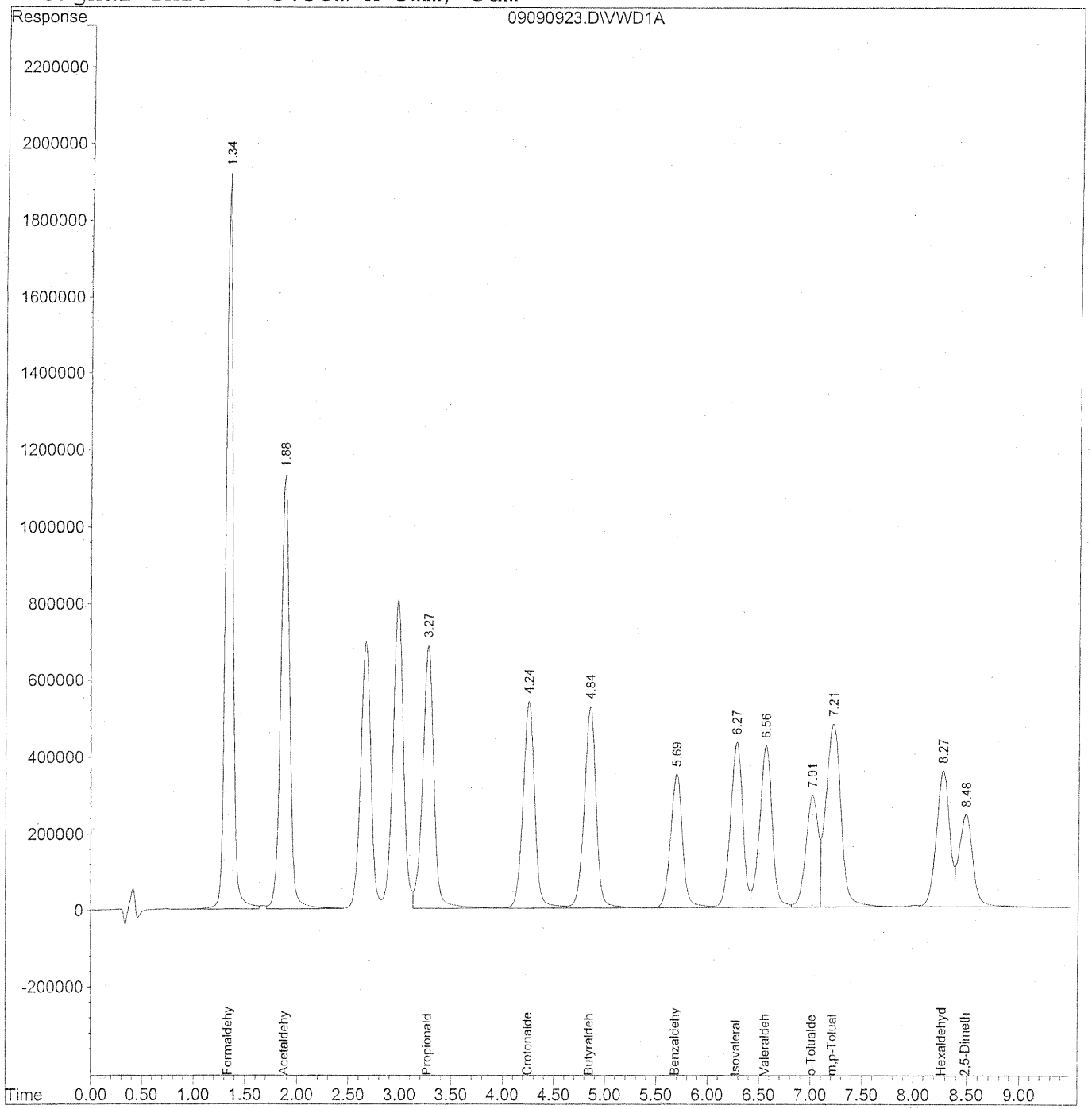
(f)=RT Delta > 1/2 Window (m)=manual int.

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



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

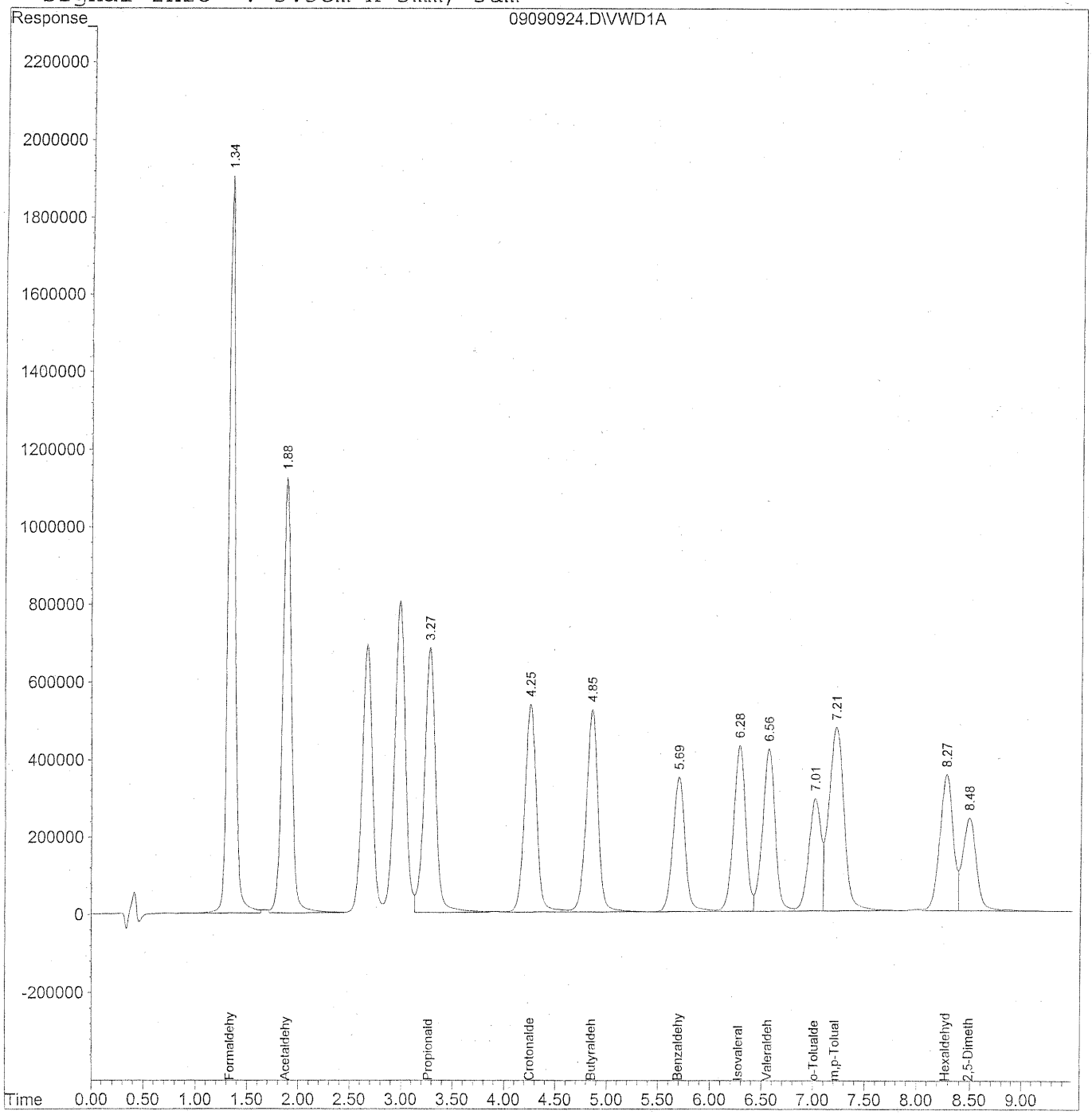
	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.34	91542792	10238.895	ng/ml
2)	Acetaldehyde	1.88	67198566	10353.832	ng/ml
3)	Propionaldehyde	3.27	52731710	10187.405	ng/ml
4)	Crotonaldehyde	4.25	42623472	10576.073	ng/ml
5)	Butyraldehyde	4.85	42304249	10456.015	ng/ml
6)	Benzaldehyde	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.

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

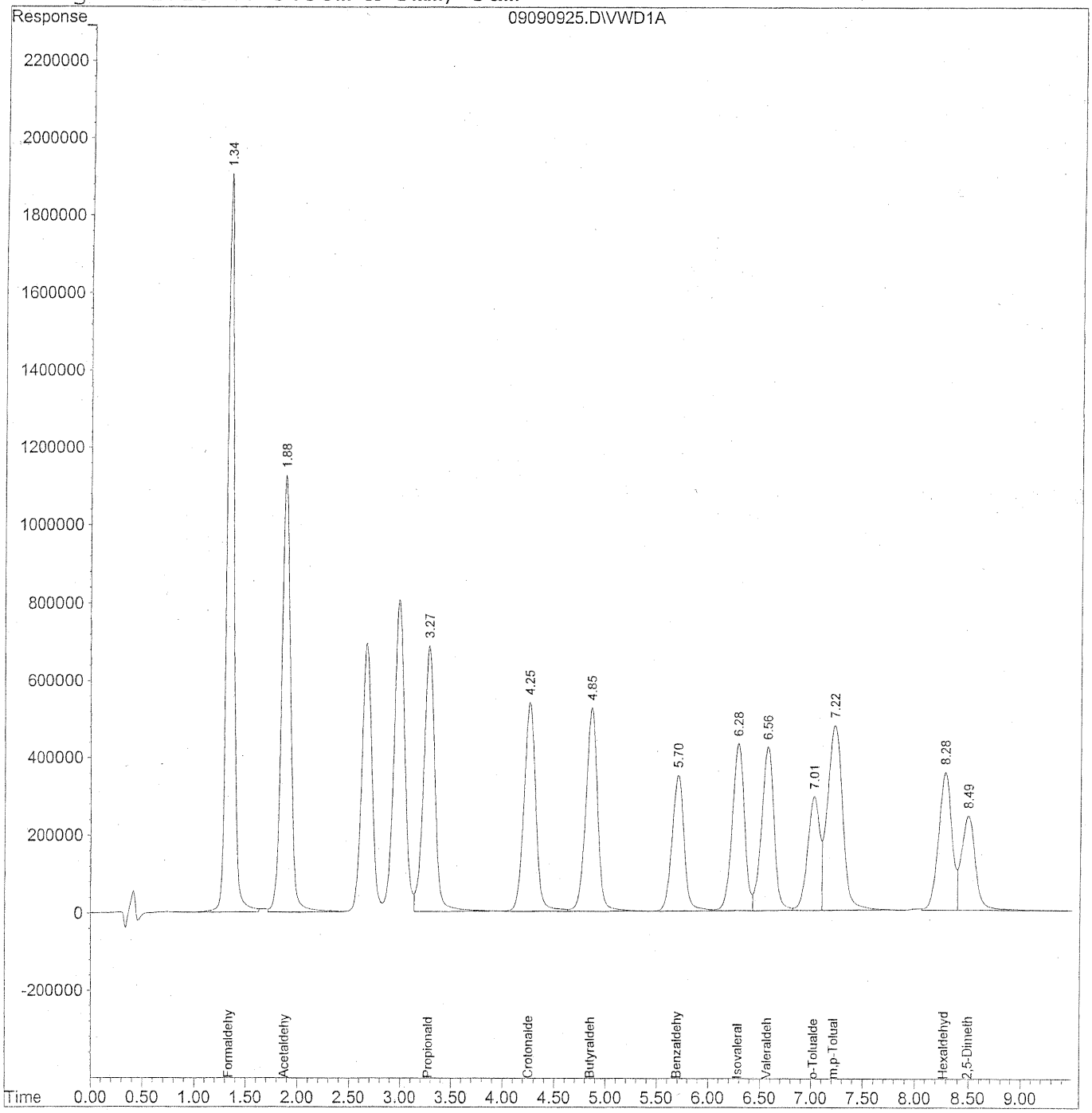
(f)=RT Delta > 1/2 Window (m)=manual int.

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



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

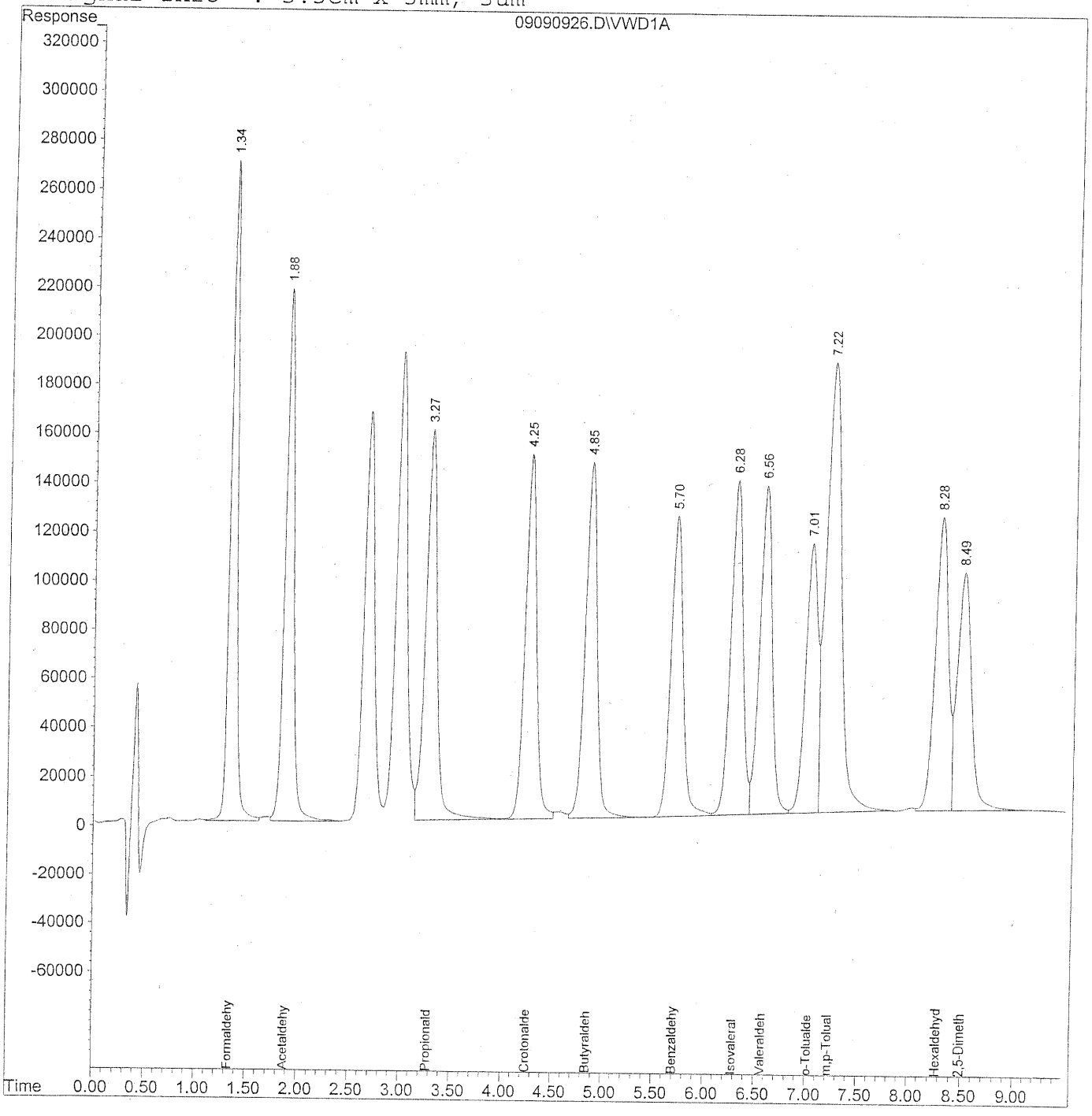
(f)=RT Delta > 1/2 Window (m)=manual int.

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



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

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

CONTINUING CALIBRATION STANDARDS

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Printed : 09/22/09
Instrument : LC#02 Date Acquired : 09/16/09
Detector : UV-VIS 360 Sample Amount : 3ul
Analyst : MD Client & PAI Job# : EH & E P0903147

MD 9/22/09

SAMPLE RESULT SUMMARY

Sample Information	MDL	1500ng/ml TO 11A S21-09090903	% Diff	ACN blank lot CY331	MB-1 front 1.0ml lot 5855/5994	MB-1 back 1.0ml lot 5855/5994	MID CCV 1500ng/ml	% Diff	P0903147-001 back 1.0ml
Dilution	1.0			1.0	1.0	1.0	1.0		1.0
Sample Volume (L)	NA			NA	NA	NA	NA		98.00
Final Vol.(ml)	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	1595.1	6.3%	ND	ND	ND	1610.180	7.3%	ND
Acetaldehyde	100.00	1581.0	5.4%	ND	ND	ND	1600.031	6.7%	1150.546
Propionaldehyde	100.00	1542.3	2.8%	ND	ND	ND	1587.227	5.8%	ND
Crotonaldehyde	100.00	1578.5	5.2%	ND	ND	ND	1609.706	7.3%	ND
Butyraldehyde	100.00	1622.1	8.1%	ND	ND	ND	1621.623	8.1%	ND
Benzaldehyde	100.00	1555.3	3.7%	ND	ND	ND	1575.155	5.0%	ND
Isovaleraldehyde	100.00	1560.2	4.0%	ND	ND	ND	1596.733	6.4%	ND
Valeraldehyde	100.00	1512.7	0.8%	ND	ND	ND	1538.356	2.6%	ND
o-Tolualdehyde	100.00	1556.6	3.8%	ND	ND	ND	1639.043	9.3%	ND
m,p-Tolualdehyde	200.00	3188.7	6.3%	ND	ND	ND	3323.952	10.8%	ND
Hexaldehyde	100.00	1617.1	7.8%	ND	ND	ND	1564.873	4.3%	104.812
2,5-Dimethylbenzaldehyde	100.00	1695.7	13.0%	ND	ND	ND	1490.722	0.6%	ND

BT

	ug/m3		ug/m3	ug/m3	ug/m3	ug/m3
Formaldehyde			NA	NA	NA	ND
Acetaldehyde			NA	NA	NA	11.740
Propionaldehyde			NA	NA	NA	ND
Crotonaldehyde			NA	NA	NA	ND
Butyraldehyde			NA	NA	NA	ND
Benzaldehyde			NA	NA	NA	ND
Isovaleraldehyde			NA	NA	NA	ND
Valeraldehyde			NA	NA	NA	ND
o-Tolualdehyde			NA	NA	NA	ND
m,p-Tolualdehyde			NA	NA	NA	ND
Hexaldehyde			NA	NA	NA	1.070
2,5-Dimethylbenzaldehyde			NA	NA	NA	ND

	ppb		ppb	ppb	ppb	ppb
Formaldehyde			NA	NA	NA	ND
Acetaldehyde			NA	NA	NA	6.519
Propionaldehyde			NA	NA	NA	ND
Crotonaldehyde			NA	NA	NA	ND
Butyraldehyde			NA	NA	NA	ND
Benzaldehyde			NA	NA	NA	ND
Isovaleraldehyde			NA	NA	NA	ND
Valeraldehyde			NA	NA	NA	ND
o-Tolualdehyde			NA	NA	NA	ND
m,p-Tolualdehyde			NA	NA	NA	ND
Hexaldehyde			NA	NA	NA	0.261
2,5-Dimethylbenzaldehyde			NA	NA	NA	ND

MD 9/22/09

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Printed : 09/22/09
Instrument : LC#02 Date Acquired : 09/16/09
Detector : UV-VIS 360 Sample Amount : 3ul
Analyst : MD Client & PAI Job# : EH & E P0903147

Sample Information	MDL	P0903147-002 back 1.0ml	P0903147-003 back 1.0ml	P0903147-004 back 1.0ml	P0903147-005 back 1.0ml	P0903147-006 back 1.0ml	1500ng/ml TO-11A S21-09090903	% Diff
Dilution	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Sample Volume (L)	NA	100.90	105.70	100.90	93.50	NA	NA	
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	ND	ND	ND	ND	ND	1590.968	6.1%
Acetaldehyde	100.00	1176.614 BT	1845.825 BT	861.374 BT	ND	ND	1586.010	5.7%
Propionaldehyde	100.00	ND	ND	ND	ND	ND	1624.727	8.3%
Crotonaldehyde	100.00	ND	ND	ND	ND	ND	1624.390	8.3%
Butyraldehyde	100.00	ND	ND	ND	ND	ND	1621.092	8.1%
Benzaldehyde	100.00	ND	ND	ND	ND	ND	1528.698	1.9%
Isovaleraldehyde	100.00	ND	ND	ND	ND	ND	1572.112	4.8%
Valeraldehyde	100.00	ND	ND	ND	ND	ND	1494.403	0.4%
o-Tolualdehyde	100.00	ND	ND	ND	ND	ND	1532.163	2.1%
m,p-Tolualdehyde	200.00	ND	ND	ND	ND	ND	3247.206	8.2%
Hexaldehyde	100.00	ND	ND	ND	ND	ND	1601.517	6.8%
2,5-Dimethylbenzaldehyde	100.00	ND	ND	ND	109.203 BH	ND	1711.367	14.1%

	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Formaldehyde		ND	ND	ND	ND	ND
Acetaldehyde		11.661	17.463	8.537	ND	ND
Propionaldehyde		ND	ND	ND	ND	ND
Crotonaldehyde		ND	ND	ND	ND	ND
Butyraldehyde		ND	ND	ND	ND	ND
Benzaldehyde		ND	ND	ND	ND	ND
Isovaleraldehyde		ND	ND	ND	ND	ND
Valeraldehyde		ND	ND	ND	ND	ND
o-Tolualdehyde		ND	ND	ND	ND	ND
m,p-Tolualdehyde		ND	ND	ND	ND	ND
Hexaldehyde		ND	ND	ND	ND	ND
2,5-Dimethylbenzaldehyde		ND	ND	ND	1.168	ND

	ppb	ppb	ppb	ppb	ppb	ppb
Formaldehyde		ND	ND	ND	ND	ND
Acetaldehyde		6.475	9.697	4.740	ND	ND
Propionaldehyde		ND	ND	ND	ND	ND
Crotonaldehyde		ND	ND	ND	ND	ND
Butyraldehyde		ND	ND	ND	ND	ND
Benzaldehyde		ND	ND	ND	ND	ND
Isovaleraldehyde		ND	ND	ND	ND	ND
Valeraldehyde		ND	ND	ND	ND	ND
o-Tolualdehyde		ND	ND	ND	ND	ND
m,p-Tolualdehyde		ND	ND	ND	ND	ND
Hexaldehyde		ND	ND	ND	ND	ND
2,5-Dimethylbenzaldehyde		ND	ND	ND	0.213	ND

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Printed : 09/22/09

Instrument : LC#02 | Date Acquired : 09/16/09

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

Analyst : MD | Client & PAI Job# : EH & E P0903147

SAMPLE RESULT SUMMARY

Sample Information	MDL	ACN blank lot CY331	MB-2 front 1.0ml lot 5855/5994	MB-2 back 1.0ml lot 5855/5994	P0903147-001 front 1.0ml	P0903147-002 front 1.0ml	P0903147-003 front 1.0ml	P0903147-004 front 1.0ml
Dilution	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Sample Volume (L)	NA	NA	NA	NA	98.00	100.90	105.70	100.90
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	4444.123	4751.918	6908.838	4458.892
Acetaldehyde	100.00	ND	ND	ND	4319.374	5274.221	6528.071	4192.131
Propionaldehyde	100.00	ND	ND	ND	289.954	356.021	356.583	276.770
Crotonaldehyde	100.00	ND	ND	ND	ND	ND	ND	ND
Butyraldehyde	100.00	ND	ND	ND	305.680	330.838	374.619	291.657
Benzaldehyde	100.00	ND	ND	ND	664.826	726.511	941.847	675.730
Isovaleraldehyde	100.00	ND	ND	ND	141.952	139.894	133.848	ND
Valeraldehyde	100.00	ND	ND	ND	951.603	1083.685	1212.374	970.772
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	3620.075	4065.506	5253.500 M1↑	4199.809 M1↑
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	45.348	47.095	65.363	44.191
Acetaldehyde		ND	ND	ND	44.075	52.272	61.760	41.547
Propionaldehyde		ND	ND	ND	2.959	3.528	3.374	2.743
Crotonaldehyde		ND	ND	ND	ND	ND	ND	ND
Butyraldehyde		ND	ND	ND	3.119	3.279	3.544	2.891
Benzaldehyde		ND	ND	ND	6.784	7.200	8.911	6.697
Isovaleraldehyde		ND	ND	ND	1.448	1.386	1.266	ND
Valeraldehyde		ND	ND	ND	9.710	10.740	11.470	9.621
o-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
m,p-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
Hexaldehyde		ND	ND	ND	36.940	40.292	49.702	41.623
2,5-Dimethylbenzaldehyde		ND	ND	ND	ND	ND	ND	ND

	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Formaldehyde		ND	ND	ND	36.937	38.360	53.239	35.995
Acetaldehyde		ND	ND	ND	24.474	29.025	34.294	23.070
Propionaldehyde		ND	ND	ND	1.246	1.486	1.421	1.155
Crotonaldehyde		ND	ND	ND	ND	ND	ND	ND
Butyraldehyde		ND	ND	ND	1.058	1.112	1.202	0.980
Benzaldehyde		ND	ND	ND	1.564	1.660	2.054	1.544
Isovaleraldehyde		ND	ND	ND	0.411	0.394	0.360	ND
Valeraldehyde		ND	ND	ND	2.758	3.050	3.257	2.732
o-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
m,p-Tolualdehyde		ND	ND	ND	ND	ND	ND	ND
Hexaldehyde		ND	ND	ND	9.021	9.840	12.138	10.165
2,5-Dimethylbenzaldehyde		ND	ND	ND	ND	ND	ND	ND

COLUMBIA ANALYTICAL SERVICES

TO11A Aldehyde & Ketone DNPH Analysis by HPLC

Printed : 09/22/09
Instrument : LC#02 Date Acquired : 09/16/09
Detector : UV-VIS 360 Sample Amount : 3ul
Analyst : MD Client & PAI Job# : EH & E P0903147

SAMPLE RESULT SUMMARY

Sample Information	MDL	P0903147-005 front 1.0ml	P0903147-006 front 1.0ml	MID CCV 1500ng/ml	% Diff
Dilution	1.0	1.0	1.0	1.0	
Sample Volume (L)	NA	93.50	NA	NA	
Final Vol.(ml)	1.0	1.0	1.0	1.0	

	ng/sample	ng/sample	ng/sample	ng/sample	
Formaldehyde	100.00	ND	ND	1588.269	5.9%
Acetaldehyde	100.00	ND	ND	1606.174	7.1%
Propionaldehyde	100.00	ND	ND	1581.151	5.4%
Crotonaldehyde	100.00	ND	ND	1589.037	5.9%
Butyraldehyde	100.00	ND	ND	1618.803	7.9%
Benzaldehyde	100.00	ND	ND	1541.650	2.8%
Isovaleraldehyde	100.00	ND	ND	1607.442	7.2%
Valeraldehyde	100.00	ND	ND	1505.918	0.4%
o-Tolualdehyde	100.00	ND	ND	1631.541	8.8%
m,p-Tolualdehyde	200.00	ND	ND	3422.561	14.1%
Hexaldehyde	100.00	ND	ND	1589.933	6.0%
2,5-Dimethylbenzaldehyde	100.00	ND	ND	1573.265	4.9%

	ug/m3	ug/m3	ug/m3
Formaldehyde		ND	ND
Acetaldehyde		ND	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

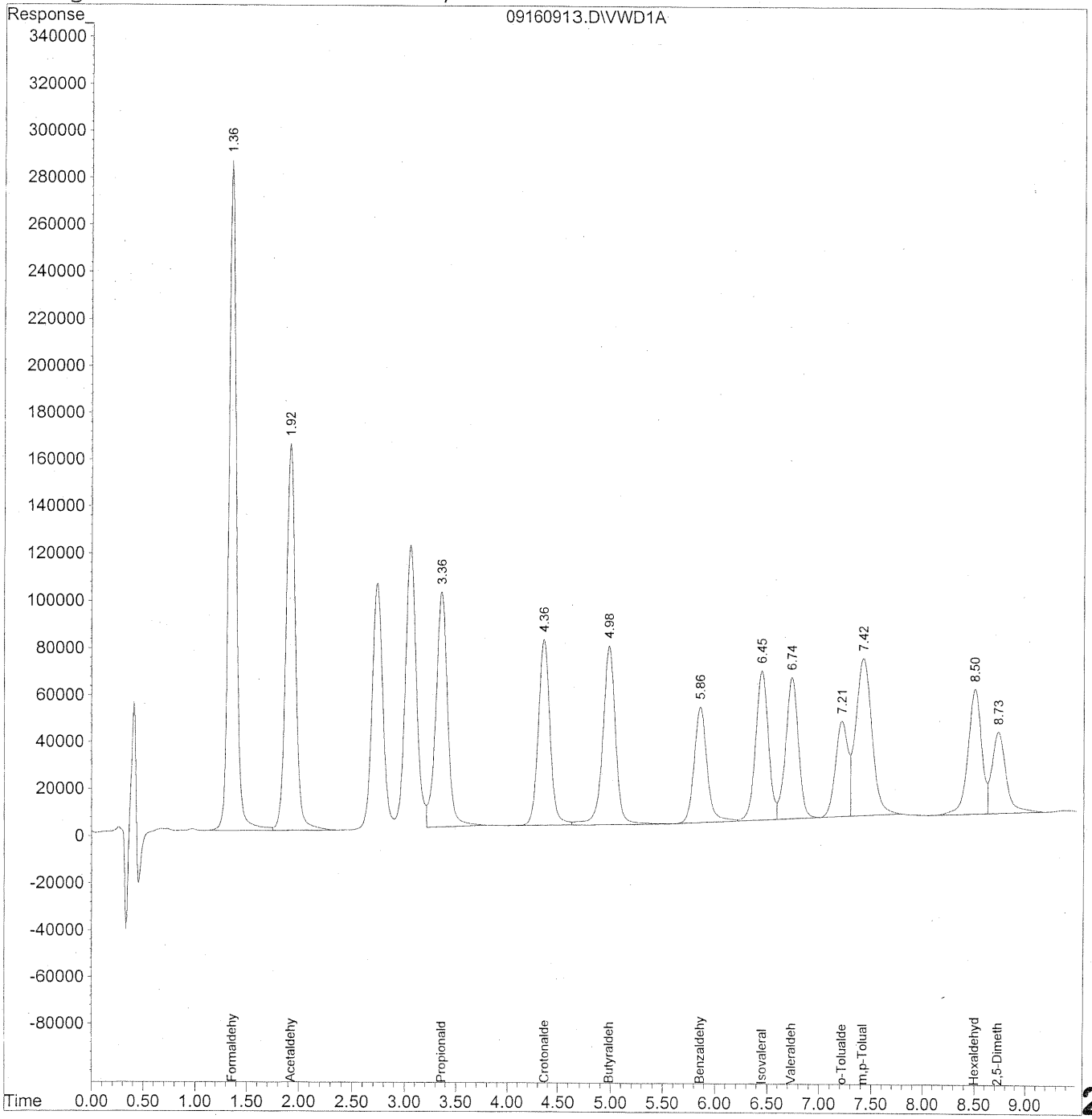
	ppb	ppb	ppb
Formaldehyde		ND	ND
Acetaldehyde		ND	ND
Propionaldehyde		ND	ND
Crotonaldehyde		ND	ND
Butyraldehyde		ND	ND
Benzaldehyde		ND	ND
Isovaleraldehyde		ND	ND
Valeraldehyde		ND	ND
o-Tolualdehyde		ND	ND
m,p-Tolualdehyde		ND	ND
Hexaldehyde		ND	ND
2,5-Dimethylbenzaldehyde		ND	ND

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160913.D Vial: 10
Acq On : 16-Sep-2009, 13:14 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 16 14:05 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



200

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160913.D Vial: 10
Acq On : 16-Sep-2009, 13:14 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 16 14:05 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

mm 9/22/09

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	14252679	1595.075	ng/ml
2)	Acetaldehyde	1.93	10277749	1580.998	ng/ml
3)	Propionaldehyde	3.37	8016470	1542.274	ng/ml
4)	Crotonaldehyde	4.37	6408166	1578.533	ng/ml
5)	Butyraldehyde	4.99	6573986	1622.098	ng/ml
6)	Benzaldehyde	5.86	4243343	1555.263	ng/ml
7)	Isovaleraldehyde	6.45	5369934	1560.216	ng/ml
8)	Valeraldehyde	6.74	5142606	1512.692	ng/ml
9)	o-Tolualdehyde	7.22	3416096	1556.619	ng/ml
10)	m,p-Tolualdehyde	7.42	7324144	3188.679	ng/ml
11)	Hexaldehyde	8.50	4787720	1617.077	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.73	3383788	1695.716	ng/ml

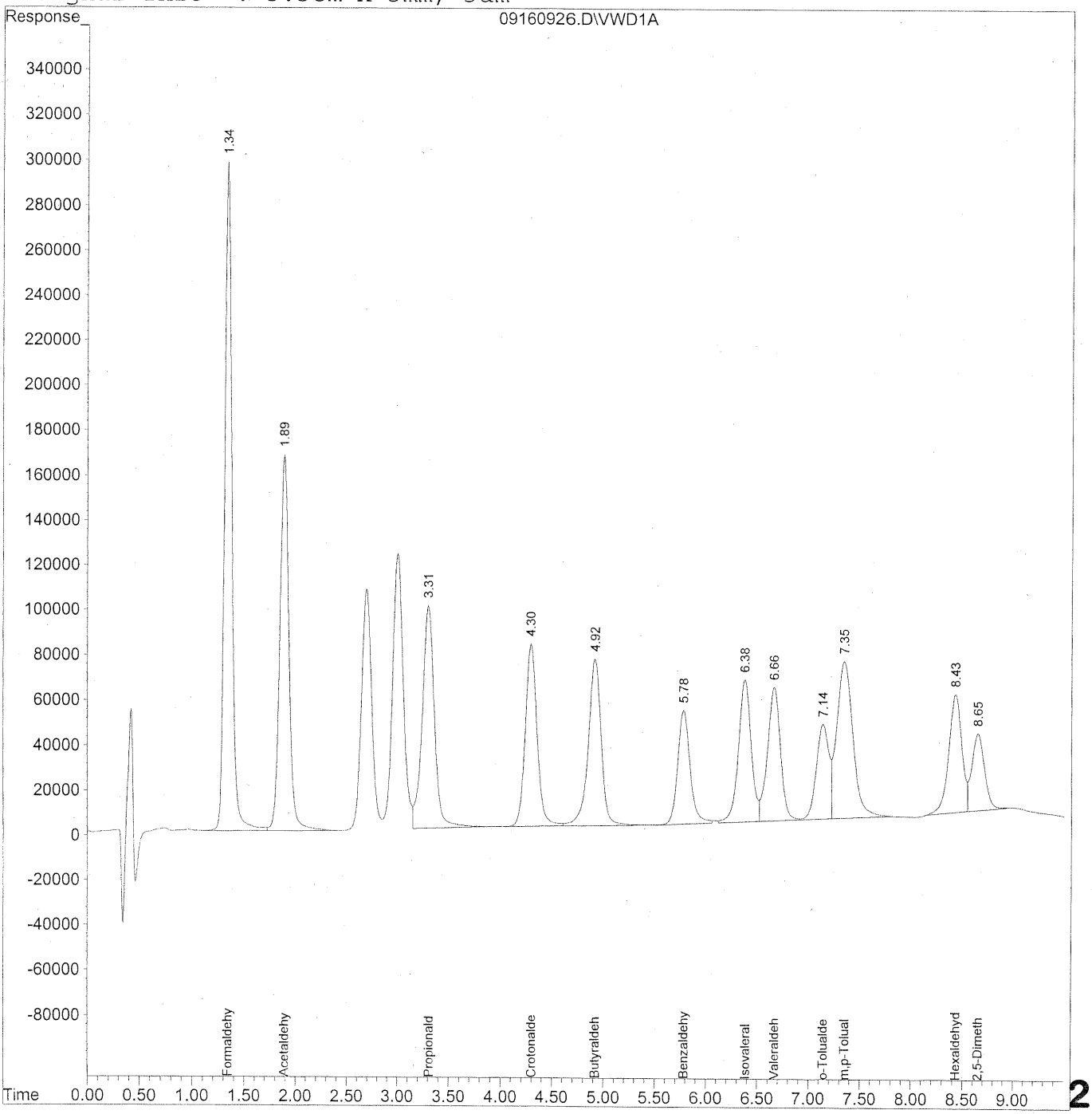
HC 9/22/09

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160926.D Vial: 10
Acq On : 16-Sep-2009, 15:49 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:18 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



202

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160926.D Vial: 10
Acq On : 16-Sep-2009, 15:49 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:18 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Initial Calibration
DataAcq Meth : TO-11A.M

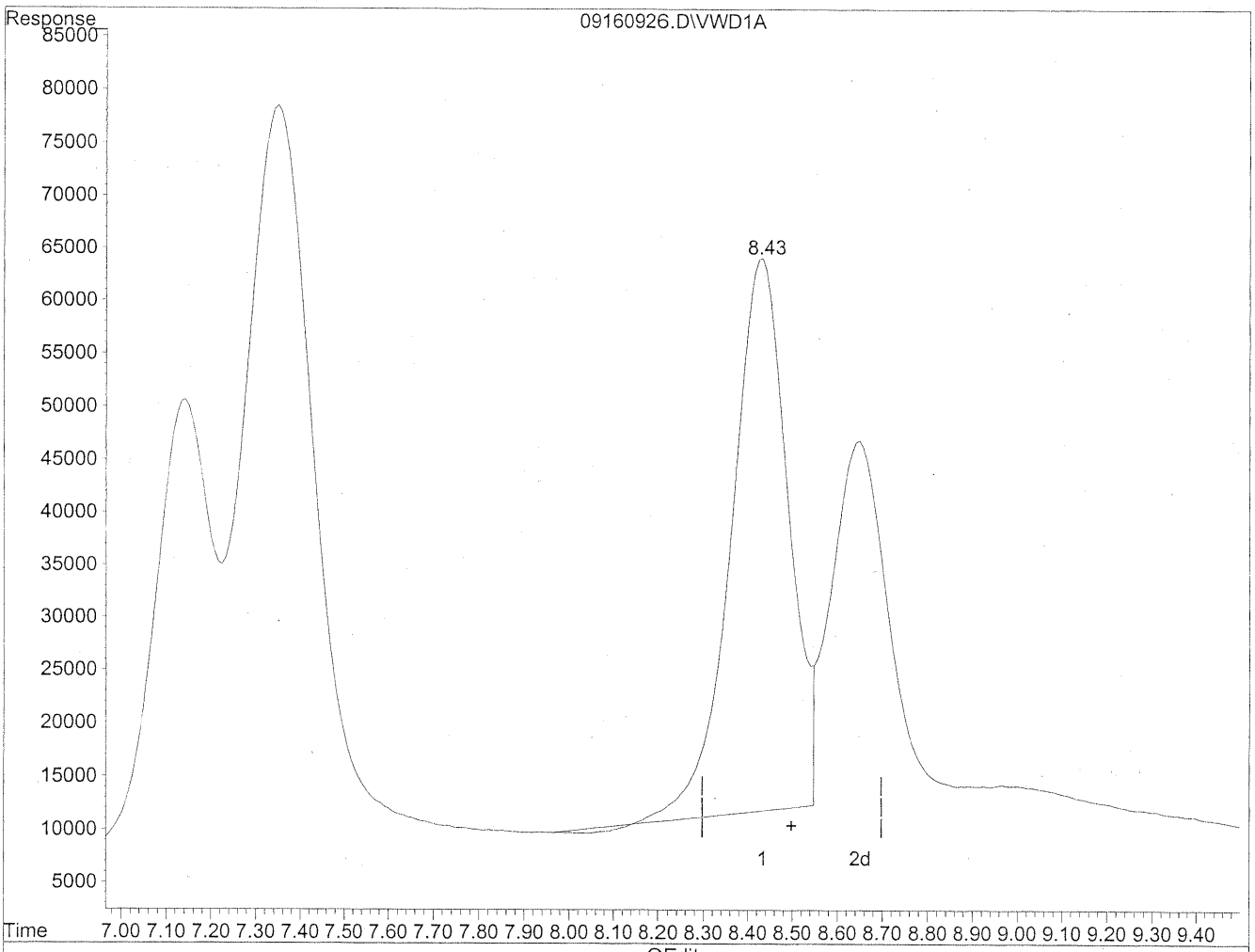
Volume Inj. : 3uL
Signal Phase : Supelcosil LC-18
Signal Info : 3.3cm x 3mm, 3um

	Compound	R.T.	Response	Conc	Units
	Target Compounds				
1)	Formaldehyde	1.35	14387649	1610.180	ng/ml
2)	Acetaldehyde	1.89	10401476	1600.031	ng/ml
3)	Propionaldehyde	3.31	8250128	1587.227	ng/ml
4)	Crotonaldehyde	4.30	6534716	1609.706	ng/ml
5)	Butyraldehyde	4.92	6572062	1621.623	ng/ml
6)	Benzaldehyde	5.79	4297616	1575.155	ng/ml
7)	Isovaleraldehyde	6.38	5495616	1596.733	ng/ml
8)	Valeraldehyde	6.67	5229857	1538.356	ng/ml
9)	o-Tolualdehyde	7.14	3596981	1639.043	ng/ml
10)	m,p-Tolualdehyde	7.35	7634856	3323.952	ng/ml
11)	Hexaldehyde	8.43	4633159	1564.873	ng/mlm
12)	2,5-Dimethylbenzaldehyde	8.65	2974724	1490.722	ng/ml

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160926.D Vial: 10
Acq On : 16-Sep-2009, 15:49 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:18 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



(11) Hexaldehyde

8.43min 1552.590ng/ml

response 4596790

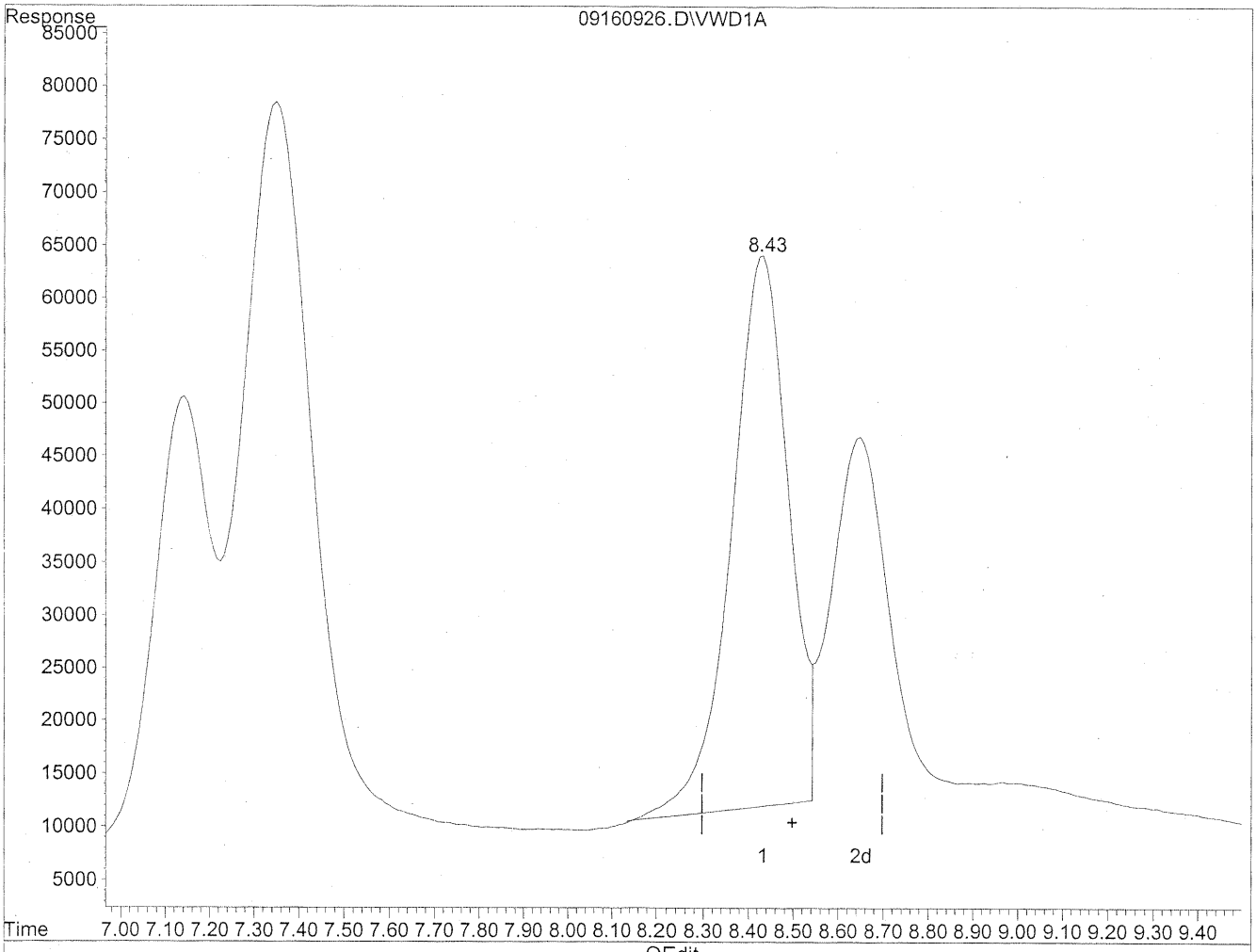
(+) = Expected Retention Time

09160926.D TO110909.M Mon Sep 21 16:18:29 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160926.D Vial: 10
Acq On : 16-Sep-2009, 15:49 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:18 19109 Quant Results File: TO110909.RES

Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 2009
Response via : Multiple Level Calibration



QEdit

(11) Hexaldehyde

8.43min 1564.873ng/ml m

response 4633159

9/21/09

HC
9/22/09

205

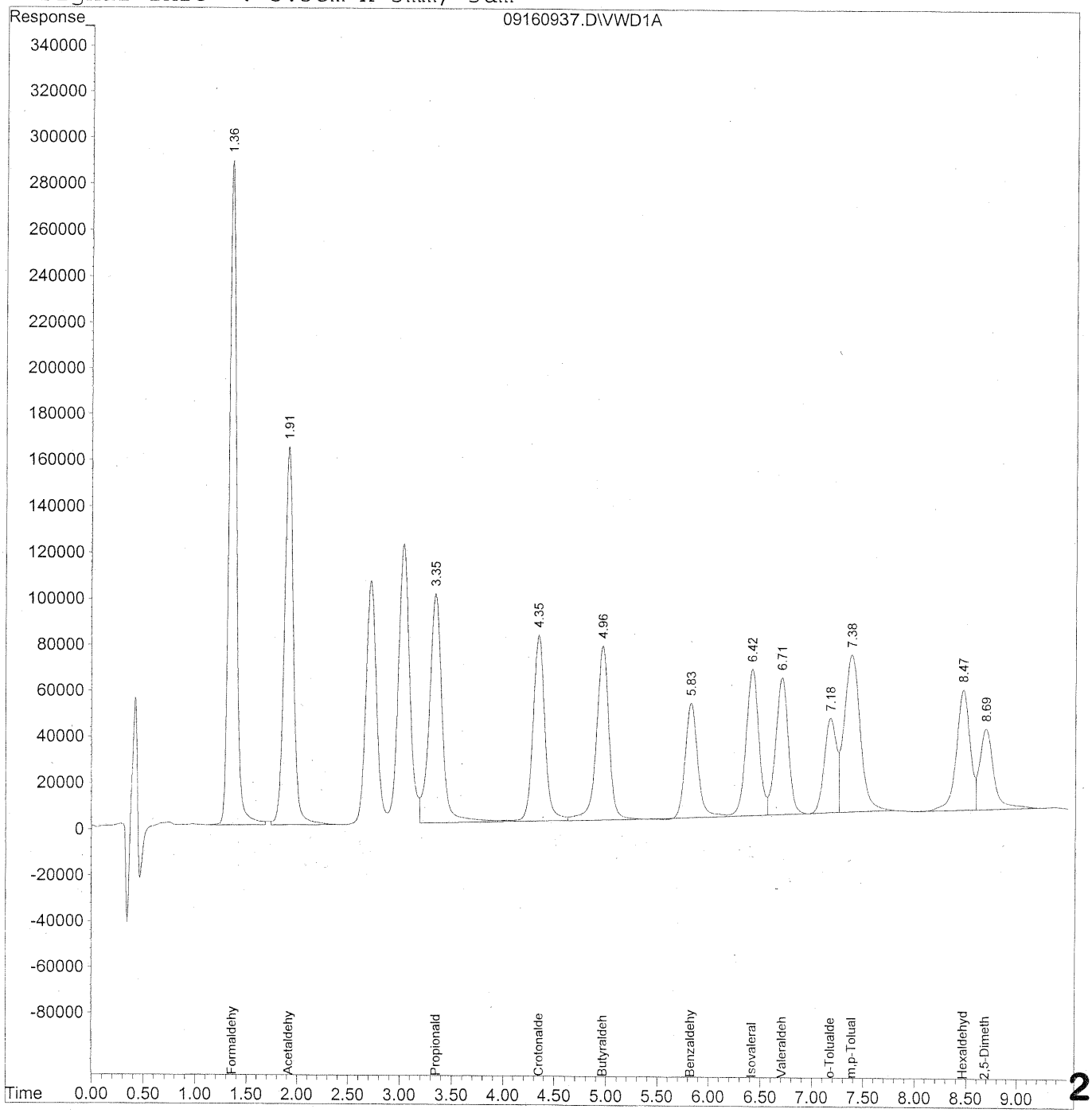
(+) = Expected Retention Time
09160926.D TO110909.M Mon Sep 21 16:18:36 2009

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160937.D Vial: 10
Acq On : 16-Sep-2009, 18:01 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:31 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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



206

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160937.D Vial: 10
Acq On : 16-Sep-2009, 18:01 Operator: MD
Sample : 1500ng/ml TO-11A S21-09090903 Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:31 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 12:16:55 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	14215985	1590.968	ng/ml
2)	Acetaldehyde	1.92	10310329	1586.010	ng/ml
3)	Propionaldehyde	3.35	8445043	1624.727	ng/ml
4)	Crotonaldehyde	4.35	6594324	1624.390	ng/ml
5)	Butyraldehyde	4.97	6569909	1621.092	ng/ml
6)	Benzaldehyde	5.83	4170866	1528.698	ng/ml
7)	Isovaleraldehyde	6.42	5410876	1572.112	ng/ml
8)	Valeraldehyde	6.71	5080430	1494.403	ng/ml
9)	o-Tolualdehyde	7.18	3362425	1532.163	ng/ml
10)	m,p-Tolualdehyde	7.39	7458577	3247.206	ng/ml
11)	Hexaldehyde	8.47	4741651	1601.517	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.69	3415019	1711.367	ng/ml

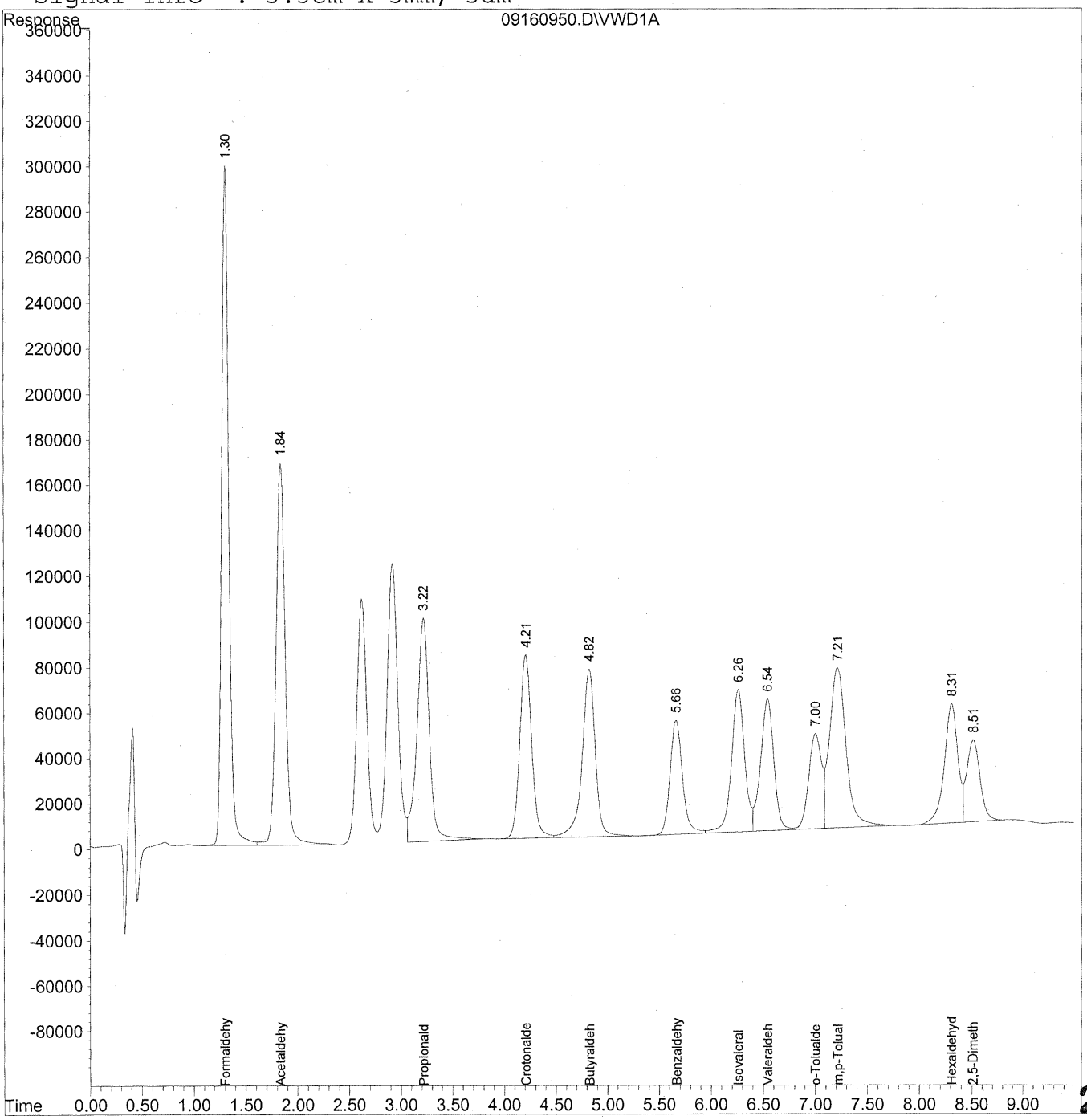
(f)=RT Delta > 1/2 Window (m)=manual int.
09160937.D TO110909.M Mon Sep 21 16:31:43 2009 Page 1

Quantitation Report

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160950.D Vial: 10
Acq On : 16-Sep-2009, 20:37 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:44 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 16:44:47 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



208

Quantitation Report (QT Reviewed)

Data File : J:\LC02\DATA\TO11A\2009_09\16\09160950.D Vial: 10
Acq On : 16-Sep-2009, 20:37 Operator: MD
Sample : MID CCV 1500ng/ml Inst : VWD
Misc : Multiplr: 1.00
IntFile : events.e
Quant Time: Sep 21 16:44 19109 Quant Results File: TO110909.RES

Quant Method : J:\LC02\METHODS\TO110909.M (Chemstation Integrator)
Title : LC-1050 TO-11A ICAL
Last Update : Mon Sep 21 16:44:47 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	1.31	14191865	1588.269	ng/ml
2)	Acetaldehyde	1.84	10441414	1606.174	ng/ml
3)	Propionaldehyde	3.22	8218545	1581.151	ng/ml
4)	Crotonaldehyde	4.21	6450809	1589.037	ng/ml
5)	Butyraldehyde	4.83	6560634	1618.803	ng/ml
6)	Benzaldehyde	5.67	4206204	1541.650	ng/ml
7)	Isovaleraldehyde	6.27	5532473	1607.442	ng/ml
8)	Valeraldehyde	6.55	5119578	1505.918	ng/ml
9)	o-Tolualdehyde	7.00	3580518	1631.541	ng/ml
10)	m,p-Tolualdehyde	7.22	7861354	3422.561	ng/ml
11)	Hexaldehyde	8.31	4707354	1589.933	ng/ml
12)	2,5-Dimethylbenzaldehyde	8.51	3139437	1573.265	ng/ml

RUN LOGS

Injection Log

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

.ine	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

211

Injection Log

Directory: j:\lc02\data\to11a\2009_09\16

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	10	09160901.d	1.	prime		16-Sep-09, 22:5
2	10	09160902.d	1.	1500ng/ml TO-11A S21-09090903		16-Sep-09, 23:0
3	9	09160903.d	1.	ACN blank Lot CY331		16-Sep-09, 23:1
4	8	09160904.d	1.	P0903144-003 front 10x dil	EH & E P0903144B	16-Sep-09, 23:3
5	7	09160905.d	1.	P0903144-004 front 10x dil		16-Sep-09, 23:4
6	6	09160906.d	1.	P0903195-003 front 10x dil	EH & E P0903195B	16-Sep-09, 23:5
7	5	09160907.d	1.	P0903195-013 front 10x dil		16-Sep-09, 12:0
8	4	09160908.d	1.	P0903195-014 front 10x dil		16-Sep-09, 12:1
9	3	09160909.d	1.	P0903195-015 front 10x dil		16-Sep-09, 12:2
10	2	09160910.d	1.	P0903195-016 front 10x dil		16-Sep-09, 12:3
11	11	09160911.d	1.	P0903195-005 front Rerun		16-Sep-09, 12:5
12	12	09160912.d	1.	P0903195-024 front Rerun		16-Sep-09, 25:0
13	10	09160913.d	1.	1500ng/ml TO-11A S21-09090903		16-Sep-09, 25:1
14	9	09160914.d	1.	ACN blank lot CY331		16-Sep-09, 25:2
15	101	09160915.d	1.	MB-1 front 1.0ml lot 5855/5994	9/15	16-Sep-09, 25:3
16	102	09160916.d	1.	MB-1 back 1.0ml lot 5855/5994	9/15	16-Sep-09, 25:5
17	103	09160917.d	1.	P0903146-001 back 1.0ml		16-Sep-09, 26:0
18	104	09160918.d	1.	P0903146-002 back 1.0ml		16-Sep-09, 26:1
19	105	09160919.d	1.	P0903146-003 back 1.0ml		16-Sep-09, 26:2
20	106	09160920.d	1.	P0903146-004 back 1.0ml		16-Sep-09, 26:3
21	107	09160921.d	1.	P0903146-005 back 1.0ml		16-Sep-09, 26:5
22	108	09160922.d	1.	P0903146-006 back 1.0ml		16-Sep-09, 27:0
23	109	09160923.d	1.	P0903146-001 front 1.0ml		16-Sep-09, 27:1
24	110	09160924.d	1.	P0903146-002 front 1.0ml		16-Sep-09, 27:2
25	9	09160925.d	1.	acn blank		16-Sep-09, 27:3
26	10	09160926.d	1.	MID CCV 1500ng/ml		16-Sep-09, 27:4
27	111	09160927.d	1.	P0903146-003 front 1.0ml		16-Sep-09, 28:0
28	112	09160928.d	1.	P0903146-004 front 1.0ml		16-Sep-09, 28:1
29	113	09160929.d	1.	P0903146-005 front 1.0ml		16-Sep-09, 28:2
30	114	09160930.d	1.	P0903146-006 front 1.0ml		16-Sep-09, 28:3
31	115	09160931.d	1.	P0903147-001 back 1.0ml		16-Sep-09, 28:5
32	116	09160932.d	1.	P0903147-002 back 1.0ml		16-Sep-09, 29:0
33	117	09160933.d	1.	P0903147-003 back 1.0ml		16-Sep-09, 29:1
34	118	09160934.d	1.	P0903147-004 back 1.0ml		16-Sep-09, 29:2
35	119	09160935.d	1.	P0903147-005 back 1.0ml		16-Sep-09, 29:3
36	120	09160936.d	1.	P0903147-006 back 1.0ml		16-Sep-09, 29:5
37	10	09160937.d	1.	1500ng/ml TO-11A S21-09090903		16-Sep-09, 30:0
38	9	09160938.d	1.	ACN blank lot CY331		16-Sep-09, 30:1
39	121	09160939.d	1.	MB-2 front 1.0ml lot 5855/5994	9/15	16-Sep-09, 30:2
40	122	09160940.d	1.	MB-2 back 1.0ml lot 5855/5994	9/15	16-Sep-09, 30:3
41	123	09160941.d	1.	P0903147-001 front 1.0ml		16-Sep-09, 30:4
42	124	09160942.d	1.	P0903147-002 front 1.0ml		16-Sep-09, 31:0
43	125	09160943.d	1.	P0903147-003 front 1.0ml		16-Sep-09, 31:1
44	126	09160944.d	1.	P0903147-004 front 1.0ml		16-Sep-09, 31:2
45	127	09160945.d	1.	P0903147-005 front 1.0ml		16-Sep-09, 31:3
46	128	09160946.d	1.	P0903147-006 front 1.0ml		16-Sep-09, 31:4
47	129	09160947.d	1.	P0903140-003 back 1.0ml		16-Sep-09, 32:0
48	130	09160948.d	1.	P0903140-004 back 1.0ml		16-Sep-09, 32:1
49	131	09160949.d	1.	P0903140-005 back 1.0ml		16-Sep-09, 32:2
50	10	09160950.d	1.	MID CCV 1500ng/ml		16-Sep-09, 32:3
51	132	09160951.d	1.	P0903176-003 back 1.0ml		16-Sep-09, 32:4
52	133	09160952.d	1.	P0903176-004 back 1.0ml		16-Sep-09, 33:0
53	134	09160953.d	1.	P0903176-005 back 1.0ml		16-Sep-09, 33:1
54	135	09160954.d	1.	P0903140-003 front 1.0ml		16-Sep-09, 33:2
55	136	09160955.d	1.	P0903140-004 front 1.0ml		16-Sep-09, 33:3
56	137	09160956.d	1.	P0903140-005 front 1.0ml		16-Sep-09, 33:4
57	138	09160957.d	1.	P0903176-003 front 1.0ml		16-Sep-09, 34:0