Air Toxics LTD.

Laboratory Services Since 1989

Electronic Comprehensive Validation Package (eCVP)

AN ENVIRONMENTAL ANALYTICAL LABORATORY

COMPREHENSIVE VALIDATION PACKAGE

ATL Application

INVENTORY SHEET

Work Order #: 0908458C

	Page Nos. From	Page Nos. To
1. Work Order Cover Page & Laboratory Narrative	1	5
a. Lumen Validation Report	--	--
2. Sample Results and Raw Data (Organized by Sample)	6	90
a. ATL Sample Results Form		
b. Target Compound Raw Data		
-Internal Standard Area and Retention Time Summary		
-Surrogate Recovery Summary (If Applicable)		
-Chromatogram(s) and Ion Profiles (If Applicable)		
3. QC Results and Raw Data		
a. Method Blank (Results+ Raw Data)	91	94
b. Surrogate Recover Summary Form (If Applicable)	--	--
c. Internal Standard Summary Form (If Applicable)	--	--
d. Duplicate Results Summary Sheet	95	97
e. Matrix Spike/Matrix Spike Duplicate (Results + Raw Data	--	--
f. Initial Calibration Data (Summary Sheet + Raw Data)	98	172
g. MDL Study (If Applicable)	--	--
h. Continuing Calibration Verification Data (Summary Sheet	173	216
i. Second Source LCS(Summary + Raw Data)	217	220
j. Extraction Logs	221	221
k. Instrument Run Logs/Software Verification	222	226
l. GC/MS Tune (Results + Raw Data)	--	--
4. Shipping/Receiving Documents		
a. Login Receipt Summary Sheet	227	228
b. Chain-of-Custody Records	229	230
c. Sample Log-In Sheet	231	232
d. Misc Shipping/Receiving Records (list of individual records)		
Sample Receipt Discrepancy Report	233	235
5. Other Records (describe or list)		
a. Manual Spectral Defense	--	--
b. Manual Integrations	236	251
c. Manual Calculations	252	262
d. Canister Dilution Factors	--	--
e. Laboratory Corrective Action Request	--	--
f. CAS Number Reference	263	263
g. Variance Table	--	--
h. Canister Certification	--	--
i. Data Review Check Sheet	264	264

Comments:

Completed by:

Kara McKiernan	Kara McKiernan / Document Control	9/11/09
(Signature)	(Print Name & Title)	(Date)

Air Toxics LTD.
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WORK ORDER #: 0908458C

Work Order Summary

CLIENT:	Mr. Taeko Minegishi Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494	**BILL TO:**	Accounts Payable Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494
PHONE:	800-825-5343	**P.O. #**	16512
FAX:	781-247-4305	**PROJECT #**	16512
DATE RECEIVED:	08/21/2009	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/03/2009		

FRACTION #	NAME	TEST
41A	100690	ATL Application
41AA	100690 Lab Duplicate	ATL Application
42A	100691	ATL Application
43A	100349	ATL Application
44A	100350	ATL Application
45A	100351	ATL Application
46A	100352	ATL Application
47A	100353	ATL Application
47AA	100353 Lab Duplicate	ATL Application
48A	100354	ATL Application
49A	100192	ATL Application
50A	100193	ATL Application
51A	100195	ATL Application
52A	100196	ATL Application
53A	100249	ATL Application
54A	100250	ATL Application
55A	100251	ATL Application

Continued on next page

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WORK ORDER #: 0908458C

Work Order Summary

CLIENT:	Mr. Taeko Minegishi Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494	**BILL TO:**	Accounts Payable Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494
PHONE:	800-825-5343	**P.O. #**	16512
FAX:	781-247-4305	**PROJECT #**	16512
DATE RECEIVED:	08/21/2009	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/03/2009		

FRACTION #	NAME	TEST
55AA	100251 Lab Duplicate	ATL Application
56A	100252	ATL Application
57A	100253	ATL Application
58A	100254	ATL Application
59A	Lab Blank	ATL Application
60A	LCS	ATL Application

CERTIFIED BY: Linda L. Freeman

Laboratory Director

DATE: 09/08/09

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Aldehydes by Radiello 165
Environmental Health & Engineering, Inc.
Workorder# 0908458C

Eighteen Radiello 165 (Aldehydes) samples were received on August 21, 2009. The procedure involves reaction of aldehydes with 2, 4-DNPH to give 2, 4-dinitrohydrazons. The 2, 4-dinitrohydrazons are then extracted with acetonitrile and analyzed using reverse phase High Pressure Liquid Chromatography (HPLC) with an Ultraviolet (UV) Detector. Results are reported in uG and uG/m3.

Receiving Notes

A Temperature Blank was not included with the shipment. Temperature was measured on a representative sample and was not within 4±2 °C. Coolant in the form of blue ice was present. Analysis proceeded.

Sample collection date was not provided on the Chain of Custody for all samples. The client was contacted and the dates of 8/19/09 and 8/20/09 were provided.

Analytical Notes

Results were calculated based on 25 deg C without temperature correction.

The actual exposure time was used to calculate sample concentrations and reporting limits. An exposure time of 21819 minutes was used for the QC samples.

Sampling rates were provided by the manufacturer. See the attached document for the sample results in uG/m3 and the sampling rates for each analyte.

Butanal coelutes with Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

The exposure time for all samples exceeded the method recommended exposure time of 7 days.

The detection of Acrolein appears to be masked by an interfering peak in samples 100690, 100690 Lab Duplicate, 100349, 100350, 100351, and 100352. Therefore, Acrolein could not be quantified or reported.

The recovery for Formaldehyde in the LCS was outside the laboratory control limits. Due to the nature of the media, it is not possible to re-extract the associated samples. All other LCS recoveries were within allowed limits.

The RPD of duplicate samples 100251 and 100251 Lab Duplicate exceeded acceptance limits for some target species due target compound concentrations present at less than 5X the reporting limit.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Table 1

Client Sample ID	Lab Sample ID	Date Collected	Date Received	Date Extracted	Sample Holding Time (Days)	Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
100690	0908458C-41A	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100690 Lab Duplicate	0908458C-41AA	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100691	0908458C-42A	8/19/2009	8/21/2009	8/25/2009	6	8/28/2009	3	Good
100349	0908458C-43A	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100350	0908458C-44A	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100351	0908458C-45A	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100352	0908458C-46A	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100353	0908458C-47A	8/19/2009	8/21/2009	8/25/2009	6	8/31/2009	6	Good
100353 Lab Duplicate	0908458C-47AA	8/19/2009	8/21/2009	8/25/2009	6	8/31/2009	6	Good
100354	0908458C-48A	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100192	0908458C-49A	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100193	0908458C-50A	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100195	0908458C-51A	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100196	0908458C-52A	8/19/2009	8/21/2009	8/25/2009	6	8/29/2009	4	Good
100249	0908458C-53A	8/20/2009	8/21/2009	8/28/2009	8	8/29/2009	1	Good
100250	0908458C-54A	8/20/2009	8/21/2009	8/25/2009	5	8/29/2009	4	Good
100251	0908458C-55A	8/20/2009	8/21/2009	8/25/2009	5	8/31/2009	6	Good
100251 Lab Duplicate	0908458C-55AA	8/20/2009	8/21/2009	8/25/2009	5	8/31/2009	6	Good
100252	0908458C-56A	8/20/2009	8/21/2009	8/25/2009	5	8/29/2009	4	Good
100253	0908458C-57A	8/20/2009	8/21/2009	8/25/2009	5	8/29/2009	4	Good
100254	0908458C-58A	8/20/2009	8/21/2009	8/25/2009	5	8/29/2009	4	Good
Lab Blank	0908458C-59A	NA	NA	8/25/2009	NA	8/25/2009	0	Good
LCS	0908458C-60A	NA	NA	8/25/2009	NA	8/25/2009	0	Good

Sample Results and Raw Data

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Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100690

Lab ID#: 0908458C-41A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	4.0	98
Acetaldehyde	2.0	30
Propanal	1.0	2.4
Methyl Ethyl Ketone/Butyraldehydes	1.0	3.9
Benzaldehyde	1.0	2.6
Pentanal	1.0	7.8
Hexanal	1.0	18

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Client Sample ID: 100690

Lab ID#: 0908458C-41A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828060**	**Date of Collection: 8/19/09**
Dil. Factor:	**4.00**	**Date of Analysis: 8/29/09 08:28 AM**
		Date of Extraction: 8/25/09

Compound	**Rpt. Limit (ug)**	**Amount (ug)**
Formaldehyde	4.0	98
Acetaldehyde	2.0	30
Propanal	1.0	2.4
Methyl Ethyl Ketone/Butyraldehydes	1.0	3.9
Benzaldehyde	1.0	2.6
Pentanal	1.0	7.8
Isopentanal	1.0	Not Detected
Hexanal	1.0	18
Acrolein	1.0	Not Detected M

M = Reported value may be biased due to apparent matrix interferences.

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828060.d
Lab Smp Id: 0908458C-41A Client Smp ID: X4
Inj Date : 29-AUG-2009 08:28
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-41A;X4
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.015	3.014	0.001	7008090		
2 FORMALDEHYDE	4.062	4.074	-0.012	6978166	61.4426	98.3
3 ACETALDEHYDE	4.888	4.907	-0.019	1635674	19.0329	30.4
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	6.455	6.481	-0.026	94118	1.49104	2.38
9 BUTYRALS/MEK	8.662	8.721	-0.059	133451	2.43896	3.90
10 BENZALDEHYDE	10.188	10.241	-0.053	64193	1.60612	2.57
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.782	11.841	-0.059	223433	4.85127	7.76
16 HEXANAL	14.168	14.221	-0.053	471374	11.4897	18.4

Data File: /chem/hplcf.i/28Aug2009.b/f0828060.d

0010

Date : 29-AUG-2009 08:28

Client ID: X4

Instrument: hplcf.i

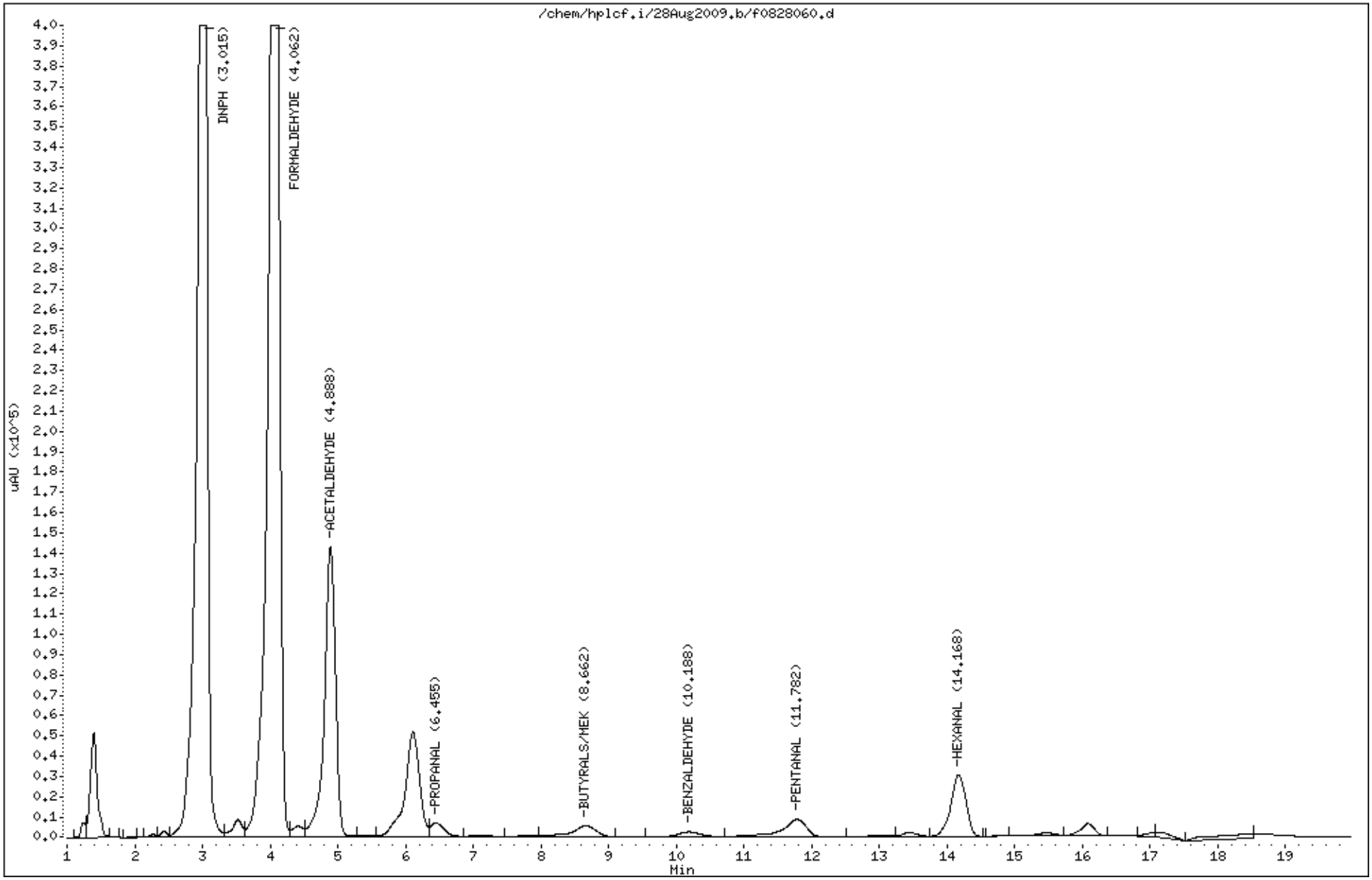
Sample Info: ;0908458C-41A;X4

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



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Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100690 Lab Duplicate

Lab ID#: 0908458C-41AA

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	4.0	98
Acetaldehyde	2.0	30
Propanal	1.0	2.2
Methyl Ethyl Ketone/Butyraldehydes	1.0	3.8
Benzaldehyde	1.0	3.0
Pentanal	1.0	6.1
Hexanal	1.0	18

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Client Sample ID: 100690 Lab Duplicate

Lab ID#: 0908458C-41AA

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828061**	**Date of Collection:**	**8/19/09**
Dil. Factor:	**4.00**	**Date of Analysis:**	**8/29/09 08:49 AM**
		Date of Extraction:	**8/25/09**

Compound	**Rpt. Limit (ug)**	**Amount (ug)**
Formaldehyde	4.0	98
Acetaldehyde	2.0	30
Propanal	1.0	2.2
Methyl Ethyl Ketone/Butyraldehydes	1.0	3.8
Benzaldehyde	1.0	3.0
Pentanal	1.0	6.1
Isopentanal	1.0	Not Detected
Hexanal	1.0	18
Acrolein	1.0	Not Detected M

M = Reported value may be biased due to apparent matrix interferences.

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/28Aug2009.b/f0828061.d
Lab Smp Id: 0908458C-41AA Client Smp ID: X4
Inj Date : 29-AUG-2009 08:49
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-41AA;X4
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 4.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.013	3.014	-0.001	7010609		
2 FORMALDEHYDE	4.060	4.074	-0.014	6979995	61.4587	98.3
3 ACETALDEHYDE	4.886	4.907	-0.021	1632502	18.9960	30.4
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	6.447	6.481	-0.034	88651	1.40444	2.25
9 BUTYRALS/MEK	8.666	8.721	-0.055	129230	2.36182	3.78
10 BENZALDEHYDE	10.200	10.241	-0.041	74015	1.85185	2.96
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.780	11.841	-0.061	175833	3.81777	6.11
16 HEXANAL	14.166	14.221	-0.055	473275	11.5361	18.4

Data File: /chem/hplcf.i/28Aug2009.b/f0828061.d

Date : 29-AUG-2009 08:49

Client ID: X4

Sample Info: ;0908458C-41AA;X4

Purge Volume: 5.0

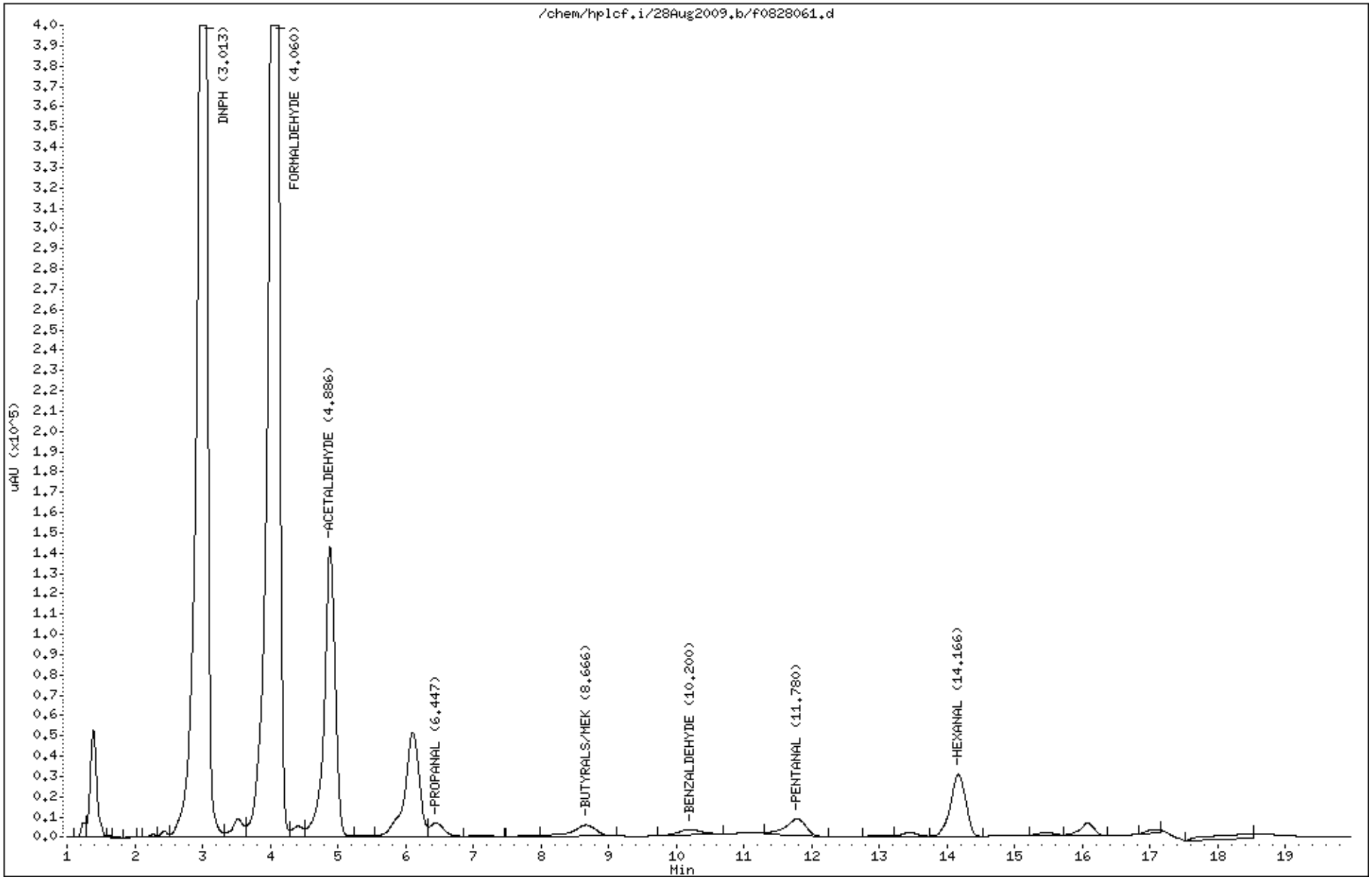
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: LZ

Column diameter: 2.00

0014



Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100691

Lab ID#: 0908458C-42A

No Detections Were Found.

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Client Sample ID: 100691

Lab ID#: 0908458C-42A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0827058**	**Date of Collection:**	**8/19/09**
Dil. Factor:	**1.00**	**Date of Analysis:**	**8/28/09 04:51 AM**
		Date of Extraction:	**8/25/09**

Compound	**Rpt. Limit (ug)**	**Amount (ug)**
Formaldehyde	1.0	Not Detected
Acetaldehyde	0.50	Not Detected
Propanal	0.25	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	0.25	Not Detected
Benzaldehyde	0.25	Not Detected
Pentanal	0.25	Not Detected
Isopentanal	0.25	Not Detected
Hexanal	0.25	Not Detected
Acrolein	0.25	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/27Aug2009a.b/f0827058.d
Lab Smp Id: 0908458C-42A
Inj Date : 28-AUG-2009 04:51
Operator : CRL Inst ID: hplcf.i
Smp Info : ;0908458C-42A;
Misc Info :
Comment :
Method : /chem/hplcf.i/27Aug2009a.b/F09D0819.m
Meth Date : 28-Aug-2009 17:48 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.011	3.017	-0.006	37393879		
2 FORMALDEHYDE	Compound Not Detected.					
3 ACETALDEHYDE	Compound Not Detected.					
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	Compound Not Detected.					
16 HEXANAL	Compound Not Detected.					

Data File: /chem/hplcf.i/27Aug2009a.b/f0827058.d

Date : 28-AUG-2009 04:51

Client ID:

Sample Info: ;0908458C-42A;

Purge Volume: 5.0

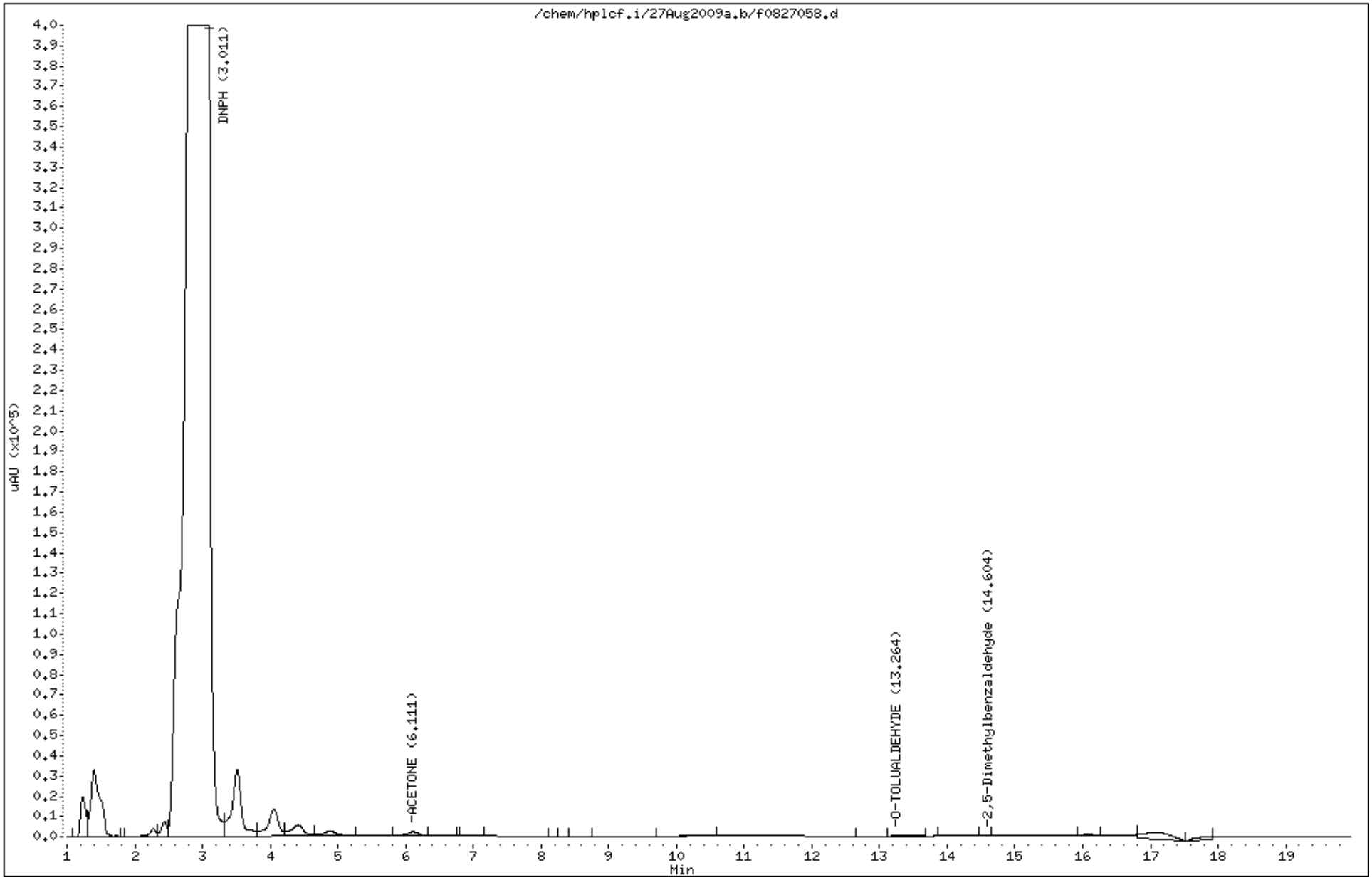
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: CRL

Column diameter: 2.00

0018



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Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100349

Lab ID#: 0908458C-43A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	120
Acetaldehyde	5.0	12
Methyl Ethyl Ketone/Butyraldehydes	2.5	7.5
Benzaldehyde	2.5	4.0
Pentanal	2.5	12
Hexanal	2.5	44

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Client Sample ID: 100349

Lab ID#: 0908458C-43A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828041**	**Date of Collection: 8/19/09**
Dil. Factor:	**10.0**	**Date of Analysis: 8/29/09 01:51 AM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	120
Acetaldehyde	5.0	12
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	7.5
Benzaldehyde	2.5	4.0
Pentanal	2.5	12
Isopentanal	2.5	Not Detected
Hexanal	2.5	44
Acrolein	2.5	Not Detected M

M = Reported value may be biased due to apparent matrix interferences.

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/28Aug2009.b/f0828041.d
Lab Smp Id: 0908458C-43A Client Smp ID: 10
Inj Date : 29-AUG-2009 01:51
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-43A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.006	3.014	-0.008	2108679		
2 FORMALDEHYDE	4.052	4.074	-0.022	3393850	29.8828	120
3 ACETALDEHYDE	4.872	4.907	-0.035	251782	2.92976	11.7
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.646	8.721	-0.075	102119	1.86633	7.46
10 BENZALDEHYDE	10.159	10.241	-0.082	40439	1.01179	4.05
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.765	11.841	-0.076	136143	2.95600	11.8
16 HEXANAL	14.152	14.221	-0.069	448054	10.9213	43.7

Data File: /chem/hplcf.i/28Aug2009.b/f0828041.d

0022

Date : 29-AUG-2009 01:51

Client ID: 10

Instrument: hplcf.i

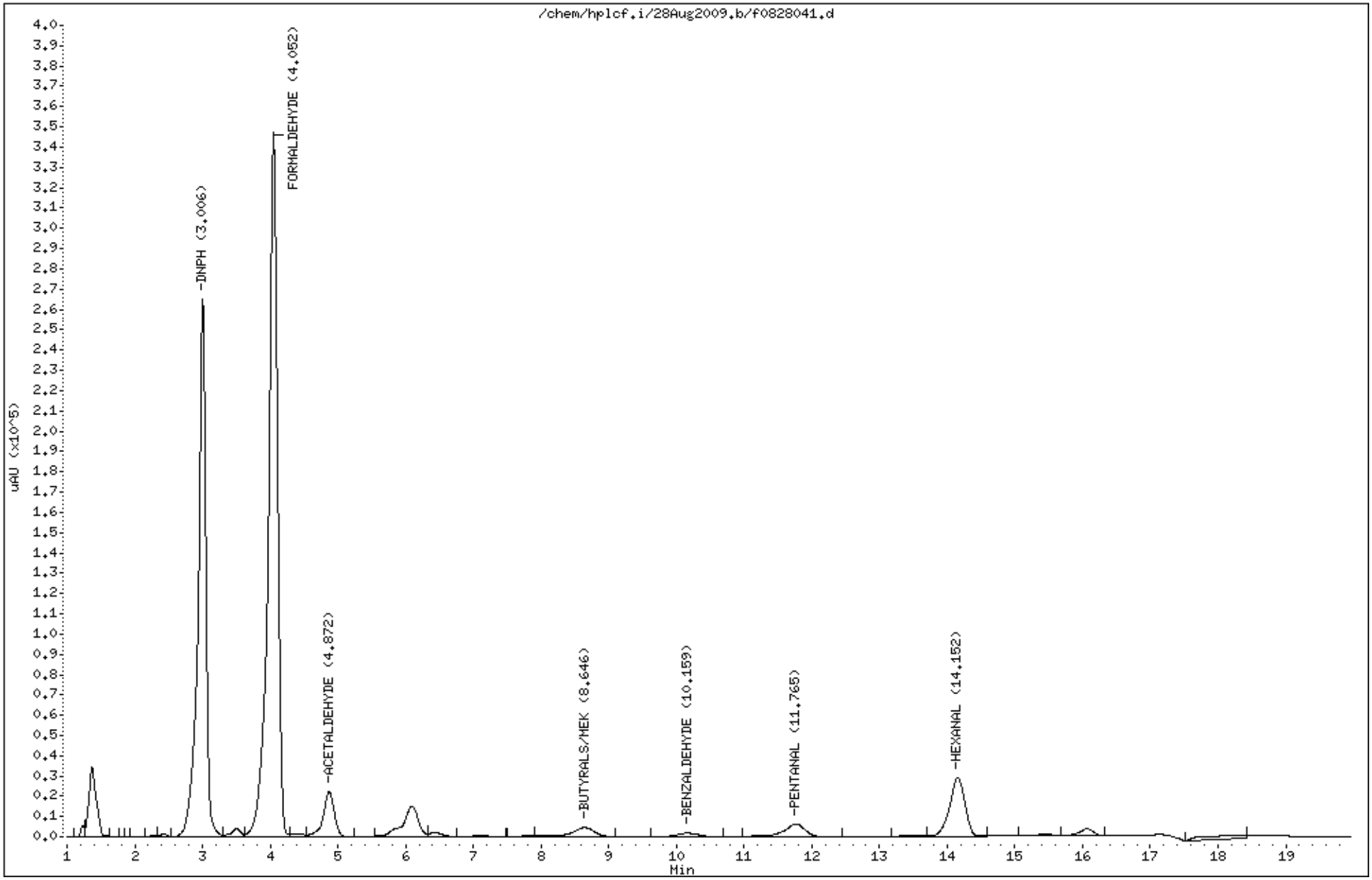
Sample Info: ;0908458C-43A;10

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100350

Lab ID#: 0908458C-44A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	120
Acetaldehyde	5.0	13
Methyl Ethyl Ketone/Butyraldehydes	2.5	7.9
Benzaldehyde	2.5	4.8
Pentanal	2.5	11
Hexanal	2.5	43

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100350

Lab ID#: 0908458C-44A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828042**	**Date of Collection: 8/19/09**
Dil. Factor:	**10.0**	**Date of Analysis: 8/29/09 02:12 AM**
		Date of Extraction: 8/25/09

Compound	**Rpt. Limit (ug)**	**Amount (ug)**
Formaldehyde	10	120
Acetaldehyde	5.0	13
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	7.9
Benzaldehyde	2.5	4.8
Pentanal	2.5	11
Isopentanal	2.5	Not Detected
Hexanal	2.5	43
Acrolein	2.5	Not Detected M

M = Reported value may be biased due to apparent matrix interferences.

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828042.d
Lab Smp Id: 0908458C-44A Client Smp ID: 10
Inj Date : 29-AUG-2009 02:12
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-44A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.001	3.014	-0.013	1885620		
2 FORMALDEHYDE	4.048	4.074	-0.026	3414694	30.0663	120
3 ACETALDEHYDE	4.875	4.907	-0.032	288825	3.36080	13.4
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.641	8.721	-0.080	108344	1.98010	7.92
10 BENZALDEHYDE	10.161	10.241	-0.080	48000	1.20096	4.80
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.761	11.841	-0.080	130855	2.84119	11.4
16 HEXANAL	14.155	14.221	-0.066	443450	10.8091	43.2

Data File: /chem/hplcf.i/28Aug2009.b/f0828042.d

Date : 29-AUG-2009 02:12

Client ID: 10

Instrument: hplcf.i

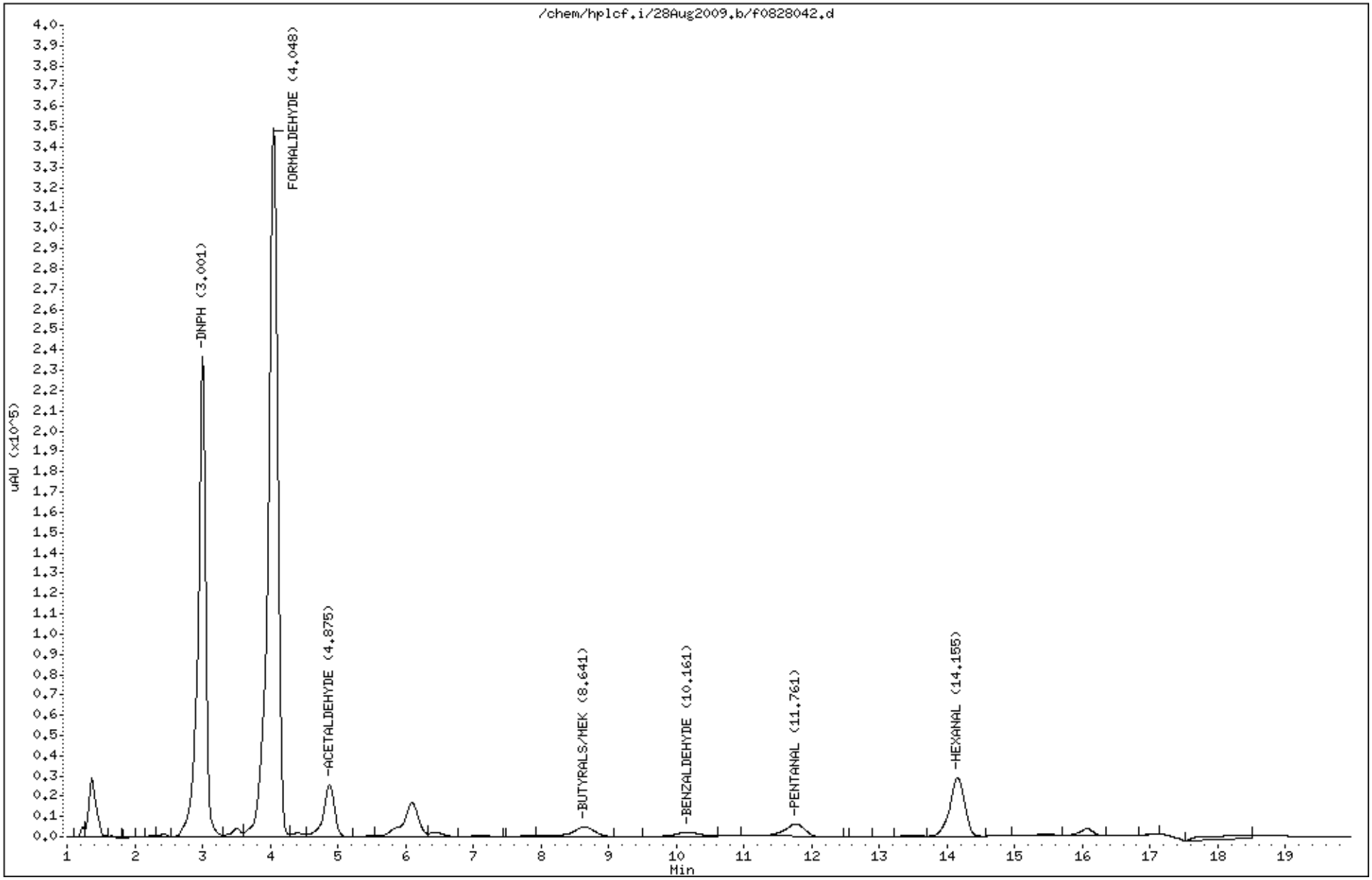
Sample Info: ;0908458C-44A;10

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0026

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100351

Lab ID#: 0908458C-45A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	120
Acetaldehyde	5.0	17
Methyl Ethyl Ketone/Butyraldehydes	2.5	8.5
Benzaldehyde	2.5	5.6
Pentanal	2.5	13
Hexanal	2.5	43

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100351

Lab ID#: 0908458C-45A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828043**	**Date of Collection: 8/19/09**
Dil. Factor:	**10.0**	**Date of Analysis: 8/29/09 02:33 AM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	120
Acetaldehyde	5.0	17
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	8.5
Benzaldehyde	2.5	5.6
Pentanal	2.5	13
Isopentanal	2.5	Not Detected
Hexanal	2.5	43
Acrolein	2.5	Not Detected M

M = Reported value may be biased due to apparent matrix interferences.

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828043.d
Lab Smp Id: 0908458C-45A Client Smp ID: 10
Inj Date : 29-AUG-2009 02:33
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-45A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.007	3.014	-0.007	2298501		
2 FORMALDEHYDE	4.053	4.074	-0.021	3488801	30.7188	123
3 ACETALDEHYDE	4.880	4.907	-0.027	359552	4.18378	16.7
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.647	8.721	-0.074	115683	2.11422	8.46
10 BENZALDEHYDE	10.167	10.241	-0.074	56472	1.41293	5.65
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.767	11.841	-0.074	154230	3.34870	13.4
16 HEXANAL	14.153	14.221	-0.068	442612	10.7886	43.2

Data File: /chem/hplcf.i/28Aug2009.b/f0828043.d

Date : 29-AUG-2009 02:33

Client ID: 10

Instrument: hplcf.i

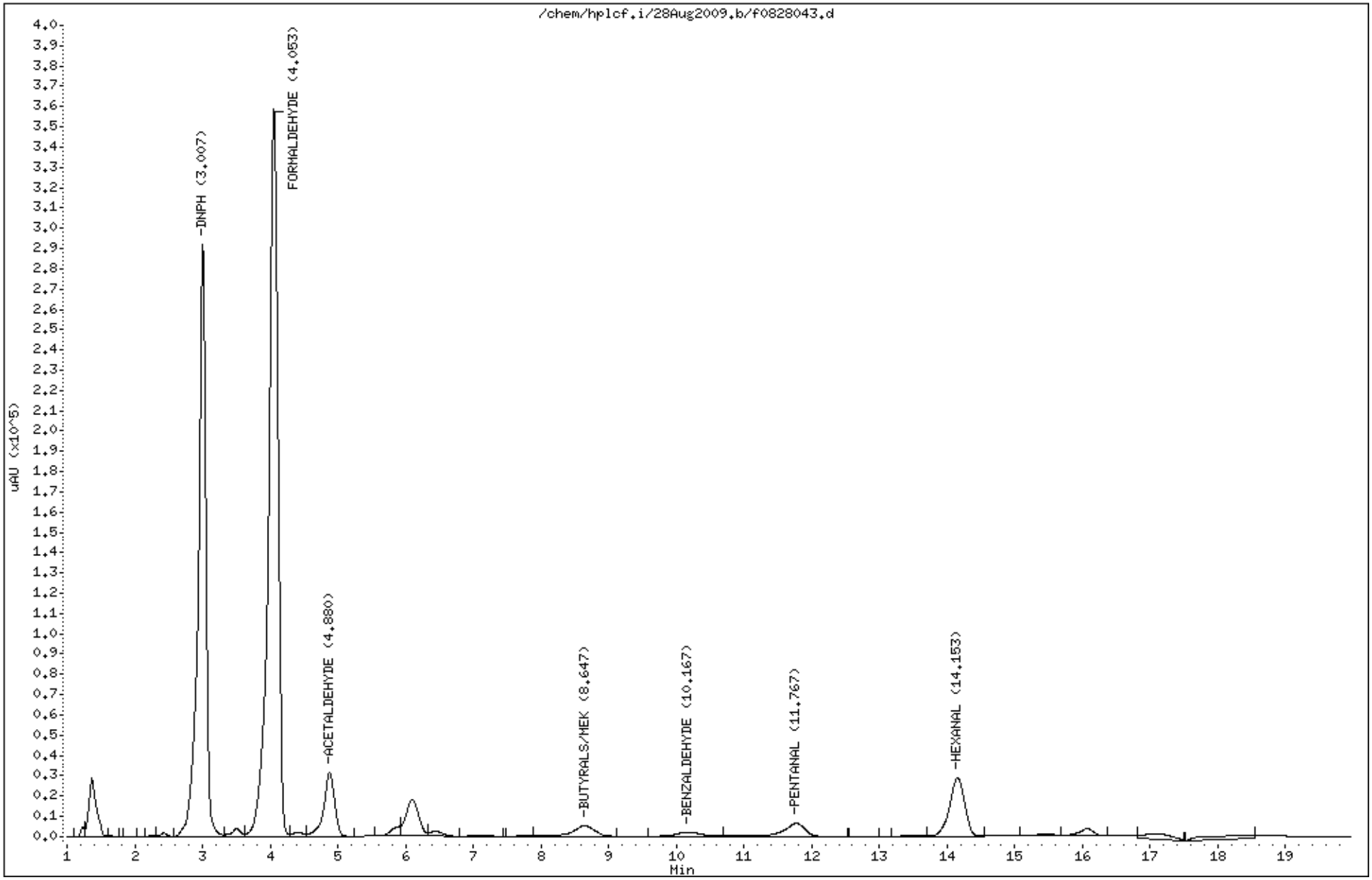
Sample Info: ;0908458C-45A;10

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0030

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100352

Lab ID#: 0908458C-46A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	110
Acetaldehyde	5.0	19
Methyl Ethyl Ketone/Butyraldehydes	2.5	9.2
Benzaldehyde	2.5	5.6
Pentanal	2.5	14
Hexanal	2.5	43

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100352

Lab ID#: 0908458C-46A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828044**	**Date of Collection: 8/19/09**
Dil. Factor:	**10.0**	**Date of Analysis: 8/29/09 02:54 AM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	110
Acetaldehyde	5.0	19
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	9.2
Benzaldehyde	2.5	5.6
Pentanal	2.5	14
Isopentanal	2.5	Not Detected
Hexanal	2.5	43
Acrolein	2.5	Not Detected M

M = Reported value may be biased due to apparent matrix interferences.

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828044.d
Lab Smp Id: 0908458C-46A Client Smp ID: 10
Inj Date : 29-AUG-2009 02:54
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-46A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.008	3.014	-0.006	2696121		
2 FORMALDEHYDE	4.048	4.074	-0.026	3217614	28.3310	113
3 ACETALDEHYDE	4.875	4.907	-0.032	404322	4.70474	18.8
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.655	8.721	-0.066	126001	2.30280	9.21
10 BENZALDEHYDE	10.175	10.241	-0.066	55949	1.39984	5.60
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.768	11.841	-0.073	160109	3.47636	13.9
16 HEXANAL	14.162	14.221	-0.059	445129	10.8500	43.4

Data File: /chem/hplcf.i/28Aug2009.b/f0828044.d

0034

Date : 29-AUG-2009 02:54

Client ID: 10

Instrument: hplcf.i

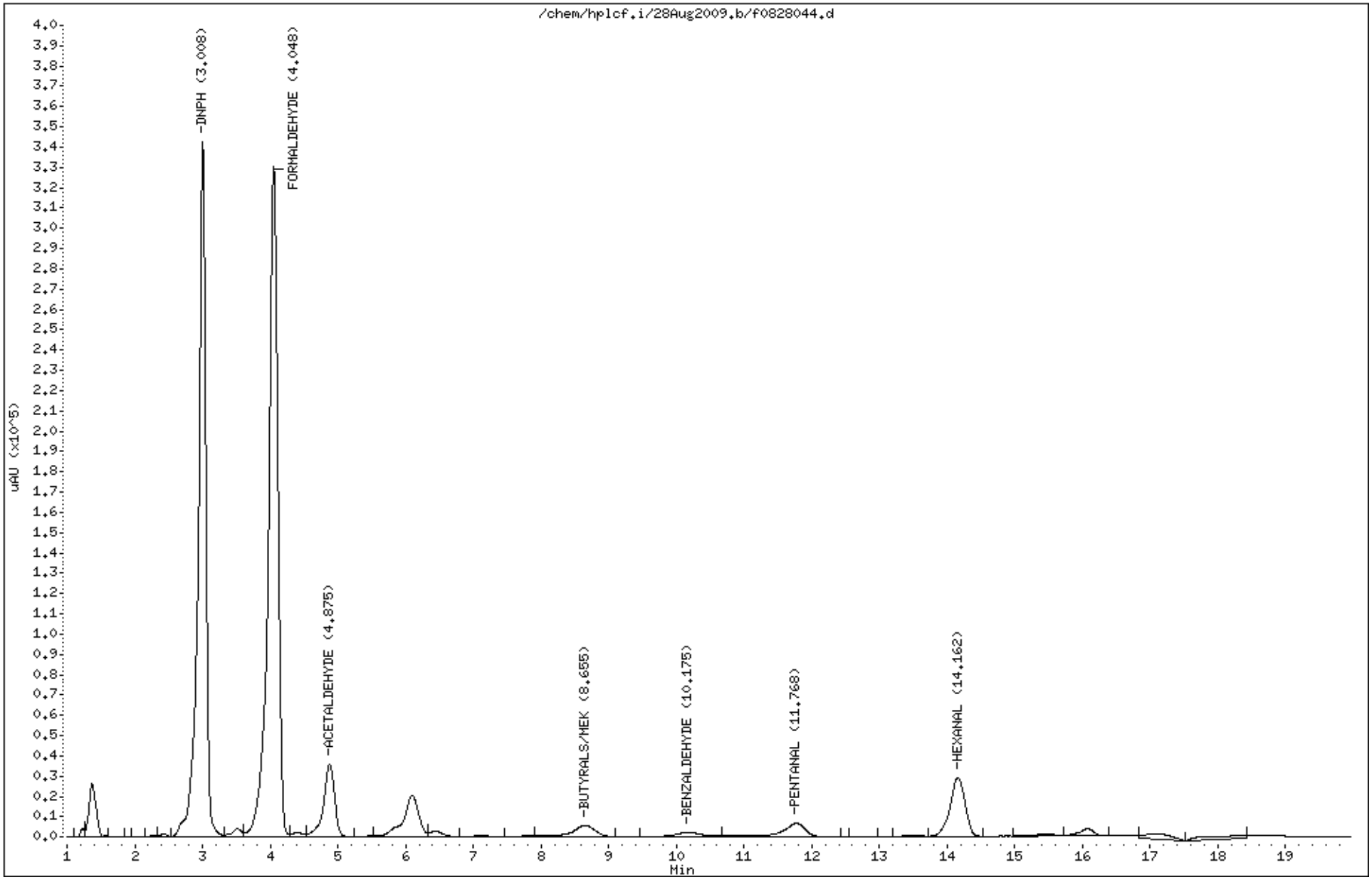
Sample Info: ;0908458C-46A;10

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100353

Lab ID#: 0908458C-47A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	1.0	3.2
Acetaldehyde	0.50	1.1
Methyl Ethyl Ketone/Butyraldehydes	0.25	0.34
Pentanal	0.25	0.34
Hexanal	0.25	0.34

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100353

Lab ID#: 0908458C-47A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0831007**	**Date of Collection: 8/19/09**
Dil. Factor:	**1.00**	**Date of Analysis: 8/31/09 12:37 PM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	1.0	3.2
Acetaldehyde	0.50	1.1
Propanal	0.25	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	0.25	0.34
Benzaldehyde	0.25	Not Detected
Pentanal	0.25	0.34
Isopentanal	0.25	Not Detected
Hexanal	0.25	0.34
Acrolein	0.25	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/31Aug2009.b/f0831007.d
Lab Smp Id: 0908458C-47A
Inj Date : 31-AUG-2009 12:37
Operator : CRL Inst ID: hplcf.i
Smp Info : ;0908458C-47A;
Misc Info :
Comment :
Method : /chem/hplcf.i/31Aug2009.b/F09D0819.m
Meth Date : 02-Sep-2009 16:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	2.991	2.982	0.009	37107510		
2 FORMALDEHYDE	4.031	4.016	0.015	920907	8.10857	3.24
3 ACETALDEHYDE	4.844	4.822	0.022	241612	2.81142	1.12
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.558	8.509	0.049	47219	0.86298	0.345
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.704	11.636	0.068	39523	0.85816	0.343
16 HEXANAL	14.098	14.056	0.042	35088	0.85528	0.342

Data File: /chem/hplcf.i/31Aug2009.b/f0831007.d

Date : 31-AUG-2009 12:37

Client ID:

Instrument: hplcf.i

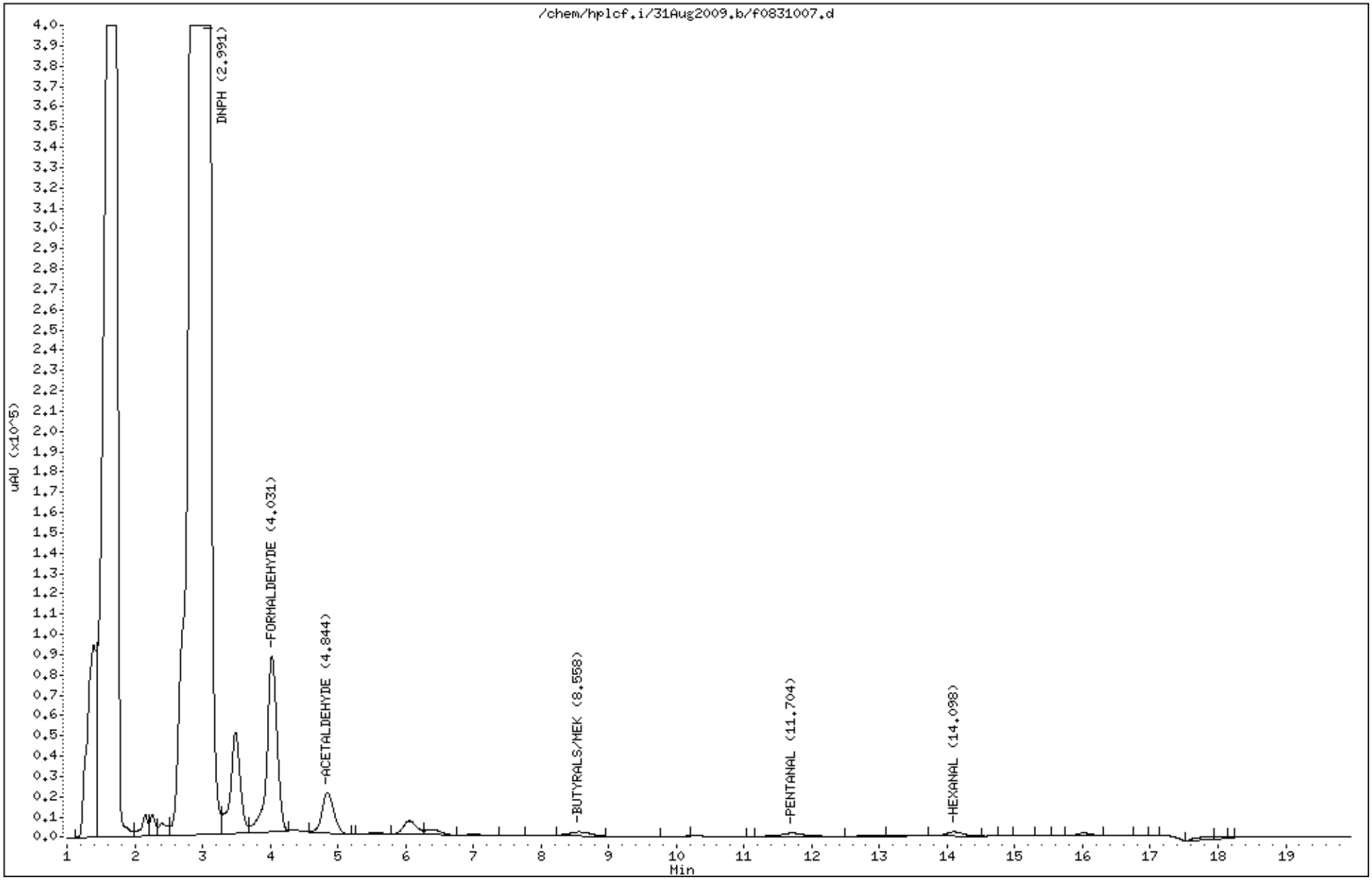
Sample Info: ;0908458C-47A;

Purge Volume: 5.0

Operator: CRL

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0038

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100353 Lab Duplicate

Lab ID#: 0908458C-47AA

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	1.0	3.3
Acetaldehyde	0.50	1.1
Methyl Ethyl Ketone/Butyraldehydes	0.25	0.37
Pentanal	0.25	0.32
Hexanal	0.25	0.35

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100353 Lab Duplicate

Lab ID#: 0908458C-47AA

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0831008**	**Date of Collection: 8/19/09**
Dil. Factor:	**1.00**	**Date of Analysis: 8/31/09 12:58 PM**
		Date of Extraction: 8/25/09

Compound	**Rpt. Limit (ug)**	**Amount (ug)**
Formaldehyde	1.0	3.3
Acetaldehyde	0.50	1.1
Propanal	0.25	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	0.25	0.37
Benzaldehyde	0.25	Not Detected
Pentanal	0.25	0.32
Isopentanal	0.25	Not Detected
Hexanal	0.25	0.35
Acrolein	0.25	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/31Aug2009.b/f0831008.d
Lab Smp Id: 0908458C-47AA
Inj Date : 31-AUG-2009 12:58
Operator : CRL Inst ID: hplcf.i
Smp Info : ;0908458C-47AA;
Misc Info :
Comment :
Method : /chem/hplcf.i/31Aug2009.b/F09D0819.m
Meth Date : 02-Sep-2009 16:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	2.997	2.982	0.015	37181700		
2 FORMALDEHYDE	4.037	4.016	0.021	925255	8.14685	3.26
3 ACETALDEHYDE	4.857	4.822	0.035	241515	2.81030	1.12
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.590	8.509	0.081	50101	0.91565	0.366
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.723	11.636	0.087	36283	0.78781	0.315
16 HEXANAL	14.103	14.056	0.047	35504	0.86543	0.346

Data File: /chem/hplcf.i/31Aug2009.b/f0831008.d

Date : 31-AUG-2009 12:58

Client ID:

Instrument: hplcf.i

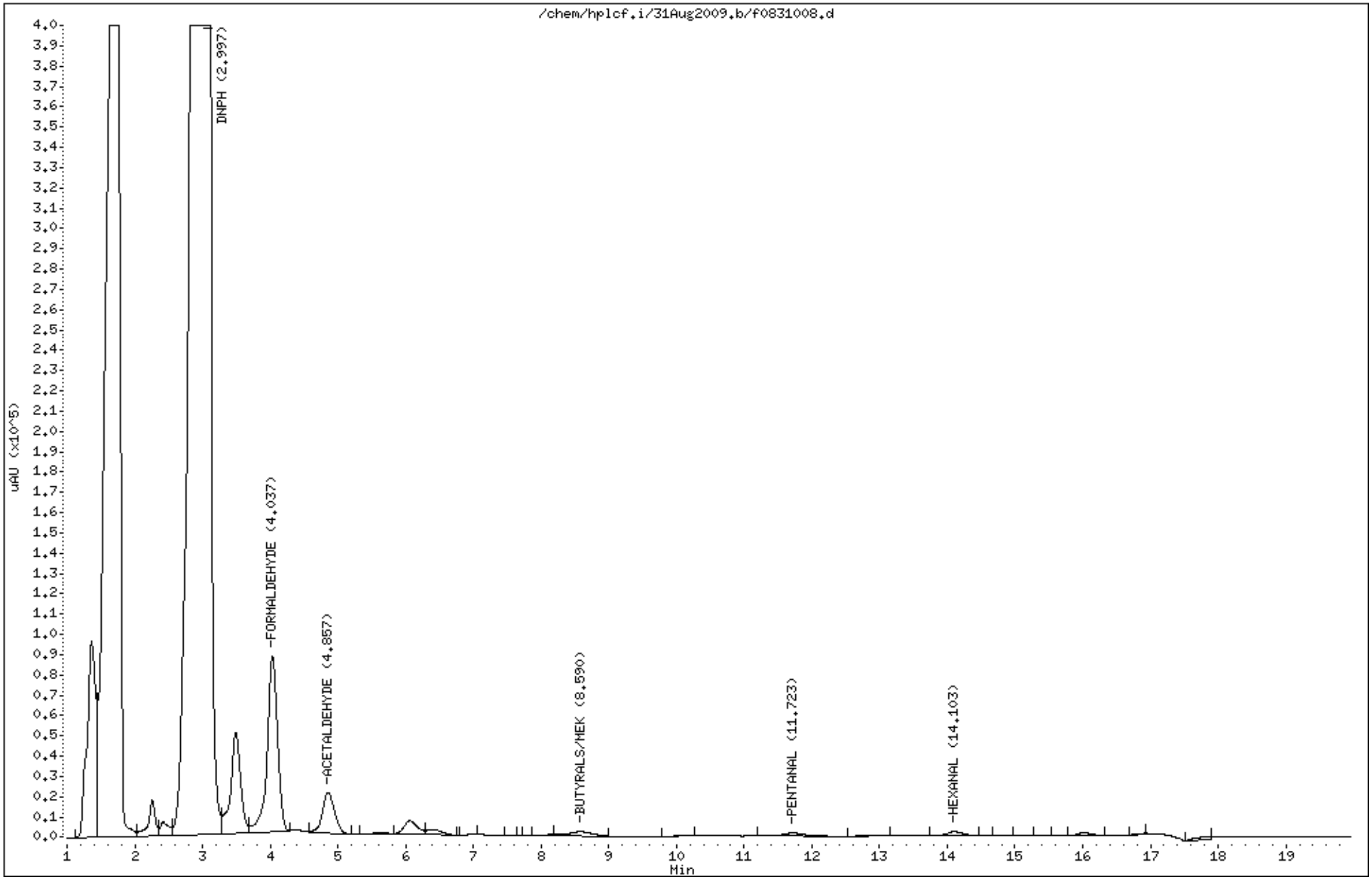
Sample Info: ;0908458C-47AA;

Purge Volume: 5.0

Operator: CRL

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100354

Lab ID#: 0908458C-48A

No Detections Were Found.

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100354

Lab ID#: 0908458C-48A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828056**	**Date of Collection:**	**8/19/09**
Dil. Factor:	**1.00**	**Date of Analysis:**	**8/29/09 07:05 AM**
		Date of Extraction:	**8/25/09**

Compound	**Rpt. Limit (ug)**	**Amount (ug)**
Formaldehyde	1.0	Not Detected
Acetaldehyde	0.50	Not Detected
Propanal	0.25	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	0.25	Not Detected
Benzaldehyde	0.25	Not Detected
Pentanal	0.25	Not Detected
Isopentanal	0.25	Not Detected
Hexanal	0.25	Not Detected
Acrolein	0.25	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828056.d
Lab Smp Id: 0908458C-48A
Inj Date : 29-AUG-2009 07:05
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-48A;
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.009	3.014	-0.005	40123364		
2 FORMALDEHYDE	Compound Not Detected.					
3 ACETALDEHYDE	Compound Not Detected.					
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	Compound Not Detected.					
16 HEXANAL	Compound Not Detected.					

Data File: /chem/hplcf.i/28Aug2009.b/f0828056.d

Date : 29-AUG-2009 07:05

Client ID:

Instrument: hplcf.i

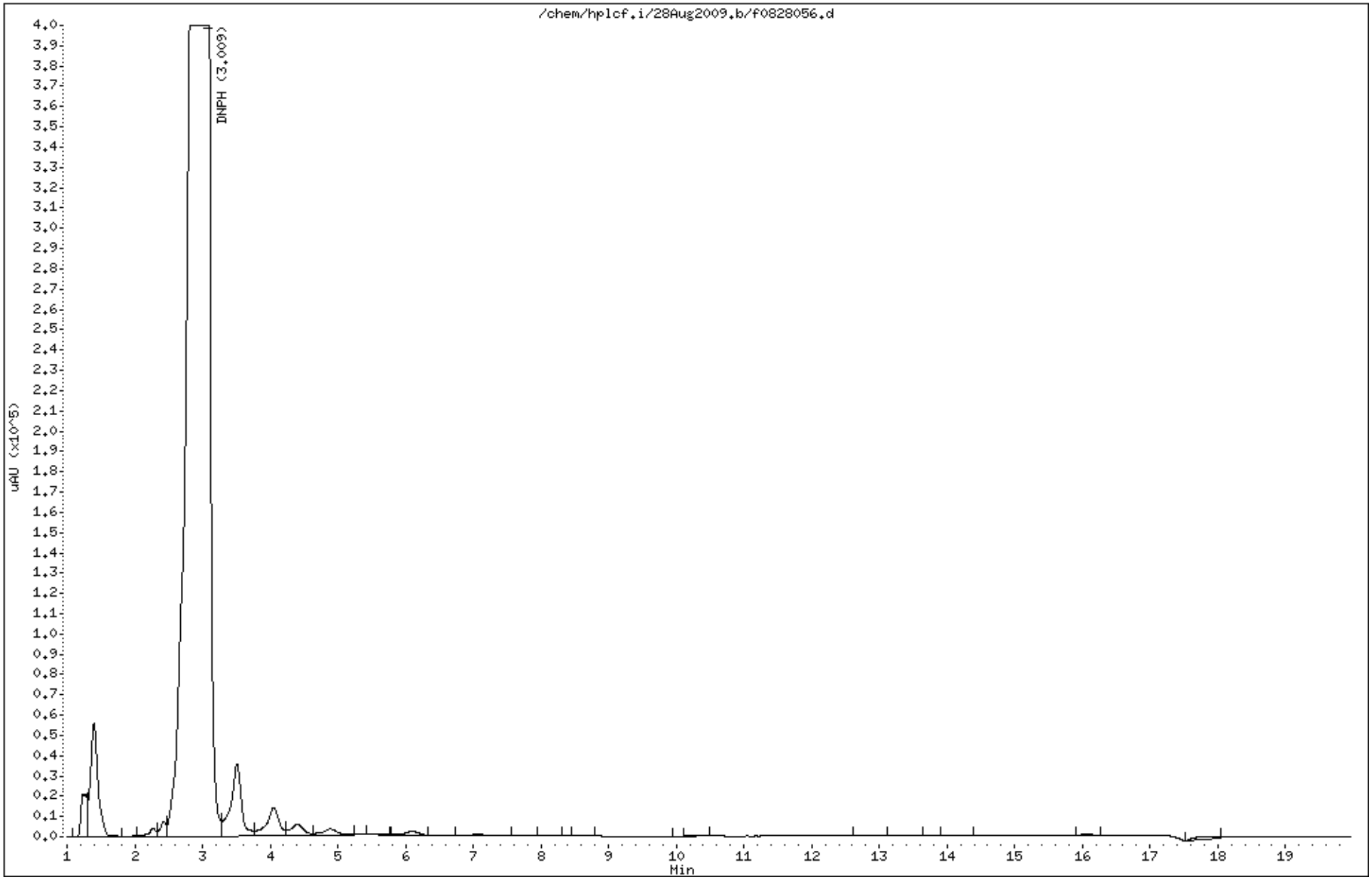
Sample Info: ;0908458C-48A;

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0046

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100192

Lab ID#: 0908458C-49A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	120
Acetaldehyde	5.0	4.8
Methyl Ethyl Ketone/Butyraldehydes	2.5	2.6
Benzaldehyde	2.5	6.3
Pentanal	2.5	9.4
Hexanal	2.5	55
Acrolein	2.5	2.8

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100192

Lab ID#: 0908458C-49A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828045**	**Date of Collection: 8/19/09**
Dil. Factor:	**10.0**	**Date of Analysis: 8/29/09 03:15 AM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	120
Acetaldehyde	5.0	4.8
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	2.6
Benzaldehyde	2.5	6.3
Pentanal	2.5	9.4
Isopentanal	2.5	Not Detected
Hexanal	2.5	55
Acrolein	2.5	2.8

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828045.d
Lab Smp Id: 0908458C-49A Client Smp ID: 10
Inj Date : 29-AUG-2009 03:15
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-49A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.009	3.014	-0.005	1900321		
2 FORMALDEHYDE	4.063	4.074	-0.011	3439528	30.2850	121
3 ACETALDEHYDE	4.889	4.907	-0.018	103781	1.20761	4.83
4 ACROLEIN	5.883	5.881	0.002	56849	0.70319	2.81
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.669	8.721	-0.052	35375	0.64651	2.59
10 BENZALDEHYDE	10.196	10.241	-0.045	63399	1.58624	6.34
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.783	11.841	-0.058	107825	2.34114	9.36
16 HEXANAL	14.176	14.221	-0.045	560501	13.6622	54.6

Data File: /chem/hplcf.i/28Aug2009.b/f0828045.d

Date : 29-AUG-2009 03:15

Client ID: 10

Instrument: hplcf.i

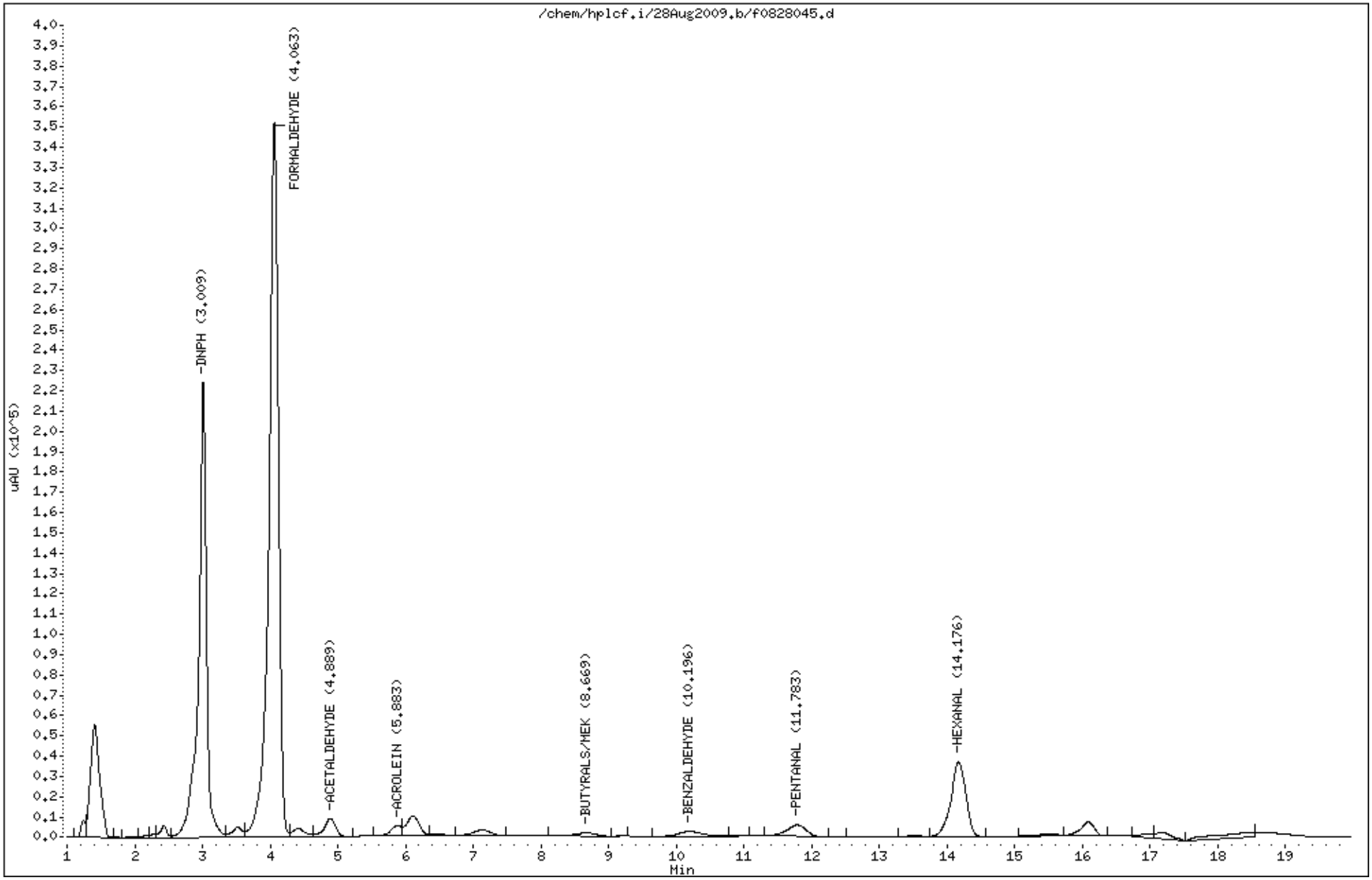
Sample Info: ;0908458C-49A;10

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0050

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100193

Lab ID#: 0908458C-50A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	120
Acetaldehyde	5.0	4.8
Methyl Ethyl Ketone/Butyraldehydes	2.5	2.6
Benzaldehyde	2.5	7.9
Pentanal	2.5	10
Hexanal	2.5	57
Acrolein	2.5	2.9

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100193

Lab ID#: 0908458C-50A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828046**	**Date of Collection: 8/19/09**
Dil. Factor:	**10.0**	**Date of Analysis: 8/29/09 03:36 AM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	120
Acetaldehyde	5.0	4.8
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	2.6
Benzaldehyde	2.5	7.9
Pentanal	2.5	10
Isopentanal	2.5	Not Detected
Hexanal	2.5	57
Acrolein	2.5	2.9

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828046.d
Lab Smp Id: 0908458C-50A Client Smp ID: 10
Inj Date : 29-AUG-2009 03:36
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-50A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.008	3.014	-0.006	2350457		
2 FORMALDEHYDE	4.055	4.074	-0.019	3529801	31.0798	124
3 ACETALDEHYDE	4.882	4.907	-0.025	102335	1.19078	4.76
4 ACROLEIN	5.875	5.881	-0.006	58586	0.72468	2.90
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.662	8.721	-0.059	35053	0.64063	2.56
10 BENZALDEHYDE	10.188	10.241	-0.053	78658	1.96802	7.87
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.775	11.841	-0.066	119059	2.58506	10.3
16 HEXANAL	14.162	14.221	-0.059	581549	14.1752	56.7

Data File: /chem/hplcf.i/28Aug2009.b/f0828046.d

Date : 29-AUG-2009 03:36

Client ID: 10

Instrument: hplcf.i

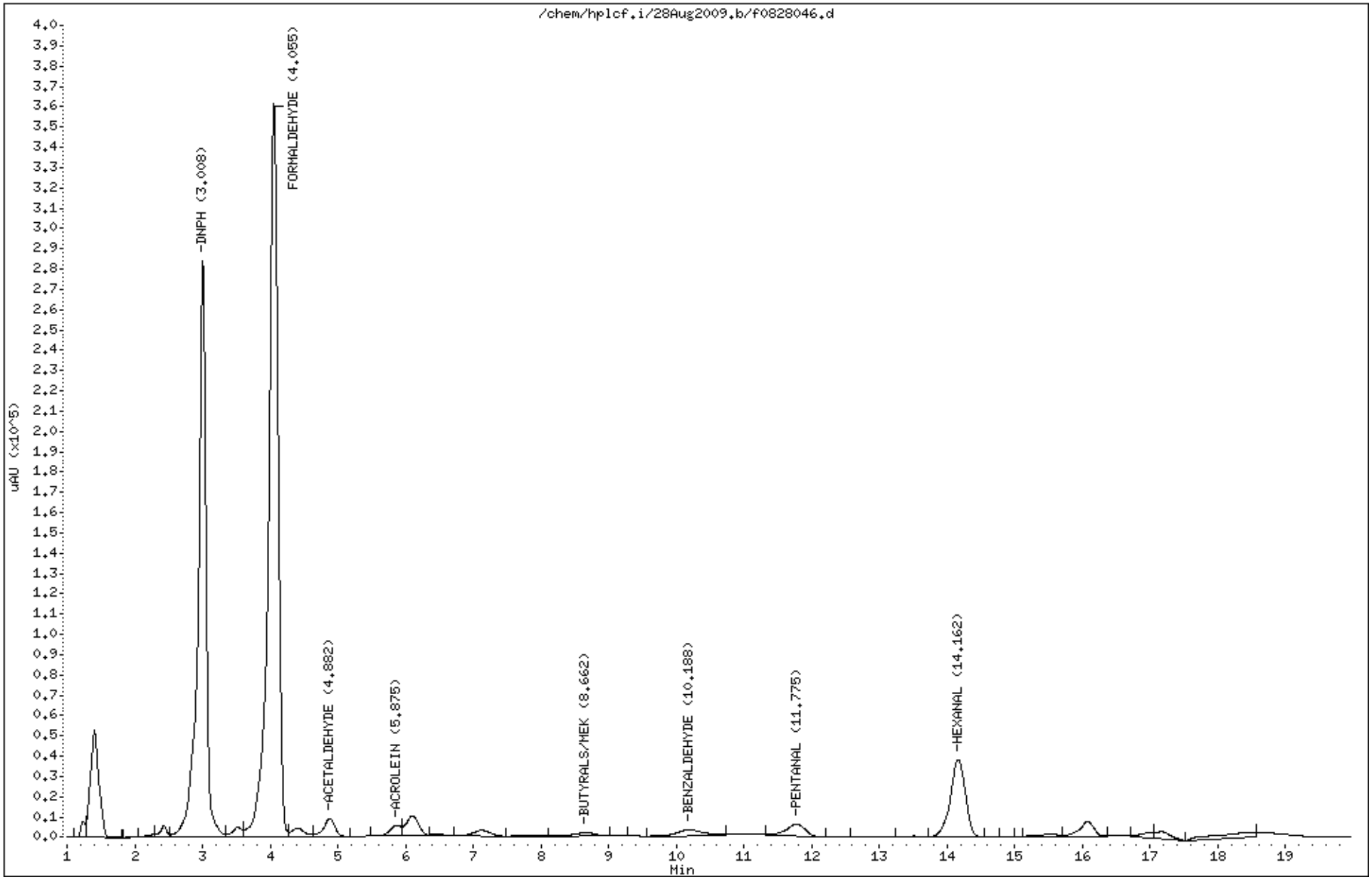
Sample Info: ;0908458C-50A;10

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0054

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100195

Lab ID#: 0908458C-51A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	140
Acetaldehyde	5.0	3.7
Methyl Ethyl Ketone/Butyraldehydes	2.5	2.2
Benzaldehyde	2.5	6.0
Pentanal	2.5	10
Hexanal	2.5	63
Acrolein	2.5	3.1

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100195

Lab ID#: 0908458C-51A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828047**	**Date of Collection: 8/19/09**
Dil. Factor:	**10.0**	**Date of Analysis: 8/29/09 03:57 AM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	140
Acetaldehyde	5.0	3.7
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	2.2
Benzaldehyde	2.5	6.0
Pentanal	2.5	10
Isopentanal	2.5	Not Detected
Hexanal	2.5	63
Acrolein	2.5	3.1

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828047.d
Lab Smp Id: 0908458C-51A Client Smp ID: 10
Inj Date : 29-AUG-2009 03:57
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-51A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.008	3.014	-0.006	1657006		
2 FORMALDEHYDE	4.055	4.074	-0.019	3829999	33.7231	135
3 ACETALDEHYDE	4.875	4.907	-0.032	79662	0.92696	3.71
4 ACROLEIN	5.862	5.881	-0.019	62399	0.77184	3.09
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.655	8.721	-0.066	30144	0.55091	2.20
10 BENZALDEHYDE	10.181	10.241	-0.060	60119	1.50417	6.02
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.768	11.841	-0.073	115740	2.51299	10.0
16 HEXANAL	14.162	14.221	-0.059	646930	15.7689	63.1

Data File: /chem/hplcf.i/28Aug2009.b/f0828047.d

Page 1

Date : 29-AUG-2009 03:57

Client ID: 10

Instrument: hplcf.i

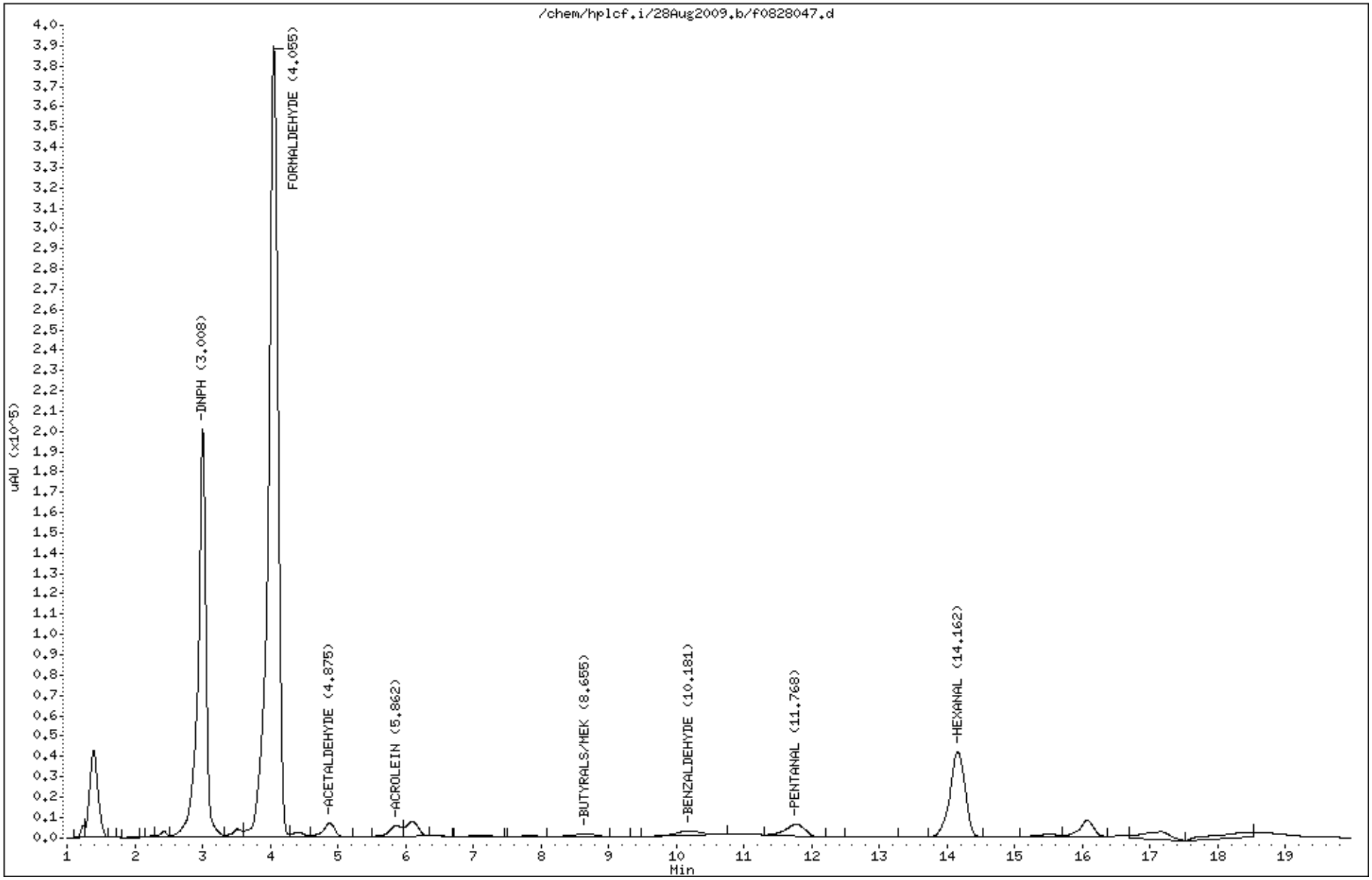
Sample Info: ;0908458C-51A;10

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0058

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100196

Lab ID#: 0908458C-52A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	140
Acetaldehyde	5.0	6.5
Methyl Ethyl Ketone/Butyraldehydes	2.5	3.8
Benzaldehyde	2.5	9.2
Pentanal	2.5	14
Hexanal	2.5	75
Acrolein	2.5	5.6

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100196

Lab ID#: 0908458C-52A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828048**	**Date of Collection: 8/19/09**
Dil. Factor:	**10.0**	**Date of Analysis: 8/29/09 04:18 AM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	140
Acetaldehyde	5.0	6.5
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	3.8
Benzaldehyde	2.5	9.2
Pentanal	2.5	14
Isopentanal	2.5	Not Detected
Hexanal	2.5	75
Acrolein	2.5	5.6

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828048.d
Lab Smp Id: 0908458C-52A Client Smp ID: 10
Inj Date : 29-AUG-2009 04:18
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-52A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.012	3.014	-0.002	2284069		
2 FORMALDEHYDE	4.059	4.074	-0.015	3972134	34.9745	140
3 ACETALDEHYDE	4.885	4.907	-0.022	138798	1.61507	6.46
4 ACROLEIN	5.872	5.881	-0.009	112314	1.38927	5.56
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.665	8.721	-0.056	52207	0.95414	3.82
10 BENZALDEHYDE	10.185	10.241	-0.056	92442	2.31289	9.25
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.778	11.841	-0.063	158369	3.43857	13.8
16 HEXANAL	14.165	14.221	-0.056	766350	18.6797	74.7

Data File: /chem/hplcf.i/28Aug2009.b/f0828048.d

Page 1

Date : 29-AUG-2009 04:18

Client ID: 10

Instrument: hplcf.i

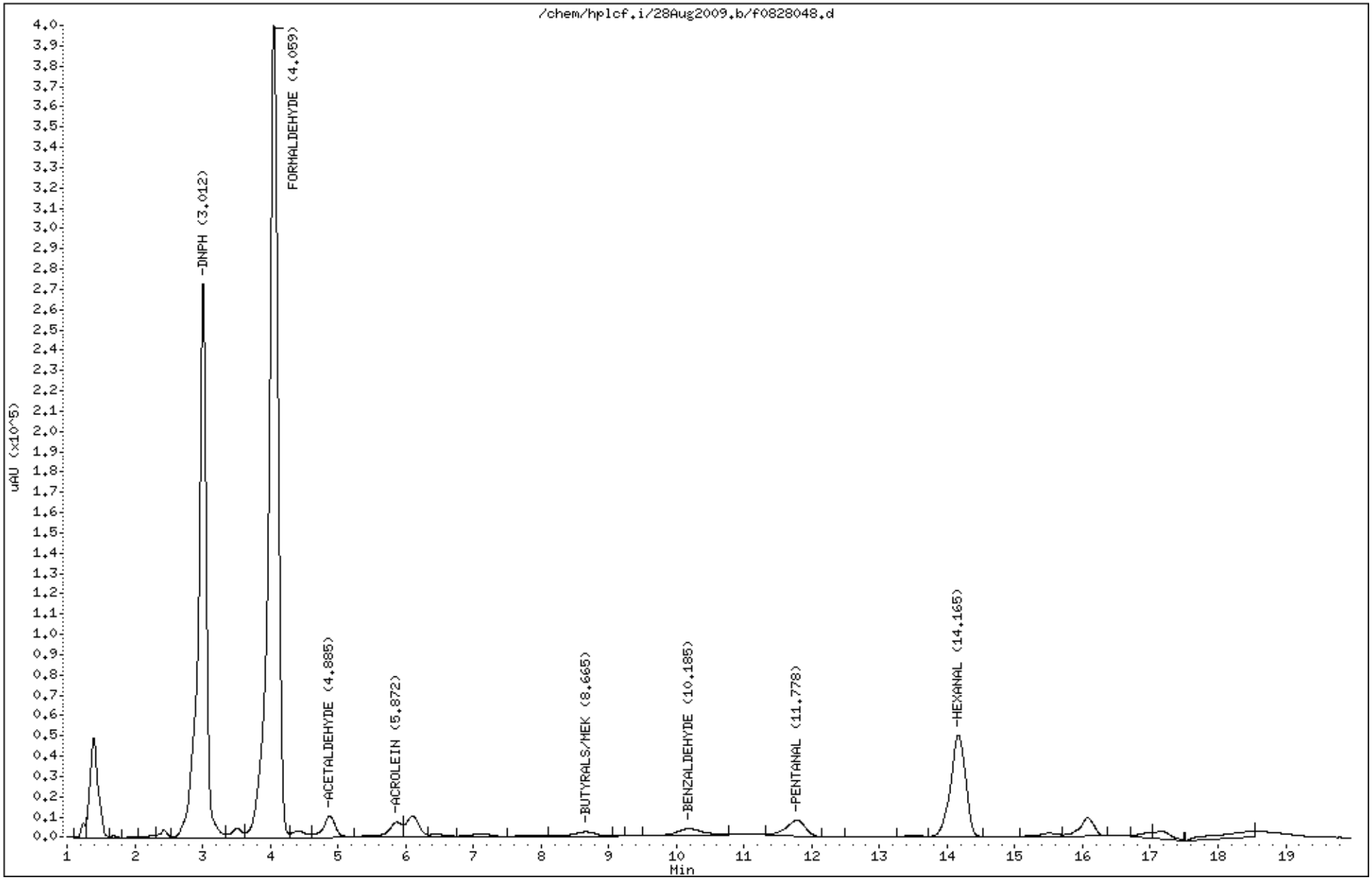
Sample Info: ;0908458C-52A;10

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0062

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100249

Lab ID#: 0908458C-53A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	140
Acetaldehyde	5.0	6.2
Benzaldehyde	2.5	4.0
Pentanal	2.5	5.4
Hexanal	2.5	27

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100249

Lab ID#: 0908458C-53A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828049**	**Date of Collection:**	**8/20/09**
Dil. Factor:	**10.0**	**Date of Analysis:**	**8/29/09 04:39 AM**
		Date of Extraction:	**8/28/09**

Compound	**Rpt. Limit (ug)**	**Amount (ug)**
Formaldehyde	10	140
Acetaldehyde	5.0	6.2
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	Not Detected
Benzaldehyde	2.5	4.0
Pentanal	2.5	5.4
Isopentanal	2.5	Not Detected
Hexanal	2.5	27
Acrolein	2.5	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828049.d
Lab Smp Id: 0908458C-53A Client Smp ID: 10
Inj Date : 29-AUG-2009 04:39
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-53A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

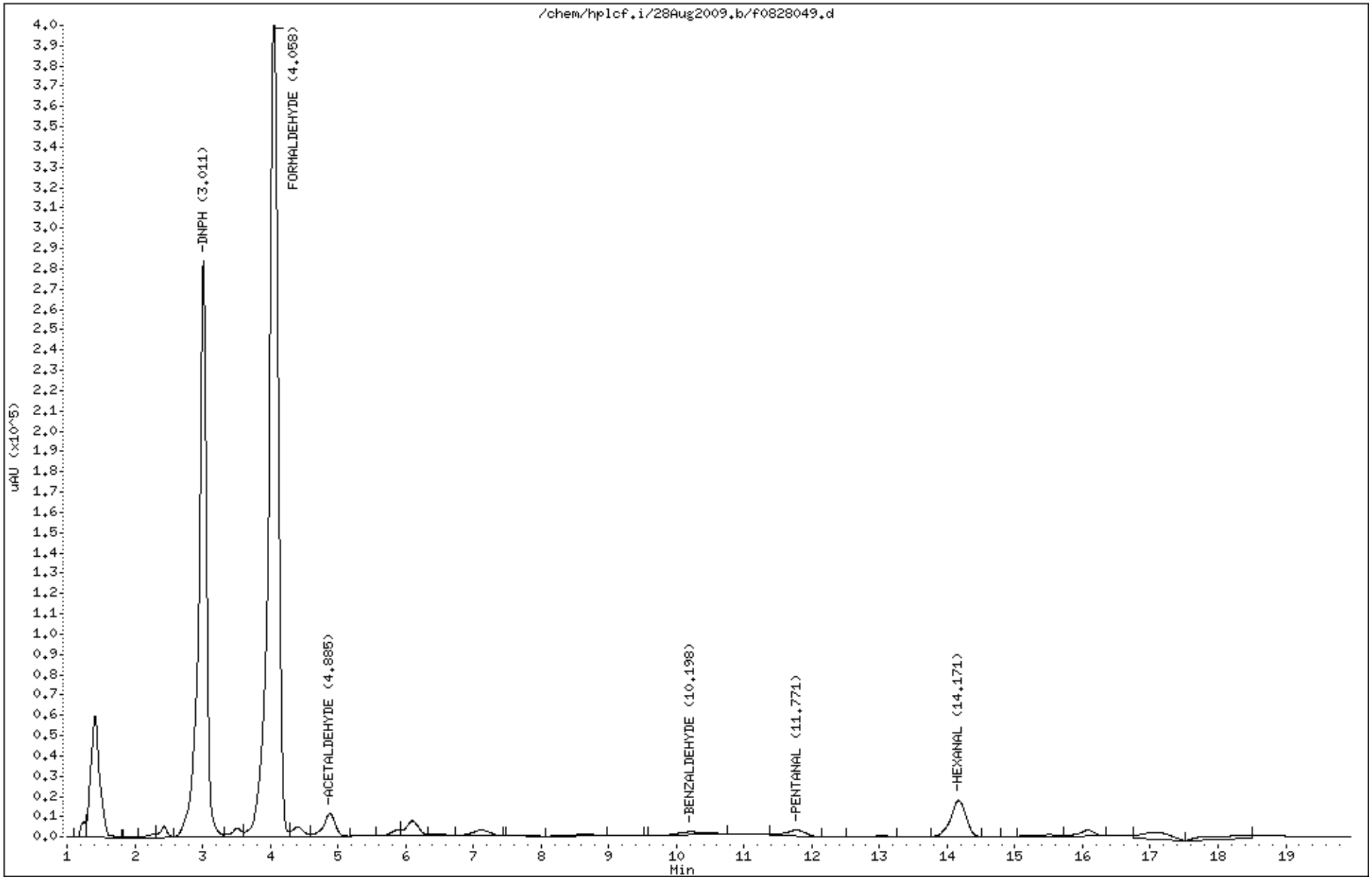
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.011	3.014	-0.003	2276036		
2 FORMALDEHYDE	4.058	4.074	-0.016	4010153	35.3093	141
3 ACETALDEHYDE	4.885	4.907	-0.022	134368	1.56352	6.25
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	10.198	10.241	-0.043	40444	1.01191	4.05
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.771	11.841	-0.070	62170	1.34986	5.40
16 HEXANAL	14.171	14.221	-0.050	275720	6.72066	26.9

0066

Data File: /chem/hplcf.i/28Aug2009.b/f0828049.d
Date : 29-AUG-2009 04:39
Client ID: 10
Sample Info: ;0908458C-53A;10
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100250

Lab ID#: 0908458C-54A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	140
Acetaldehyde	5.0	5.9
Benzaldehyde	2.5	3.8
Pentanal	2.5	5.1
Hexanal	2.5	26

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100250

Lab ID#: 0908458C-54A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828050**	**Date of Collection:**	**8/20/09**
Dil. Factor:	**10.0**	**Date of Analysis:**	**8/29/09 05:00 AM**
		Date of Extraction:	**8/25/09**

Compound	**Rpt. Limit (ug)**	**Amount (ug)**
Formaldehyde	10	140
Acetaldehyde	5.0	5.9
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	Not Detected
Benzaldehyde	2.5	3.8
Pentanal	2.5	5.1
Isopentanal	2.5	Not Detected
Hexanal	2.5	26
Acrolein	2.5	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828050.d
Lab Smp Id: 0908458C-54A Client Smp ID: 10
Inj Date : 29-AUG-2009 05:00
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-54A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

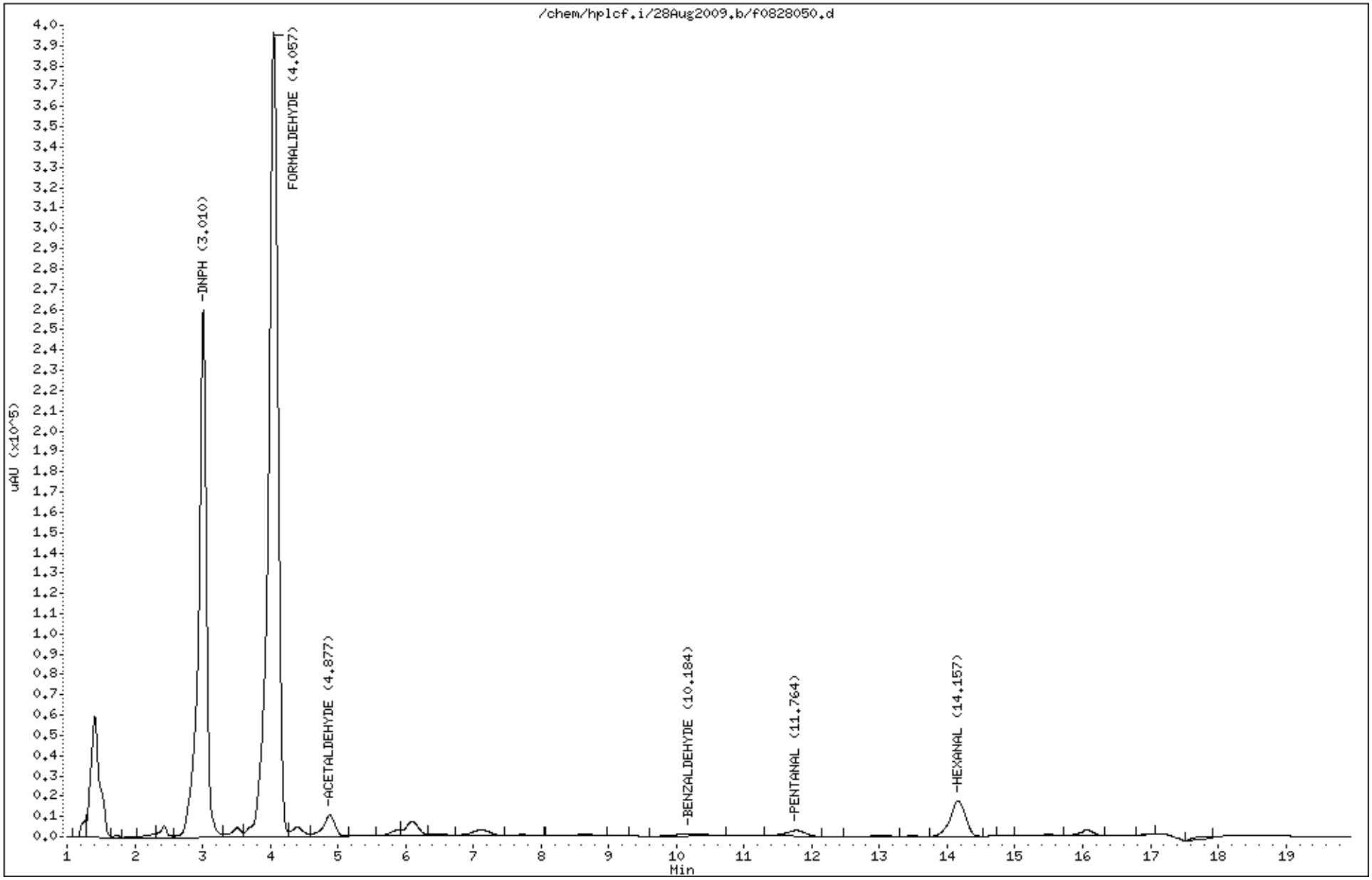
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.010	3.014	-0.004	2114731		
2 FORMALDEHYDE	4.057	4.074	-0.017	3899753	34.3372	137
3 ACETALDEHYDE	4.877	4.907	-0.030	125931	1.46535	5.86
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	10.184	10.241	-0.057	37950	0.94951	3.80
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.764	11.841	-0.077	58940	1.27973	5.12
16 HEXANAL	14.157	14.221	-0.064	270622	6.59639	26.4

0070

Data File: /chem/hplcf.i/28Aug2009.b/f0828050.d
Date : 29-AUG-2009 05:00
Client ID: 10
Sample Info: ;0908458C-54A;10
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100251

Lab ID#: 0908458C-55A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	1.0	4.3
Acetaldehyde	0.50	1.1
Methyl Ethyl Ketone/Butyraldehydes	0.25	0.40
Pentanal	0.25	0.28
Hexanal	0.25	0.37

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100251

Lab ID#: 0908458C-55A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0831009**	**Date of Collection: 8/20/09**
Dil. Factor:	**1.00**	**Date of Analysis: 8/31/09 01:19 PM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	1.0	4.3
Acetaldehyde	0.50	1.1
Propanal	0.25	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	0.25	0.40
Benzaldehyde	0.25	Not Detected
Pentanal	0.25	0.28
Isopentanal	0.25	Not Detected
Hexanal	0.25	0.37
Acrolein	0.25	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/31Aug2009.b/f0831009.d
Lab Smp Id: 0908458C-55A
Inj Date : 31-AUG-2009 13:19
Operator : CRL Inst ID: hplcf.i
Smp Info : ;0908458C-55A;
Misc Info :
Comment :
Method : /chem/hplcf.i/31Aug2009.b/F09D0819.m
Meth Date : 02-Sep-2009 16:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	2.996	2.982	0.014	36051849		
2 FORMALDEHYDE	4.029	4.016	0.013	1215043	10.6984	4.28
3 ACETALDEHYDE	4.856	4.822	0.034	227511	2.64734	1.06
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.569	8.509	0.060	54493	0.99592	0.398
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.703	11.636	0.067	32613	0.70811	0.283
16 HEXANAL	14.103	14.056	0.047	38031	0.92701	0.371

Data File: /chem/hplcf.i/31Aug2009.b/f0831009.d

Date : 31-AUG-2009 13:19

Client ID:

Instrument: hplcf.i

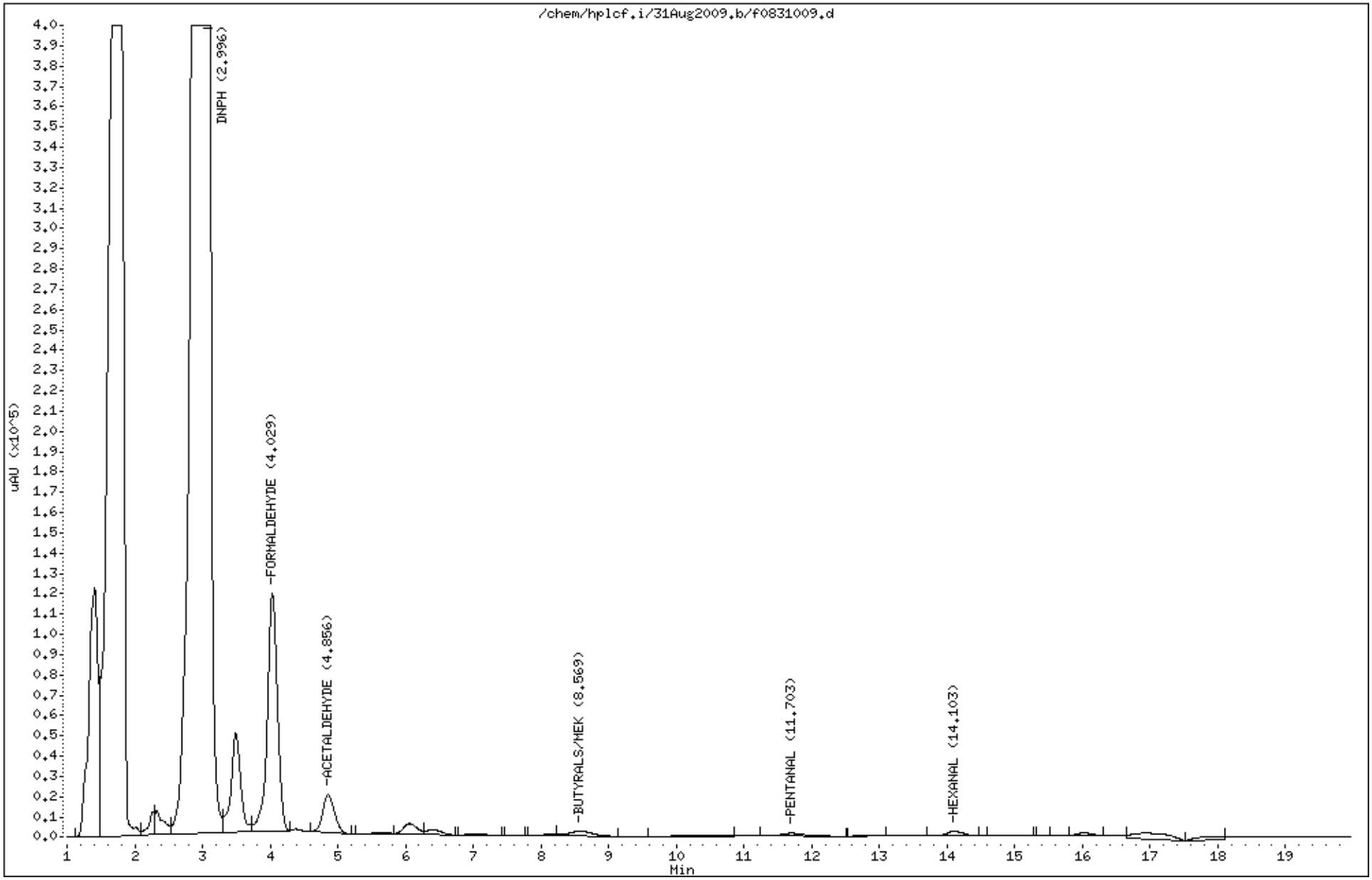
Sample Info: ;0908458C-55A;

Purge Volume: 5.0

Operator: CRL

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0074

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100251 Lab Duplicate

Lab ID#: 0908458C-55AA

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	1.0	4.5
Acetaldehyde	0.50	1.2
Methyl Ethyl Ketone/Butyraldehydes	0.25	0.52
Hexanal	0.25	0.37

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100251 Lab Duplicate

Lab ID#: 0908458C-55AA

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0831010**	**Date of Collection: 8/20/09**
Dil. Factor:	**1.00**	**Date of Analysis: 8/31/09 01:40 PM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	1.0	4.5
Acetaldehyde	0.50	1.2
Propanal	0.25	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	0.25	0.52
Benzaldehyde	0.25	Not Detected
Pentanal	0.25	Not Detected
Isopentanal	0.25	Not Detected
Hexanal	0.25	0.37
Acrolein	0.25	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/31Aug2009.b/f0831010.d
Lab Smp Id: 0908458C-55AA
Inj Date : 31-AUG-2009 13:40
Operator : CRL Inst ID: hplcf.i
Smp Info : ;0908458C-55AA;
Misc Info :
Comment :
Method : /chem/hplcf.i/31Aug2009.b/F09D0819.m
Meth Date : 02-Sep-2009 16:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	2.995	2.982	0.013	35968575		
2 FORMALDEHYDE	4.035	4.016	0.019	1280901	11.2783	4.51
3 ACETALDEHYDE	4.862	4.822	0.040	257198	2.99278	1.20
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	8.588	8.509	0.079	71270	1.30254	0.521
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.708	11.636	0.072	27791	0.60341	0.241
16 HEXANAL	14.102	14.056	0.046	37665	0.91811	0.367

Data File: /chem/hplcf.i/31Aug2009.b/f0831010.d

Date : 31-AUG-2009 13:40

Client ID:

Instrument: hplcf.i

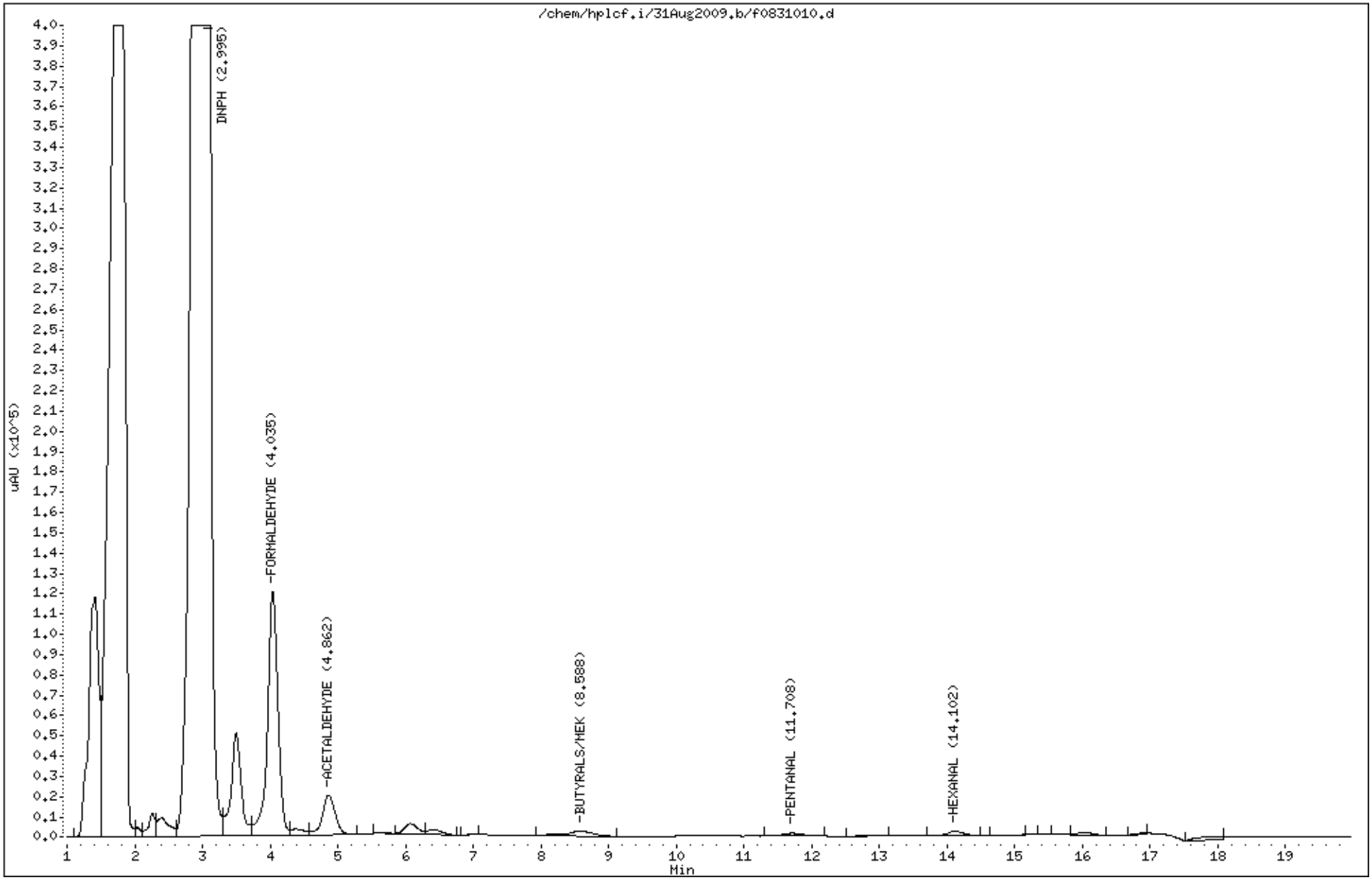
Sample Info: ;0908458C-55AA;

Purge Volume: 5.0

Operator: CRL

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0078

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100252

Lab ID#: 0908458C-56A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	180
Acetaldehyde	5.0	8.0
Benzaldehyde	2.5	5.2
Pentanal	2.5	6.8
Hexanal	2.5	33

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100252

Lab ID#: 0908458C-56A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828062**	**Date of Collection: 8/20/09**
Dil. Factor:	**10.0**	**Date of Analysis: 8/29/09 09:10 AM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	180
Acetaldehyde	5.0	8.0
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	Not Detected
Benzaldehyde	2.5	5.2
Pentanal	2.5	6.8
Isopentanal	2.5	Not Detected
Hexanal	2.5	33
Acrolein	2.5	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828062.d
Lab Smp Id: 0908458C-56A Client Smp ID: 10
Inj Date : 29-AUG-2009 09:10
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-56A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.009	3.014	-0.005	2166361		
2 FORMALDEHYDE	4.056	4.074	-0.018	5013956	44.1478	176
3 ACETALDEHYDE	4.882	4.907	-0.025	172540	2.00769	8.03
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	10.195	10.241	-0.046	52499	1.31352	5.25
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.769	11.841	-0.072	77854	1.69040	6.76
16 HEXANAL	14.155	14.221	-0.066	336898	8.21187	32.8

Data File: /chem/hplcf.i/28Aug2009.b/f0828062.d

0082

Date : 29-AUG-2009 09:10

Client ID: 10

Instrument: hplcf.i

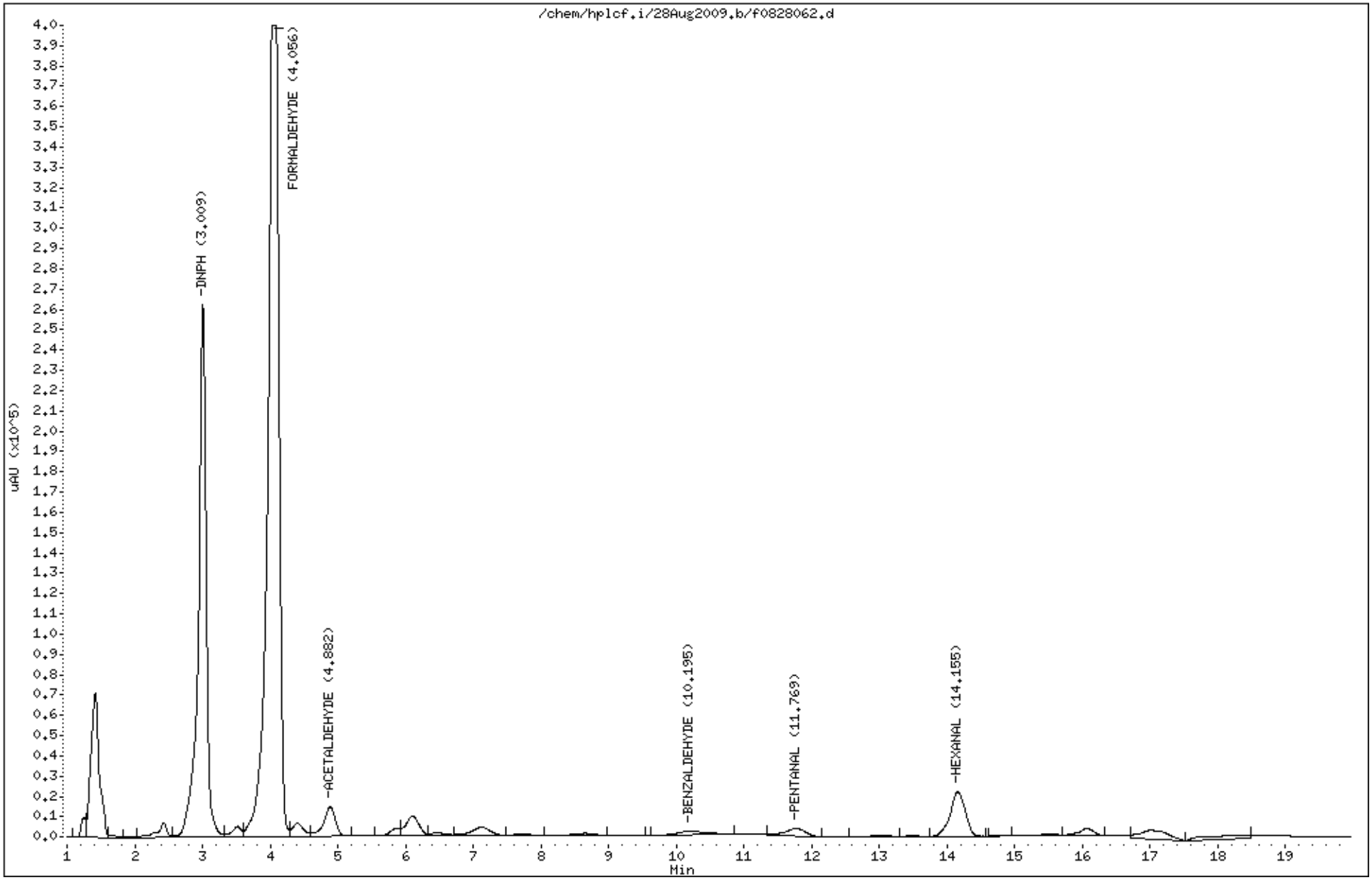
Sample Info: ;0908458C-56A;10

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100253

Lab ID#: 0908458C-57A

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	180
Acetaldehyde	5.0	7.6
Benzaldehyde	2.5	5.2
Pentanal	2.5	6.8
Hexanal	2.5	35

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100253

Lab ID#: 0908458C-57A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828063**	**Date of Collection: 8/20/09**
Dil. Factor:	**10.0**	**Date of Analysis: 8/29/09 09:31 AM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	10	180
Acetaldehyde	5.0	7.6
Propanal	2.5	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	2.5	Not Detected
Benzaldehyde	2.5	5.2
Pentanal	2.5	6.8
Isopentanal	2.5	Not Detected
Hexanal	2.5	35
Acrolein	2.5	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828063.d
Lab Smp Id: 0908458C-57A Client Smp ID: 10
Inj Date : 29-AUG-2009 09:31
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-57A;10
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

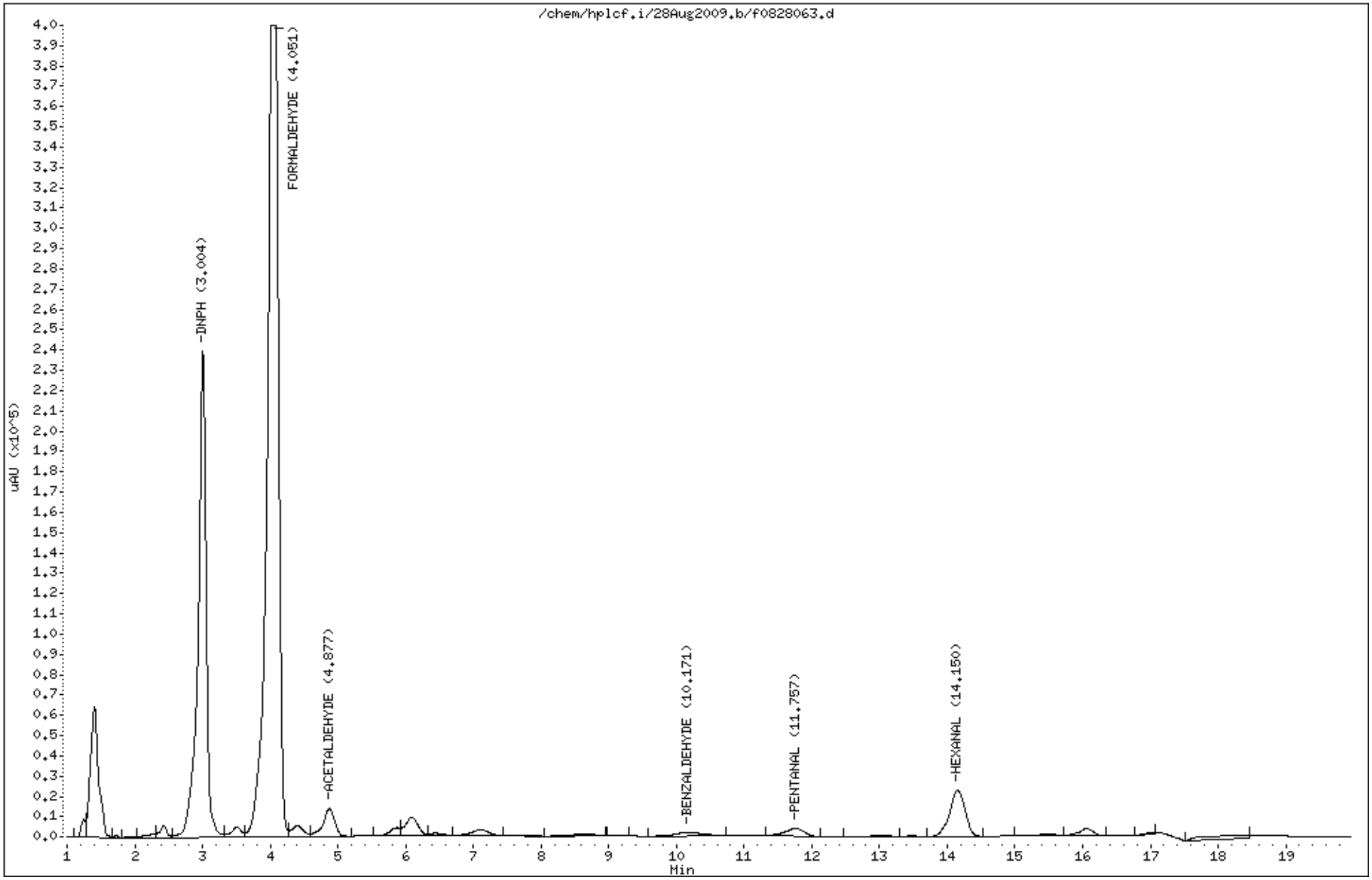
Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.004	3.014	-0.010	1979488		
2 FORMALDEHYDE	4.051	4.074	-0.023	5216990	45.9355	184
3 ACETALDEHYDE	4.877	4.907	-0.030	163653	1.90428	7.62
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	10.171	10.241	-0.070	51732	1.29433	5.18
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	11.757	11.841	-0.084	78762	1.71011	6.84
16 HEXANAL	14.150	14.221	-0.071	354623	8.64391	34.6

Data File: /chem/hplcf.i/28Aug2009.b/f0828063.d
Date : 29-AUG-2009 09:31
Client ID: 10
Sample Info: ;0908458C-57A;10
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Summary of Detected Compounds
RADIELLO ANALYSIS BY HPLC/UV

Client Sample ID: 100254

Lab ID#: 0908458C-58A

No Detections Were Found.

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: 100254

Lab ID#: 0908458C-58A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0828055**	**Date of Collection: 8/20/09**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/29/09 06:44 AM**	
		Date of Extraction: 8/25/09	

Compound	**Rpt. Limit (ug)**	**Amount (ug)**
Formaldehyde	1.0	Not Detected
Acetaldehyde	0.50	Not Detected
Propanal	0.25	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	0.25	Not Detected
Benzaldehyde	0.25	Not Detected
Pentanal	0.25	Not Detected
Isopentanal	0.25	Not Detected
Hexanal	0.25	Not Detected
Acrolein	0.25	Not Detected

Container Type: Radiello 165 (Aldehydes)

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/28Aug2009.b/f0828055.d
Lab Smp Id: 0908458C-58A
Inj Date : 29-AUG-2009 06:44
Operator : LZ Inst ID: hplcf.i
Smp Info : ;0908458C-58A;
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable

Vs	2.00000	Sample Final Volume (mL)
Vo	5.00000	Curve baesed Volume (mL)

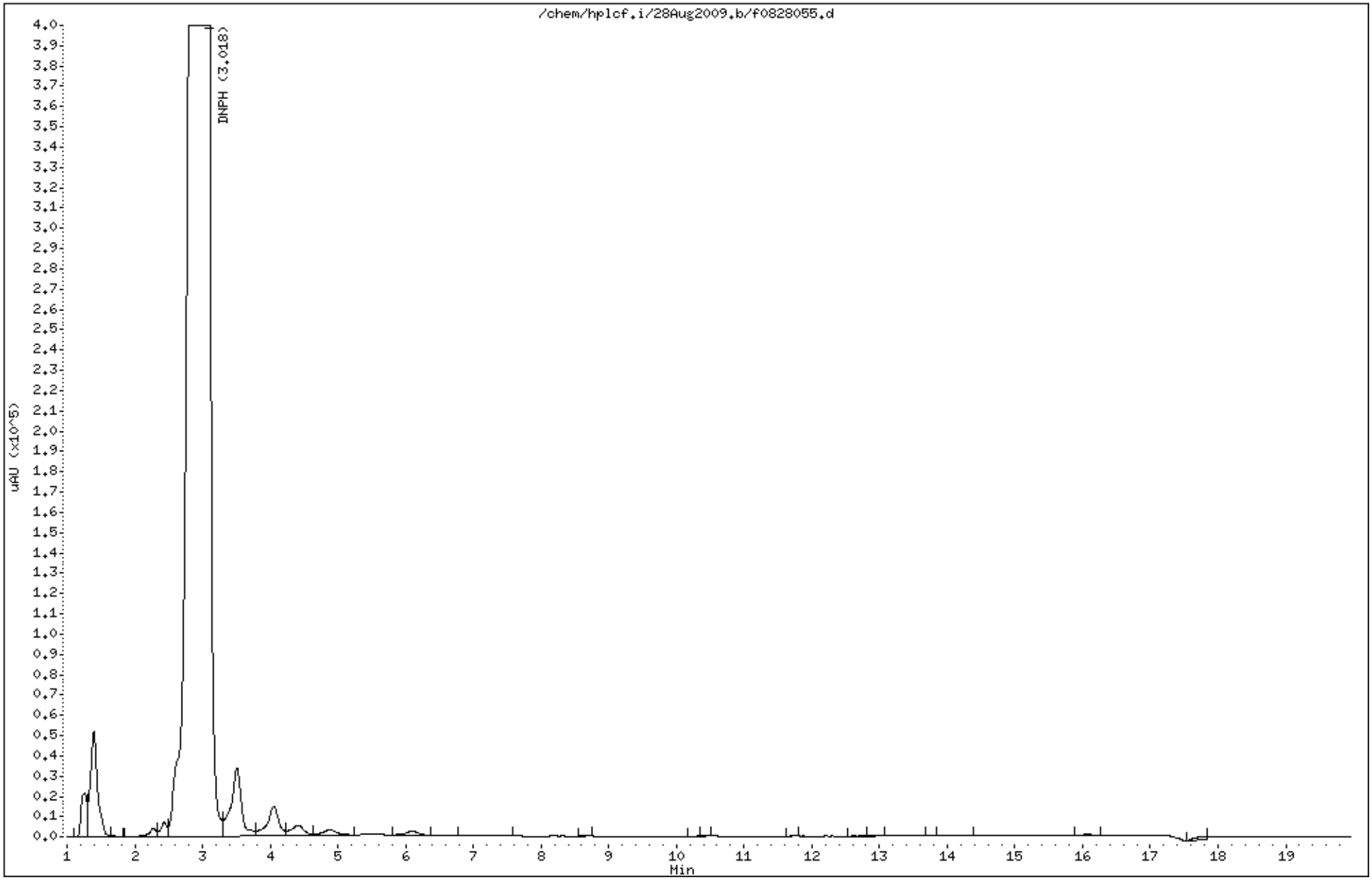
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.018	3.014	0.004	38886057		
2 FORMALDEHYDE	Compound Not Detected.					
3 ACETALDEHYDE	Compound Not Detected.					
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	Compound Not Detected.					
16 HEXANAL	Compound Not Detected.					

0600

Data File: /chem/hplcf.i/28Aug2009.b/f0828055.d
Date : 29-AUG-2009 06:44
Client ID:
Sample Info: ;0908458C-58A;
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



QC Results and Raw Data

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0908458C-59A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0825026**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 8/25/09 03:31 PM**
		Date of Extraction: 8/25/09

Compound	Rpt. Limit (ug)	Amount (ug)
Formaldehyde	1.0	Not Detected
Acetaldehyde	0.50	Not Detected
Propanal	0.25	Not Detected
Methyl Ethyl Ketone/Butyraldehydes	0.25	Not Detected
Benzaldehyde	0.25	Not Detected
Pentanal	0.25	Not Detected
Isopentanal	0.25	Not Detected
Hexanal	0.25	Not Detected
Acrolein	0.25	Not Detected

Container Type: NA - Not Applicable

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/25Aug2009a.b/f0825026.d
Lab Smp Id: 0908458C-BLK Client Smp ID: LAB BLANK
Inj Date : 25-AUG-2009 15:31
Operator : CRL Inst ID: hplcf.i
Smp Info : ;0908458C-BLK;
Misc Info :
Comment :
Method : /chem/hplcf.i/25Aug2009a.b/F09D0819.m
Meth Date : 26-Aug-2009 16:15 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.013	3.007	0.006	40823626		
2 FORMALDEHYDE	Compound Not Detected.					
3 ACETALDEHYDE	Compound Not Detected.					
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	Compound Not Detected.					
16 HEXANAL	Compound Not Detected.					

Data File: /chem/hplcf.i/25Aug2009a.b/f0825026.d

Date : 25-AUG-2009 15:31

Client ID: LAB BLANK

Instrument: hplcf.i

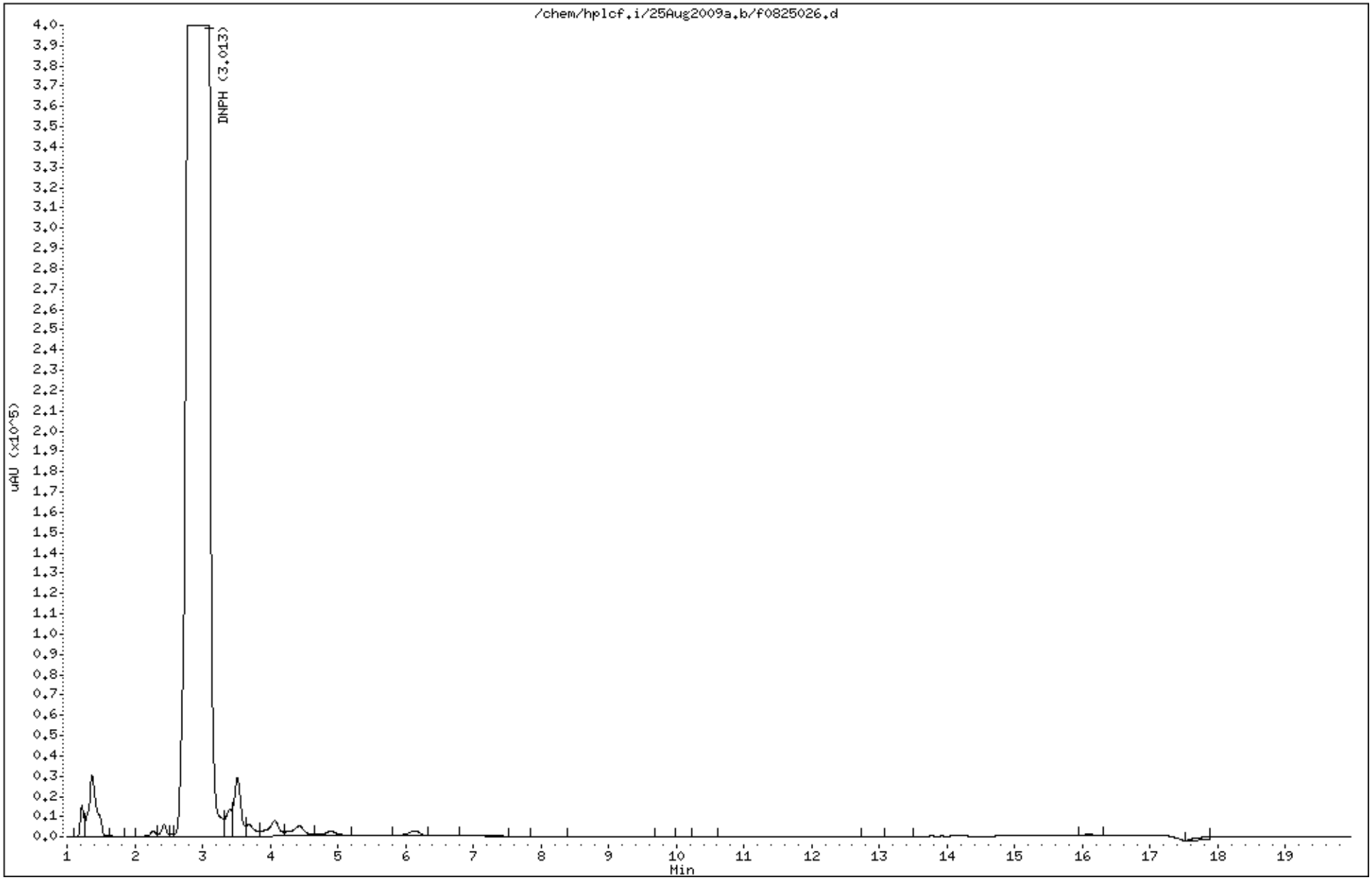
Sample Info: ;0908458C-BLK;

Purge Volume: 5.0

Operator: CRL

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0094

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: f0828061.d & f0828060.d

Lab Sample ID: 41A & 41AA

Dilution: 4.00 & 4.00

Client Sample ID: X4 & X4

Date Analyzed: 8/29/09 & 8/29/09

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
75-07-0	Acetaldehyde	30.4		30.4		0	
107-02-8	Acrolein	ND	U	ND	U	0	
100-52-7	Benzaldehyde	2.57		2.96		14	Y
50-00-0	Formaldehyde	98.3		98.3		0	
66-25-1	Hexanal	18.4		18.4		0	
590-86-3	Isopentanal	ND	U	ND	U	0	
9999-9999-007	Methyl Ethyl Ketone/Butyraldehydes	3.9		3.78		3.1	Y
110-62-3	Pentanal	7.76		6.11		24	
123-38-6	Propanal	2.38		2.25		5.6	Y

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: f0831008.d & f0831007.d

Lab Sample ID: 47A & 47AA

Dilution: 1.00 & 1.00

Client Sample ID: &

Date Analyzed: 8/31/09 & 8/31/09

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
75-07-0	Acetaldehyde	1.12		1.12		0	Y
107-02-8	Acrolein	ND	U	ND	U	0	
100-52-7	Benzaldehyde	ND	U	ND	U	0	
50-00-0	Formaldehyde	3.24		3.26		0.62	Y
66-25-1	Hexanal	0.342		0.346		1.2	Y
590-86-3	Isopentanal	ND	U	ND	U	0	
9999-9999-007	Methyl Ethyl Ketone/Butyraldehydes	0.345		0.366		5.9	Y
110-62-3	Pentanal	0.343		0.315		8.5	Y
123-38-6	Propanal	ND	U	ND	U	0	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: f0831010.d & f0831009.d

Lab Sample ID: 55A & 55AA

Dilution: 1.00 & 1.00

Client Sample ID: &

Date Analyzed: 8/31/09 & 8/31/09

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
75-07-0	Acetaldehyde	1.06		1.2		12	Y
107-02-8	Acrolein	ND	U	ND	U	0	
100-52-7	Benzaldehyde	ND	U	ND	U	0	
50-00-0	Formaldehyde	4.28		4.51		5.2	Y
66-25-1	Hexanal	0.371		0.367		1.1	Y
590-86-3	Isopentanal	ND	U	ND	U	0	
9999-9999-007	Methyl Ethyl Ketone/Butyraldehydes	0.398		0.521		-->27<--	Y
110-62-3	Pentanal	0.283		ND		-->200<--	Y
123-38-6	Propanal	ND	U	ND	U	0	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

Air Toxics Ltd.

INITIAL CALIBRATION DATA

Start Cal Date : 19-AUG-2009 10:43
End Cal Date : 19-AUG-2009 20:49
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Cal Date : 24-Aug-2009 18:14 lzhang
Curve Type : Average

Calibration File Names:
Level 1: /chem/hplcf.i/19Aug2009.b/f0819006.d
Level 2: /chem/hplcf.i/19Aug2009.b/f0819009.d
Level 3: /chem/hplcf.i/19Aug2009.b/f0819012.d
Level 4: /chem/hplcf.i/19Aug2009.b/f0819015.d
Level 5: /chem/hplcf.i/19Aug2009.b/f0819018.d
Level 6: /chem/hplcf.i/19Aug2009.b/f0819021.d
Level 7: /chem/hplcf.i/19Aug2009.b/f0819024.d
Level 8: /chem/hplcf.i/19Aug2009.b/f0819027.d
Level 9: /chem/hplcf.i/19Aug2009.b/f0819030.d
Level 10: /chem/hplcf.i/19Aug2009.b/f0819033.d

Compound	0.05000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	4.000 Level 6	___ RRF	% RSD
	10.000 Level 7	20.000 Level 8	50.000 Level 9	75.000 Level 10				
1 DNPH	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
2 FORMALDEHYDE	102160	106773	111828	116173	116296	116192		
	116157	116344	117113	116686			113572	4.538
3 ACETALDEHYDE	+++++	83033	83152	87655	87285	86402		
	86139	86290	86824	86674			85939	1.965
4 ACROLEIN	+++++	+++++	73696	76906	80738	82606		
	82881	82875	83748	83303			80844	4.438
5 ACETONE	+++++	+++++	59779	60379	62489	62609		
	62774	62924	63197	63264			62177	2.203
6 PROPANAL	+++++	+++++	61779	62397	63054	63610		
	63137	63478	63775	63751			63123	1.351

Air Toxics Ltd.

INITIAL CALIBRATION DATA

Start Cal Date : 19-AUG-2009 10:43
End Cal Date : 19-AUG-2009 20:49
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Cal Date : 24-Aug-2009 18:14 lzhang
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	4.000 Level 6	___ RRF	% RSD
	10.000 Level 7	20.000 Level 8	50.000 Level 9	75.000 Level 10				
7 CROTONAL	+++++	+++++	56861	58567	57584	56976		
	56916	57177	57701	57622			57426	1.504
8 METHACROLEIN	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
9 BUTYRALS/MEK	+++++	+++++	54221	56339	55033	54143		
	54071	54370	54827	54727			54717	2.188
10 BENZALDEHYDE	+++++	+++++	42929	41214	40976	38788		
	38849	38895	39088	39005			39968	3.855
11 ISO-PENTANAL	+++++	+++++	45864	47911	48453	46404		
	46492	46500	46759	46708			46886	2.315
12 PENTANAL	+++++	+++++	47079	47402	46667	45454		
	45234	45458	45616	45544			46057	2.200
13 MIBK	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
14 O-TOLUALDEHYDE	+++++	+++++	36931	36216	35899	34670		
	34826	34926	35294	35246			35501	2.483
15 M,P-TOLUALDEHYDE	+++++	37153	34847	33345	32600	32316		
	31994	32126	32219	32175			33197	5.312
16 HEXANAL	+++++	+++++	43807	42279	41199	40143		
	40002	40117	40371	40289			41026	3.256

Air Toxics Ltd.

INITIAL CALIBRATION DATA

Start Cal Date : 19-AUG-2009 10:43
End Cal Date : 19-AUG-2009 20:49
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Cal Date : 24-Aug-2009 18:14 lzhang
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.25000 Level 3	0.50000 Level 4	1.000 Level 5	4.000 Level 6	___ RRF	% RSD
	10.000 Level 7	20.000 Level 8	50.000 Level 9	75.000 Level 10				
17 2,5-Dimethylbenzaldehyde	+++++	+++++	33648	31287	29998	29192		
	28892	28949	29131	29080			30022	5.429
18 HEPTALDEHYDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++

Calibration History

Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Start Cal Date: 19-AUG-2009 10:43
End Cal Date : 19-AUG-2009 20:49

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.05000		
19-AUG-2009 11:25	form	/chem/hplcf.i/19Aug2009.b/f0819006.d
19-AUG-2009 11:04	form	/chem/hplcf.i/19Aug2009.b/f0819005.d
19-AUG-2009 10:43	form	/chem/hplcf.i/19Aug2009.b/f0819004.d

Cal Level: 2 , Cal Amount: 0.10000		
19-AUG-2009 12:27	foracetmp	/chem/hplcf.i/19Aug2009.b/f0819009.d
19-AUG-2009 12:06	foracetmp	/chem/hplcf.i/19Aug2009.b/f0819008.d
19-AUG-2009 11:45	foracetmp	/chem/hplcf.i/19Aug2009.b/f0819007.d

Cal Level: 3 , Cal Amount: 0.25000		
19-AUG-2009 13:30	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819012.d
19-AUG-2009 13:09	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819011.d
19-AUG-2009 12:48	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819010.d

Cal Level: 4 , Cal Amount: 0.50000		
19-AUG-2009 14:33	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819015.d
19-AUG-2009 14:12	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819014.d
19-AUG-2009 13:51	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819013.d

Cal Level: 5 , Cal Amount: 1.00000		
19-AUG-2009 15:35	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819018.d
19-AUG-2009 15:14	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819017.d
19-AUG-2009 14:53	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819016.d

Cal Level: 6 , Cal Amount: 4.00000		
19-AUG-2009 16:38	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819021.d
19-AUG-2009 16:17	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819020.d
19-AUG-2009 15:56	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819019.d

Cal Level: 7 , Cal Amount: 10.00000		
19-AUG-2009 17:41	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819024.d
19-AUG-2009 17:20	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819023.d
19-AUG-2009 16:59	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819022.d

Cal Level: 8 , Cal Amount: 20.00000		
19-AUG-2009 18:43	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819027.d
19-AUG-2009 18:23	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819026.d
19-AUG-2009 18:02	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819025.d

Cal Level: 9 , Cal Amount: 50.00000		
19-AUG-2009 19:46	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819030.d
19-AUG-2009 19:25	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819029.d
19-AUG-2009 19:04	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819028.d

Cal Level: 10, Cal Amount: 75.00000		
19-AUG-2009 20:49	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819033.d
19-AUG-2009 20:28	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819032.d
19-AUG-2009 20:07	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819031.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

Ccal Level: 6 , Ccal Amount: 4.00		
19-AUG-2009 16:38	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819021.d

Ccal Level: 6 , Ccal Amount: 4.00		
19-AUG-2009 16:17	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819020.d

Ccal Level: 6 , Ccal Amount: 4.00		
19-AUG-2009 15:56	TO-11+Acr+17	/chem/hplcf.i/19Aug2009.b/f0819019.d

HPLC-F Run Logbook **@Air Toxics Ltd.** **Logbook Book #: 1709**

Method (Circle all that apply): TO-5 CARB 430 TO-11A Method 0011 Pressure: 99 bar

Use	File #	Sample Name/Client	DF	Loaded by Init.	Date	Time	Reviewed by Init.	Comments
✓	f 0819 001	CCB	1.00	W	8/19/09	0918	W	
✓	2	↓	↓	↓	↓	0939	↓	
✓	3	↓	↓	↓	↓	1000	↓	
✓	4	1331-138-0.05	↓	↓	↓	1043	↓	
✓	5	↓	↓	↓	↓	1104	↓	
✓	6	↓	↓	↓	↓	1125	↓	
✓	7	1331-138-0.10	↓	↓	↓	1145	↓	
✓	8	↓	↓	↓	↓	1206	↓	
✓	9	↓	↓	↓	↓	1227	↓	
✓	10	1331-138-0.25	↓	↓	↓	1248	↓	
✓	11	↓	↓	↓	↓	1309	↓	
✓	12	↓	↓	↓	↓	1330	↓	
✓	13	1331-138-0.50	↓	↓	↓	1351	↓	
✓	14	↓	↓	↓	↓	1412	↓	
✓	15	↓	↓	↓	↓	1433	↓	
✓	16	1331-138-1.0	↓	↓	↓	1453	↓	
✓	17	↓	↓	↓	↓	1514	↓	
✓	18	↓	↓	↓	↓	1535	↓	
✓	19	1331-138-4.0	↓	↓	↓	1556	↓	
✓	20	↓	↓	↓	↓	1617	↓	
✓	21	↓	↓	↓	↓	1638	↓	
✓	22	1331-138-10.0	↓	↓	↓	1659	↓	
✓	23	↓	↓	↓	↓	1720	↓	
✓	24	↓	↓	↓	↓	1741	↓	
✓	25	1331-138-20.0	↓	↓	↓	1802	↓	
✓	26	↓	↓	↓	↓	1823	↓	
✓	27	↓	↓	↓	↓	1843	↓	
✓	28	1331-138-50.0	↓	↓	↓	1904	↓	

Calculation Check:

File ID: _____ Compound: _____ Initials: _____

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × DF = ( ) × ( ) = [redacted]

Reported Result: [redacted] 8/20/09

Signed _____ Date 8/20/09

0103

Revised 07/08

HPLC-F Run Logbook **@Air Toxics Ltd.** **Logbook Book #: 1709**

Method (Circle all that apply): TO-5 CARB 430 TO-11A Method 0011 Pressure: 99 bar

Use	File #	Sample Name/Client	DF	Loaded by Init.	Date	Time	Reviewed by Init.	Comments
✓	f0819029	1331-138-50.0	1.00	W	8/19/09	1925	W	
✓	30	↓				1946		
✓	31	1331-138-75				2007		1476-846/847
✓	32					2028		
✓	33	↓				2049		
✓	34	CCB				2110		
✓	35	1331-129-4. LCS				2131	↓	
					W 8/20/09			

Calculation Check:

File ID: f0819 35 Compound: Formaldehyde Initials: W

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × DF = (~~466315~~ 464100) × (1) = ~~3.95~~ ~~4.08~~ 4.09

(~~48653~~ ~~113736~~ 113572) W 8/24/09 W 8/24/09

Reported Result: ~~3.95~~ ~~4.08~~ 4.09

Signed Date 8/20/09

Validation of the Target software for HPLC curve DNPDEC14f. Formaldehyde

0.05	RF	0.1	RF	0.25	RF	0.5	RF	1	RF	4	RF	10	RF	20	RF	50	RF	75	RF			
5162	103240	10857	108570	27289	109156	58493	116986	116616	116616	464648	116162	1162679	116267.9	2326198	116309.9	5855197	117103.9	8746467	116619.6			
5250	105000	10754	107540	27774	111096	58510	117020	116575	116575	464653	116163.3	1161251	116125.1	2327435	116371.8	5855194	117103.9	8747741	116636.5			
4912	98240	10421	104210	28808	115232	57256	114512	115697	115697	464998	116249.5	1160792	116079.2	2327000	116350	5856519	117130.4	8760098	116801.3	Ave	STD Dev	%RSD
Ave. RF	102160		106773.3		111828		116172.7		116296		116191.6		116157.4		116343.9		117112.7		116685.8	**113572.1**	5154.176	**4.538%**

G 812409

0105

Air Toxics Ltd.

INITIAL CALIBRATION DATA

Start Cal Date : 19-AUG-2009 10:43
End Cal Date : 19-AUG-2009 20:49
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Cal Date : 24-Aug-2009 18:13 lzhang
Curve Type : Average

Calibration File Names:
Level 1: /chem/hplcf.i/19Aug2009.b/f0819006.d
Level 2: /chem/hplcf.i/19Aug2009.b/f0819009.d
Level 3: /chem/hplcf.i/19Aug2009.b/f0819012.d
Level 4: /chem/hplcf.i/19Aug2009.b/f0819015.d
Level 5: /chem/hplcf.i/19Aug2009.b/f0819018.d
Level 6: /chem/hplcf.i/19Aug2009.b/f0819021.d
Level 7: /chem/hplcf.i/19Aug2009.b/f0819024.d
Level 8: /chem/hplcf.i/19Aug2009.b/f0819027.d
Level 9: /chem/hplcf.i/19Aug2009.b/f0819030.d
Level 10: /chem/hplcf.i/19Aug2009.b/f0819033.d

See History

2nd source : f0819035.d

8/25/09

Based on 20 uL sample loop injection.

Compound (ug/5mL)	0.05000 Level 1 / 10.000 Level 7	0.10000 Level 2 / 20.000 Level 8	0.25000 Level 3 / 50.000 Level 9	0.50000 Level 4 / 75.000 Level 10	1.000 Level 5	4.000 Level 6	RRF	% RSD
1 DNPH	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++	+++++			+++++	+++++
2 FORMALDEHYDE	102160	106773	111828	116173	116296	116192		
	116157	116344	117113	116686			113572	4.538
3 ACETALDEHYDE	+++++	83033	83152	87655	87285	86402		
	86139	86290	86824	86674			85939	1.965
4 ACROLEIN	+++++	+++++	73696	76906	80738	82606		
	82881	82875	83748	83303			80844	4.438
5 ACETONE	+++++	+++++	59779	60379	62489	62609		
	62774	62924	63197	63264			62177	2.203
6 PROPANAL	+++++	+++++	61779	62397	63054	63610		
	63137	63478	63775	63751			63123	1.351

8/24/09

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819035.d
Lab Smp Id: 1331-129-4 Client Smp ID: LCS
Inj Date : 19-AUG-2009 21:31
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-129-4;LCS
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:14 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	Compound Not Detected.					
2 FORMALDEHYDE	4.081	4.086	-0.005	464100	4.08639	4.09
3 ACETALDEHYDE	4.928	4.932	-0.004	351853	4.09420	4.09
4 ACROLEIN	5.921	5.926	-0.005	328705	4.06591	4.06
5 ACETONE	6.175	6.179	-0.004	256348	4.12288	4.12
6 PROPANAL	6.528	6.532	-0.004	253734	4.01970	4.02
7 CROTONAL	7.881	7.886	-0.005	233368	4.06383	4.06
9 BUTYRALS/MEK	8.808	8.819	-0.011	214014	3.91132	3.91
10 BENZALDEHYDE	10.348	10.359	-0.011	157869	3.94987	3.95
11 ISO-PENTANAL	11.395	11.412	-0.017	184625	3.93771	3.94
12 PENTANAL	11.928	11.946	-0.018	176760	3.83789	3.84
14 O-TOLUALDEHYDE	12.808	12.812	-0.004	137893	3.88420	3.88
15 M,P-TOLUALDEHYDE	13.048	13.059	-0.011	263923	7.95016	7.95
16 HEXANAL	14.295	14.299	-0.004	158165	3.85526	3.86
17 2,5-Dimethylbenzaldehyde	14.835	14.839	-0.004	117161	3.90248	3.90

Report Date: 24-Aug-2009 18:28

Air Toxics Ltd.

RECOVERY REPORT

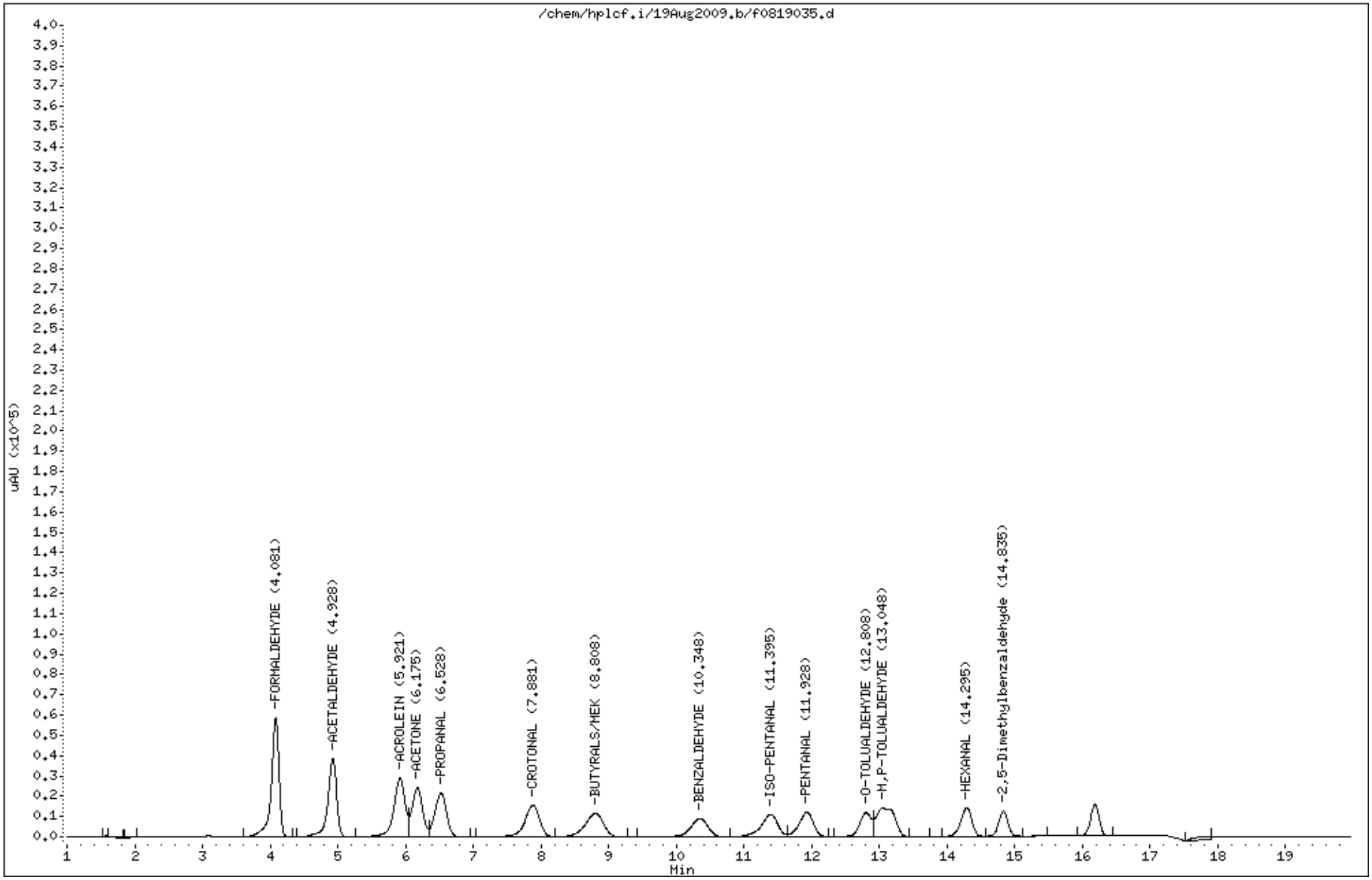
Client Name:
Client SDG: 19Aug2009
Sample Matrix: LIQUID
Fraction: OTHER
Lab Smp Id: 1331-129-4
Client Smp ID: LCS
Level: HIGH
Operator: LZ
Data Type: LC DATA
SampleType: METHSPIKE
SpikeList File: 4ug2nd.spk
Quant Type: ESTD
Sublist File: TO-11+Acr+17.sub
Method File: /chem/hplcf.i/19Aug2009.b/F09D0819.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 FORMALDEHYDE	4.00	4.09	102.16	85-115
3 ACETALDEHYDE	4.00	4.09	102.35	85-115
4 ACROLEIN	4.00	4.06	101.65	85-115
5 ACETONE	4.00	4.12	103.07	85-115
6 PROPANAL	4.00	4.02	100.49	85-115
7 CROTONAL	4.00	4.06	101.60	85-115
9 BUTYRALS/MEK	4.00	3.91	97.78	85-115
10 BENZALDEHYDE	4.00	3.95	98.75	85-115
11 ISO-PENTANAL	4.00	3.94	98.44	85-115
12 PENTANAL	4.00	3.84	95.95	85-115
14 O-TOLUALDEHYDE	4.00	3.88	97.10	85-115
15 M,P-TOLUALDEHYDE	8.00	7.95	99.38	85-115
16 HEXANAL	4.00	3.86	96.38	85-115
17 2,5-Dimethylbenzal	4.00	3.90	97.56	85-115

0109

Data File: /chem/hplcf.i/19Aug2009.b/f0819035.d
Date : 19-AUG-2009 21:31
Client ID: LCS
Sample Info: ;1331-129-4;LCS
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819006.d
Lab Smp Id: 1331-138-0.05 Client Smp ID: 1
Inj Date : 19-AUG-2009 11:25
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.05;1
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 11:25 Cal File: f0819006.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: form.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable

Vs	2.00000	Sample Final Volume (mL)
Vo	5.00000	Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	Compound Not Detected.					
2 FORMALDEHYDE	4.074	4.074	0.000	4912	0.05000	0.0481

Data File: /chem/hplcf.i/19Aug2009.b/f0819006.d

Date : 19-AUG-2009 11:25

Client ID: 1

Instrument: hplcf.i

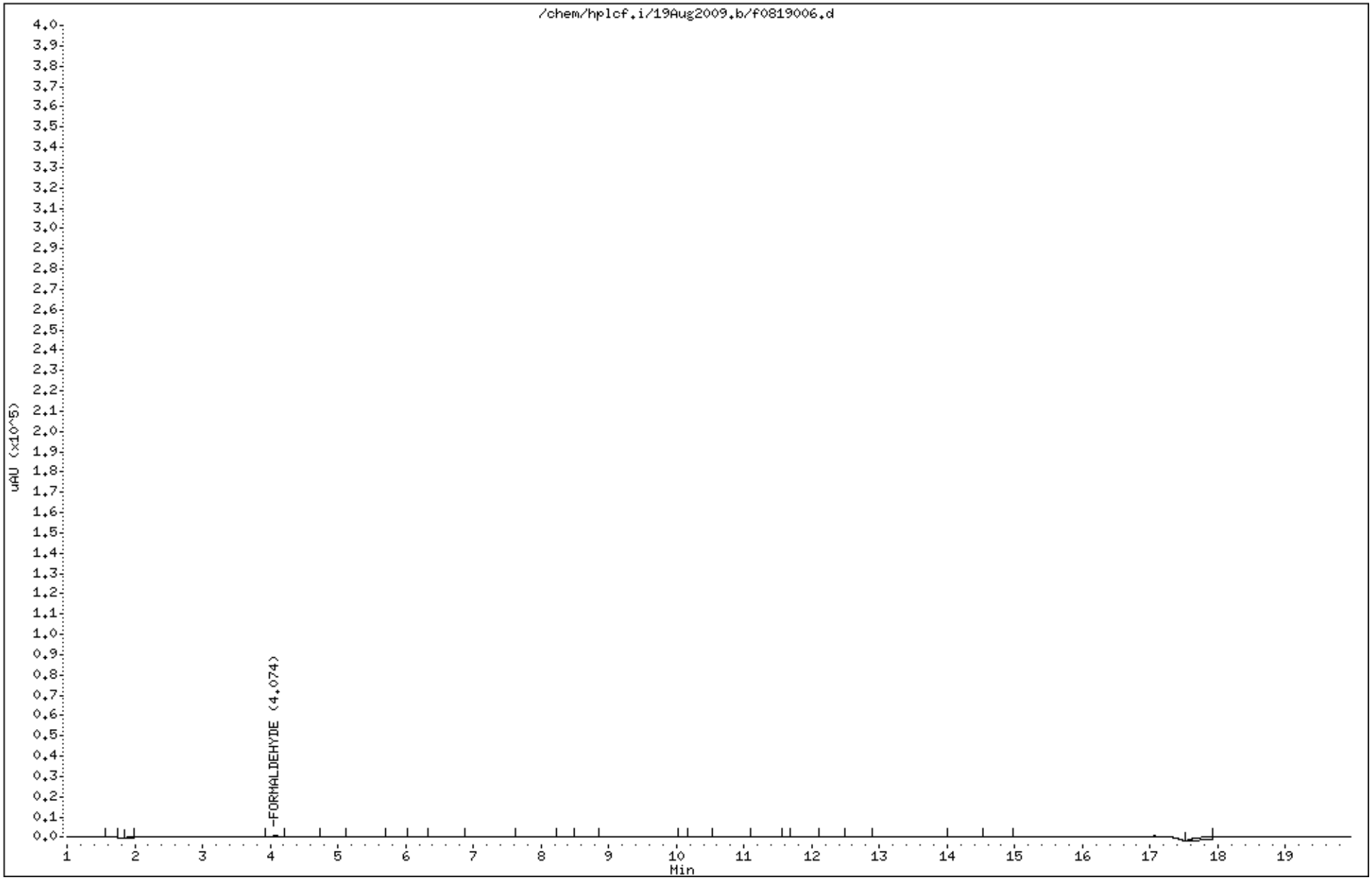
Sample Info: ;1331-138-0.05;1

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0111

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819005.d
Lab Smp Id: 1331-138-0.05 Client Smp ID: 1
Inj Date : 19-AUG-2009 11:04
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.05;1
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 11:04 Cal File: f0819005.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: form.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable

Vs	2.00000	Sample Final Volume (mL)
Vo	5.00000	Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	Compound Not Detected.					
2 FORMALDEHYDE	4.073	4.073	0.000	5250	0.05000	0.0504

Data File: /chem/hplcf.i/19Aug2009.b/f0819005.d

Date : 19-AUG-2009 11:04

Client ID: 1

Instrument: hplcf.i

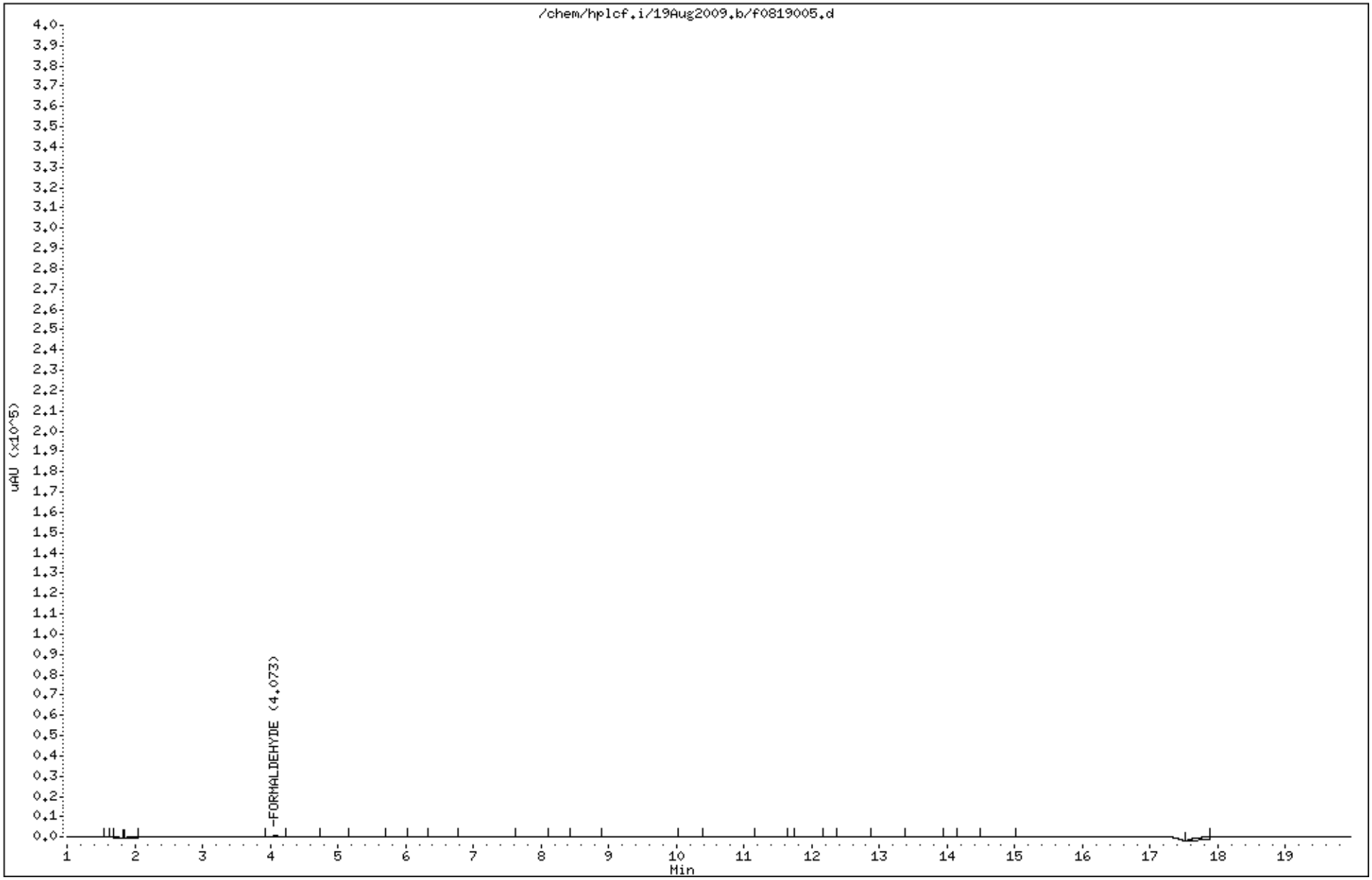
Sample Info: ;1331-138-0.05;1

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0113

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819004.d
Lab Smp Id: 1331-138-0.05 Client Smp ID: 1
Inj Date : 19-AUG-2009 10:43
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.05;1
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 10:43 Cal File: f0819004.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: form.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable

Vs	2.00000	Sample Final Volume (mL)
Vo	5.00000	Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	Compound Not Detected.					
2 FORMALDEHYDE	4.068	4.068	0.000	5162	0.05000	0.0500

Data File: /chem/hplcf.i/19Aug2009.b/f0819004.d

Date : 19-AUG-2009 10:43

Client ID: 1

Instrument: hplcf.i

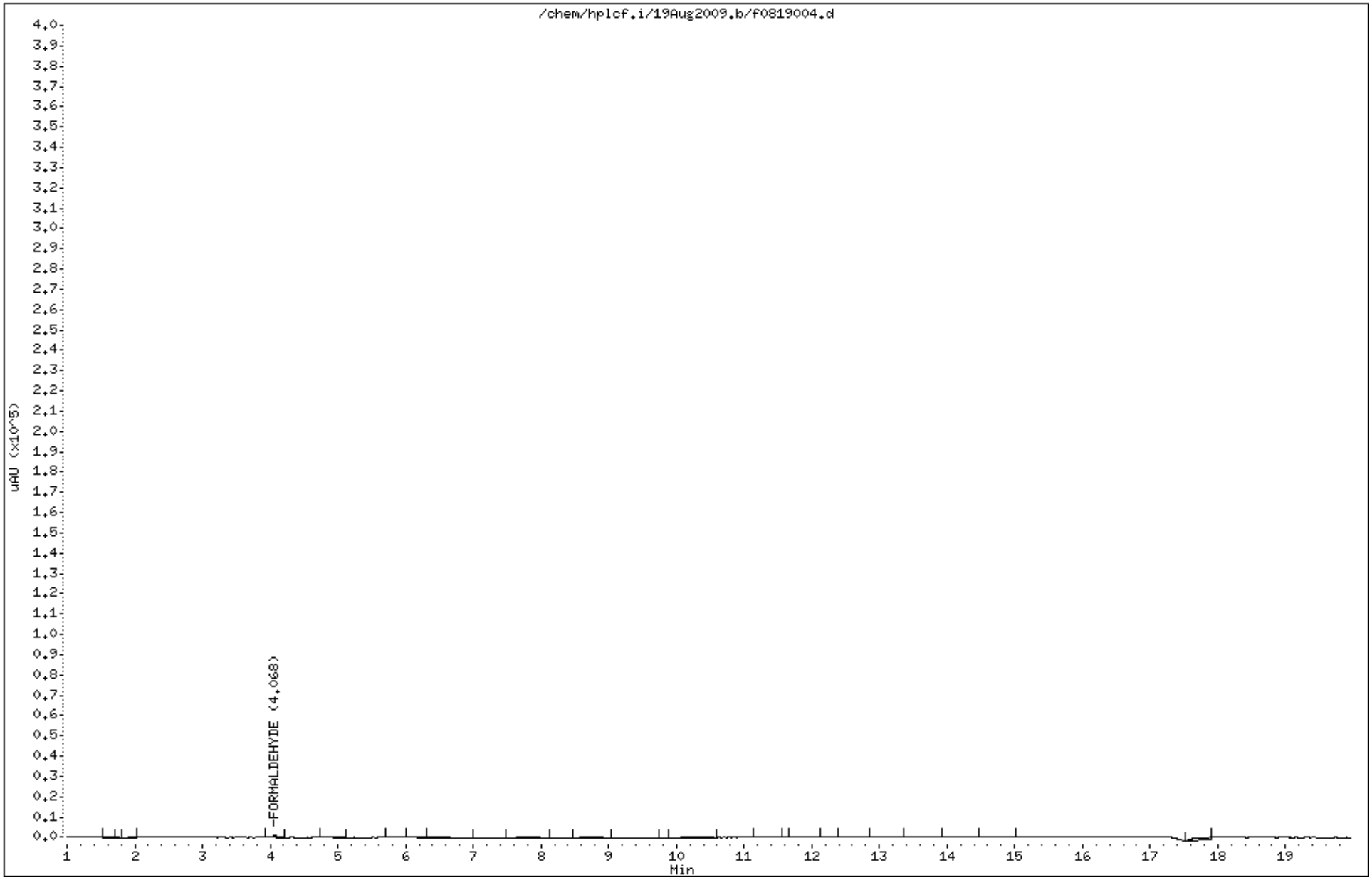
Sample Info: ;1331-138-0.05;1

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0115

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819009.d
Lab Smp Id: 1331-138-0.1 Client Smp ID: L2
Inj Date : 19-AUG-2009 12:27
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.1;L2
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 12:27 Cal File: f0819009.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: foracetmp.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.012	3.012	0.000	1668	0.10000	
2 FORMALDEHYDE	4.079	4.079	0.000	10421	0.10000	0.0998
3 ACETALDEHYDE	4.926	4.926	0.000	8325	0.10000	0.100
15 M,P-TOLUALDEHYDE	13.046	13.046	0.000	7347	0.20000	0.198

Data File: /chem/hplcf.i/19Aug2009.b/f0819009.d

0117

Date : 19-AUG-2009 12:27

Client ID: L2

Instrument: hplcf.i

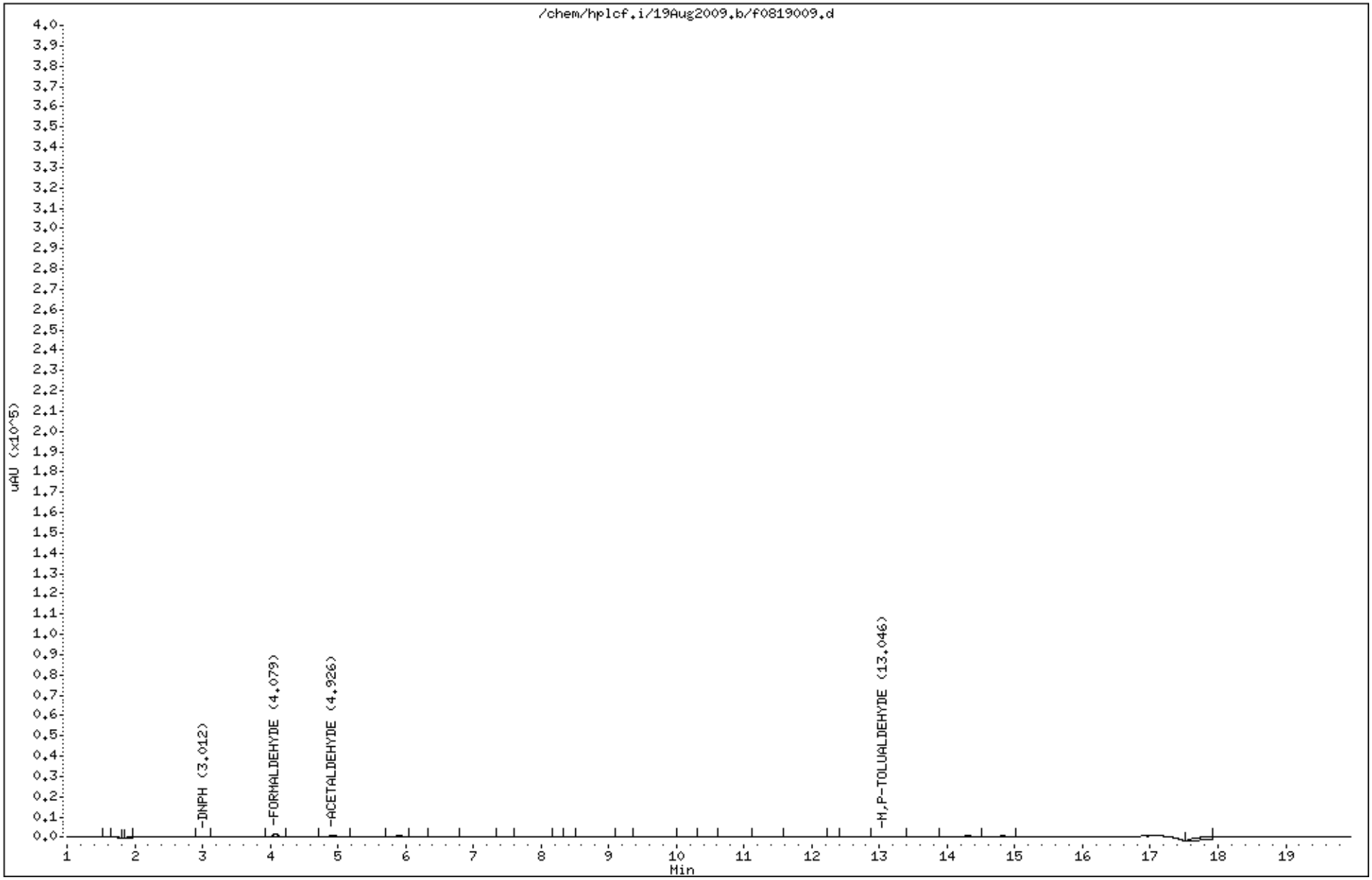
Sample Info: ;1331-138-0.1;L2

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819008.d
Lab Smp Id: 1331-138-0.1 Client Smp ID: L2
Inj Date : 19-AUG-2009 12:06
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.1;L2
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 12:06 Cal File: f0819008.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: foracetmp.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

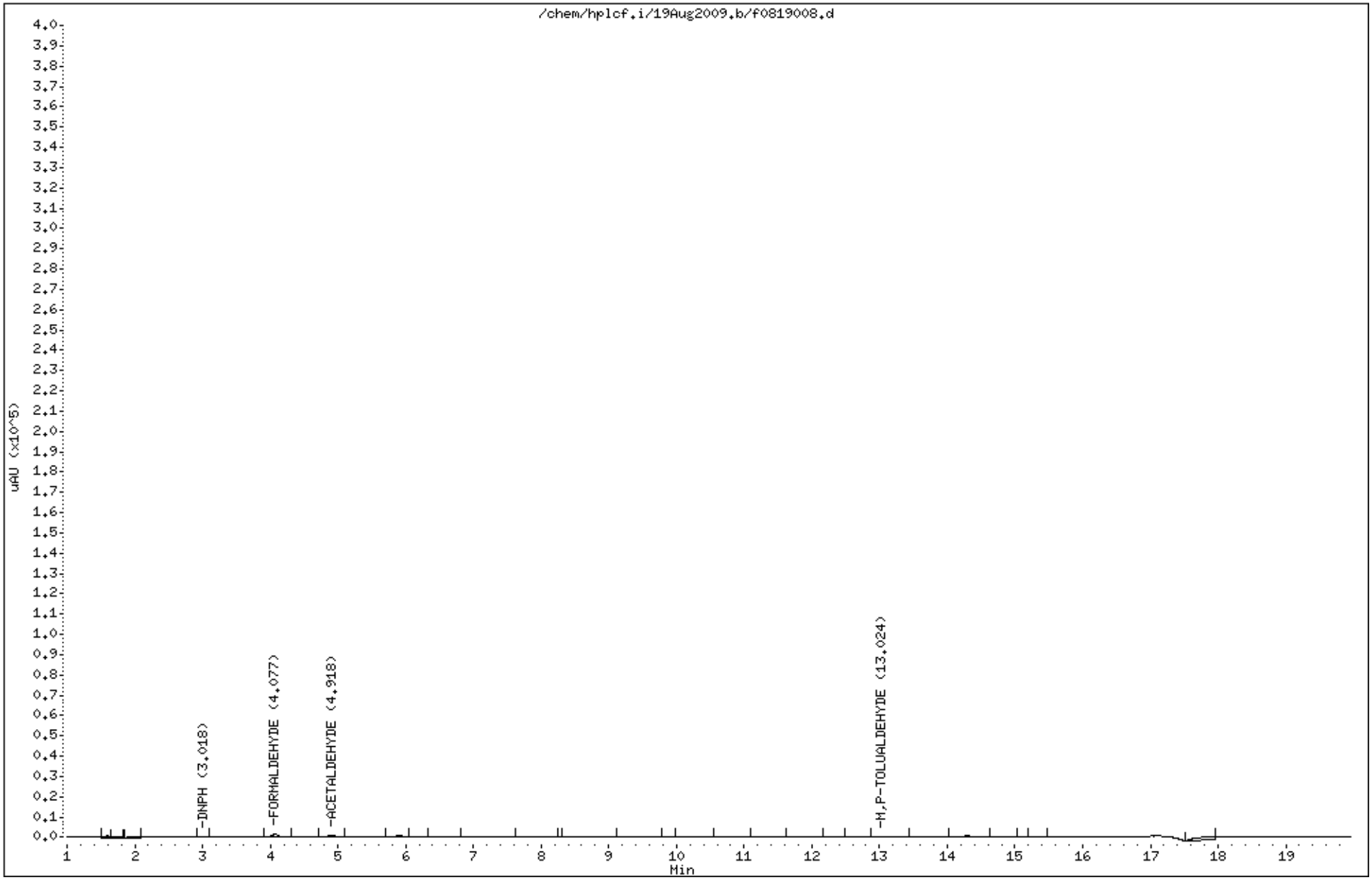
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.018	3.018	0.000	1817	0.10000	
2 FORMALDEHYDE	4.077	4.077	0.000	10754	0.10000	0.103
3 ACETALDEHYDE	4.918	4.918	0.000	8296	0.10000	0.100
15 M,P-TOLUALDEHYDE	13.024	13.024	0.000	7777	0.20000	0.208

0119

Data File: /chem/hplcf.i/19Aug2009.b/f0819008.d
Date : 19-AUG-2009 12:06
Client ID: L2
Sample Info: ;1331-138-0.1;L2
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819007.d
Lab Smp Id: 1331-138-0.1 Client Smp ID: L2
Inj Date : 19-AUG-2009 11:45
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.1;L2
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 11:45 Cal File: f0819007.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: foracetmp.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.011	3.011	0.000	1775	0.10000	
2 FORMALDEHYDE	4.078	4.078	0.000	10857	0.10000	0.105
3 ACETALDEHYDE	4.918	4.918	0.000	8289	0.10000	0.100
15 M,P-TOLUALDEHYDE	13.005	13.005	0.000	7168	0.20000	0.200

Data File: /chem/hplcf.i/19Aug2009.b/f0819007.d

Date : 19-AUG-2009 11:45

Client ID: L2

Instrument: hplcf.i

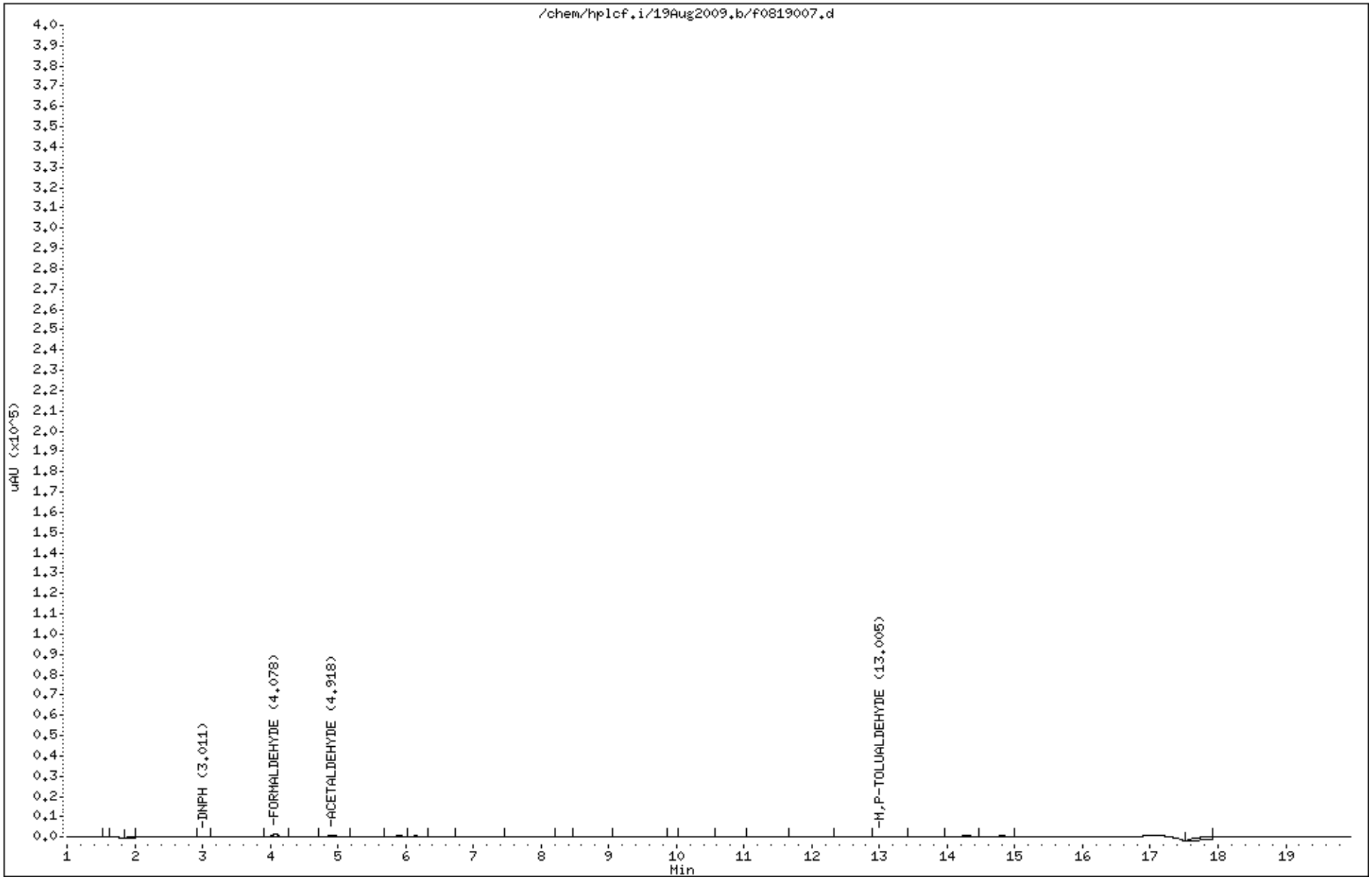
Sample Info: ;1331-138-0.1;L2

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0121

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819012.d
Lab Smp Id: 1331-138-0.25 Client Smp ID: 3
Inj Date : 19-AUG-2009 13:30
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.25;3
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 13:30 Cal File: f0819012.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.019	3.019	0.000	4604	0.25000	
2 FORMALDEHYDE	4.079	4.079	0.000	28808	0.25000	0.269
3 ACETALDEHYDE	4.926	4.926	0.000	21153	0.25000	0.254
4 ACROLEIN	5.919	5.919	0.000	18261	0.25000	0.248
5 ACETONE	6.173	6.173	0.000	14844	0.25000	0.248
6 PROPANAL	6.526	6.526	0.000	15327	0.25000	0.248
7 CROTONAL	7.873	7.873	0.000	14770	0.25000	0.260
9 BUTYRALS/MEK	8.806	8.806	0.000	12710	0.25000	0.234
10 BENZALDEHYDE	10.339	10.339	0.000	10904	0.25000	0.254
11 ISO-PENTANAL	11.406	11.406	0.000	11380	0.25000	0.248
12 PENTANAL	11.939	11.939	0.000	11925	0.25000	0.253
14 O-TOLUALDEHYDE	12.799	12.799	0.000	9026	0.25000	0.244
15 M,P-TOLUALDEHYDE	13.046	13.046	0.000	17594	0.50000	0.489
16 HEXANAL	14.306	14.306	0.000	10721	0.25000	0.245
17 2,5-Dimethylbenzaldehyde	14.839	14.839	0.000	8668	0.25000	0.258

Data File: /chem/hplcf.i/19Aug2009.b/f0819012.d

Date : 19-AUG-2009 13:30

Client ID: 3

Instrument: hplcf.i

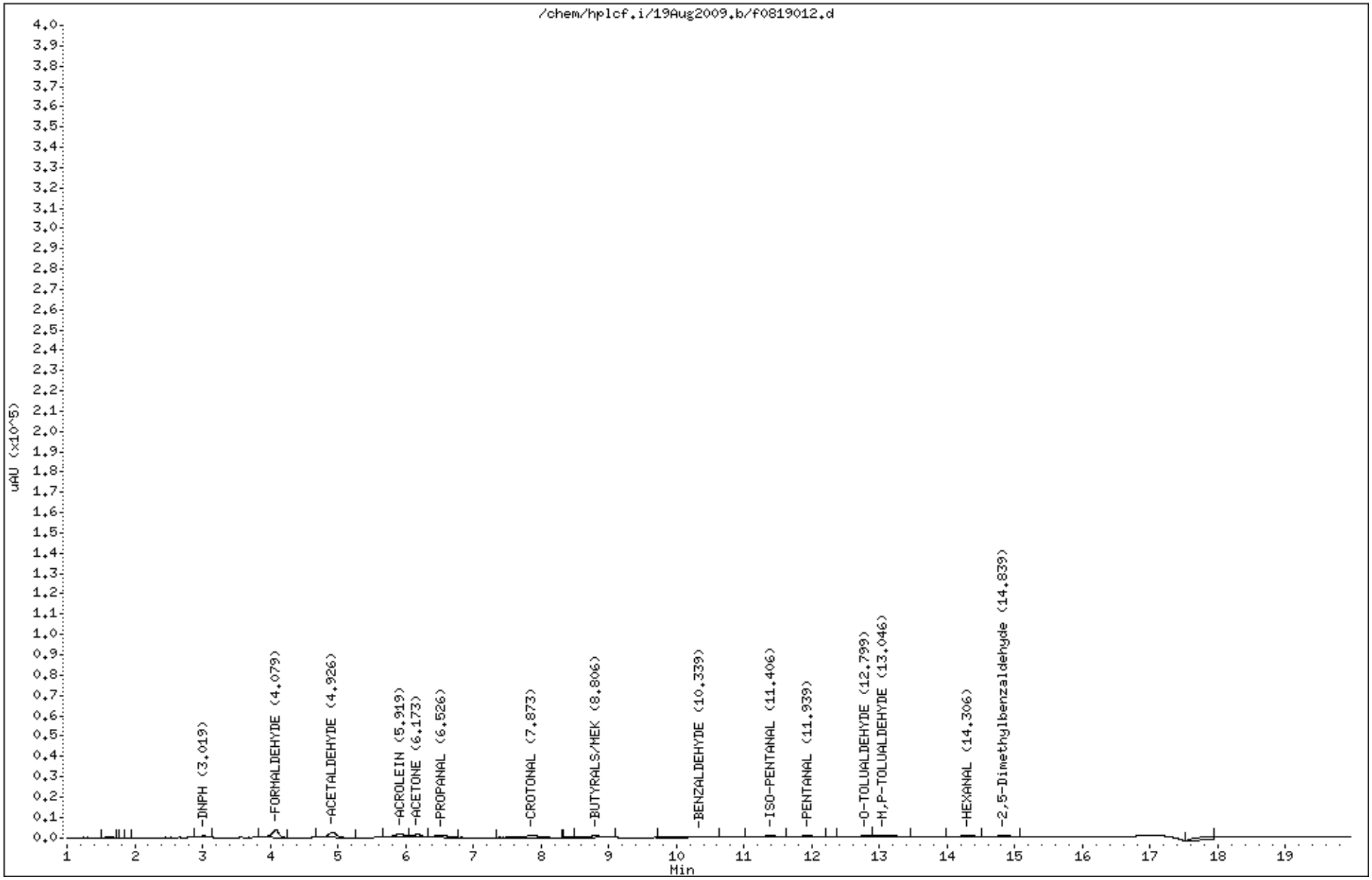
Sample Info: ;1331-138-0.25;3

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0123

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819011.d
Lab Smp Id: 1331-138-0.25 Client Smp ID: 3
Inj Date : 19-AUG-2009 13:09
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.25;3
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 13:09 Cal File: f0819011.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

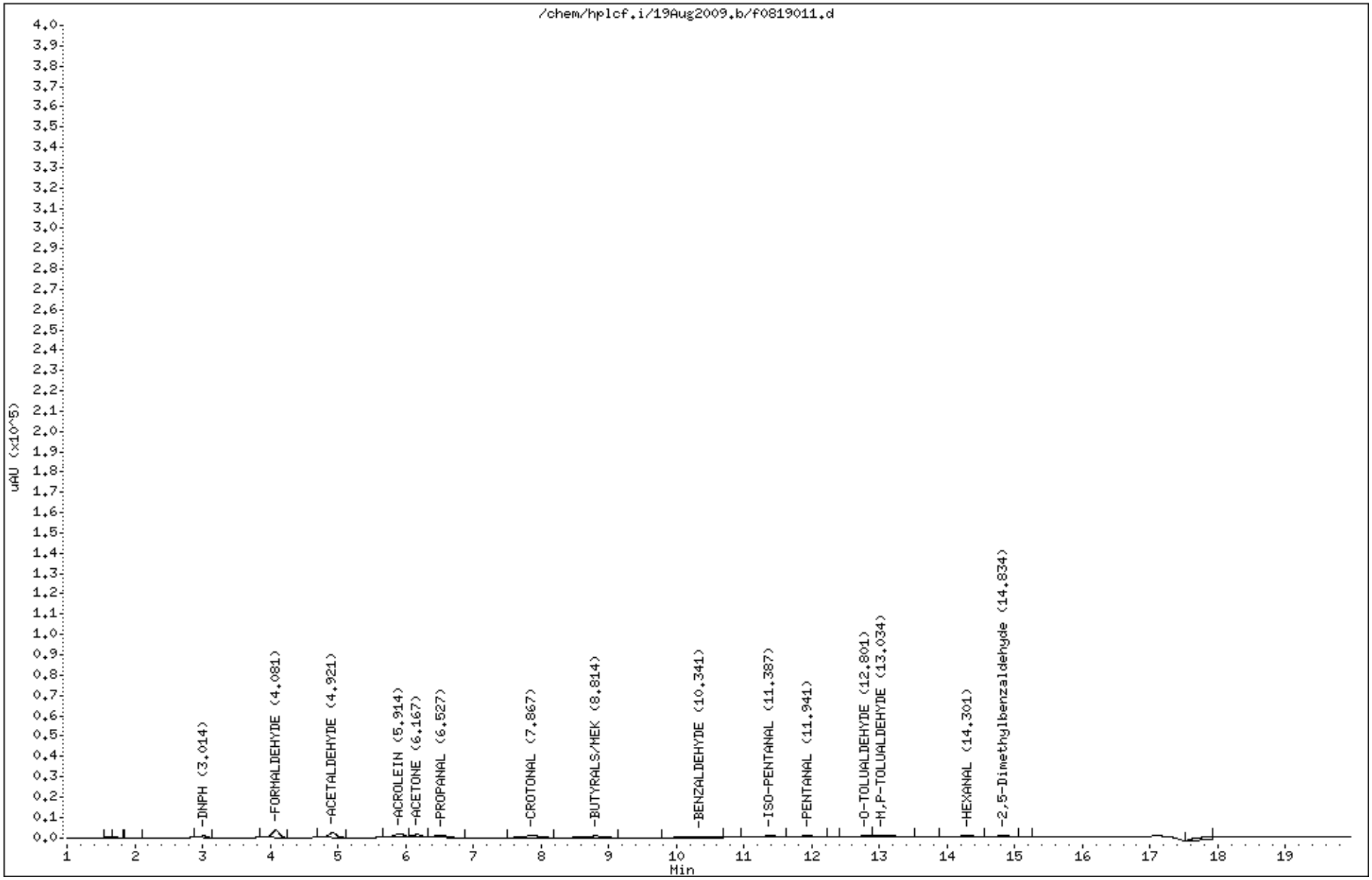
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.014	3.014	0.000	4907	0.25000	
2 FORMALDEHYDE	4.081	4.081	0.000	27774	0.25000	0.262
3 ACETALDEHYDE	4.921	4.921	0.000	20613	0.25000	0.249
4 ACROLEIN	5.914	5.914	0.000	18506	0.25000	0.250
5 ACETONE	6.167	6.167	0.000	15000	0.25000	0.250
6 PROPANAL	6.527	6.527	0.000	15329	0.25000	0.247
7 CROTONAL	7.867	7.867	0.000	14139	0.25000	0.254
9 BUTYRALS/MEK	8.814	8.814	0.000	14046	0.25000	0.251
10 BENZALDEHYDE	10.341	10.341	0.000	10911	0.25000	0.256
11 ISO-PENTANAL	11.387	11.387	0.000	11914	0.25000	0.259
12 PENTANAL	11.941	11.941	0.000	12006	0.25000	0.257
14 O-TOLUALDEHYDE	12.801	12.801	0.000	9470	0.25000	0.254
15 M,P-TOLUALDEHYDE	13.034	13.034	0.000	17767	0.50000	0.491
16 HEXANAL	14.301	14.301	0.000	11133	0.25000	0.251
17 2,5-Dimethylbenzaldehyde	14.834	14.834	0.000	8195	0.25000	0.247

0125

Data File: /chem/hplcf.i/19Aug2009.b/f0819011.d
Date : 19-AUG-2009 13:09
Client ID: 3
Sample Info: ;1331-138-0.25;3
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819010.d
Lab Smp Id: 1331-138-0.25 Client Smp ID: 3
Inj Date : 19-AUG-2009 12:48
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.25;3
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 12:48 Cal File: f0819010.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

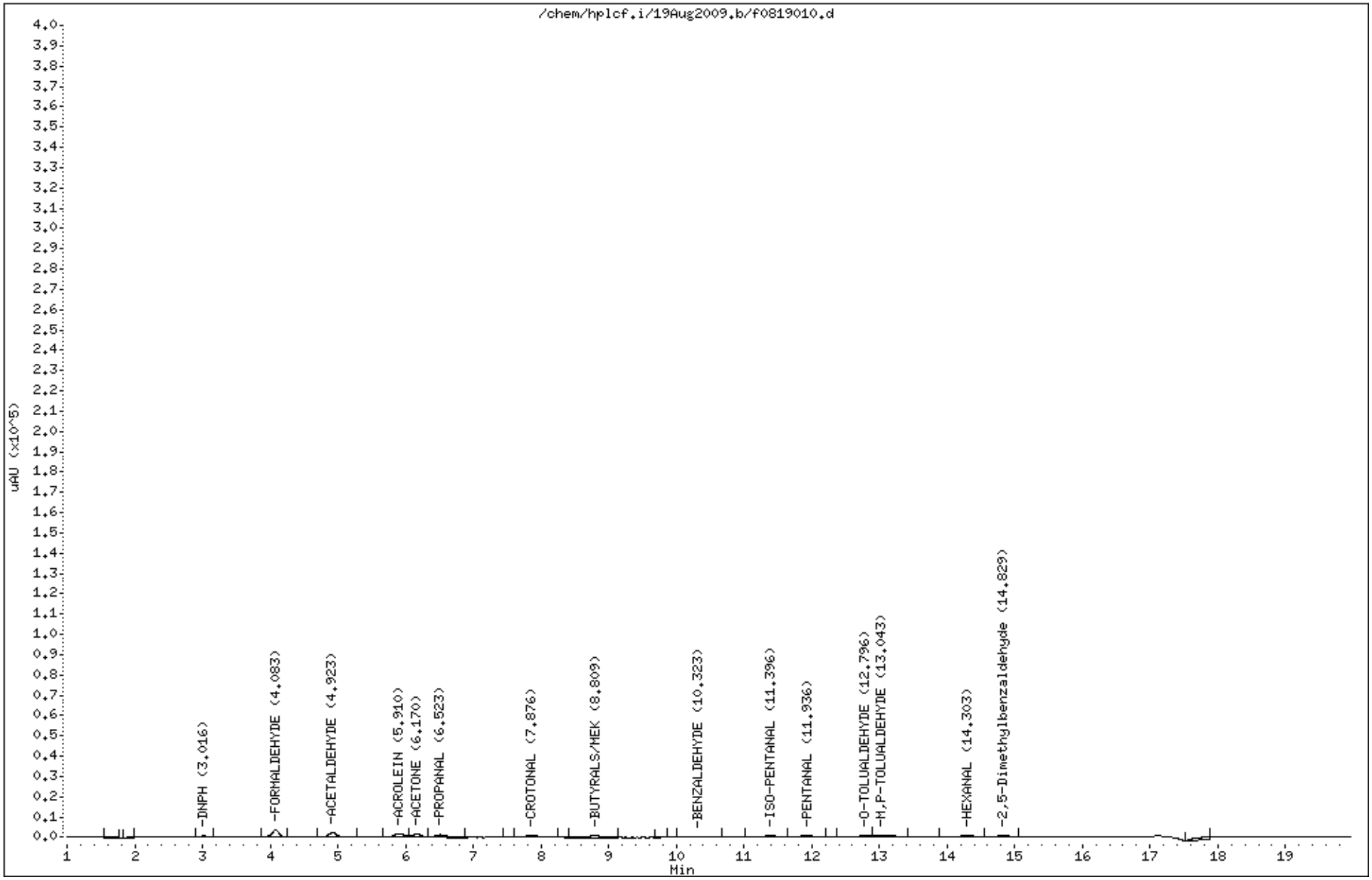
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.016	3.016	0.000	4784	0.25000	
2 FORMALDEHYDE	4.083	4.083	0.000	27289	0.25000	0.260
3 ACETALDEHYDE	4.923	4.923	0.000	20598	0.25000	0.248
4 ACROLEIN	5.910	5.910	0.000	18505	0.25000	0.250
5 ACETONE	6.170	6.170	0.000	14990	0.25000	0.250
6 PROPANAL	6.523	6.523	0.000	15678	0.25000	0.250
7 CROTONAL	7.876	7.876	0.000	13737	0.25000	0.250
9 BUTYRALS/MEK	8.809	8.809	0.000	13910	0.25000	0.250
10 BENZALDEHYDE	10.323	10.323	0.000	10382	0.25000	0.250
11 ISO-PENTANAL	11.396	11.396	0.000	11104	0.25000	0.250
12 PENTANAL	11.936	11.936	0.000	11378	0.25000	0.250
14 O-TOLUALDEHYDE	12.796	12.796	0.000	9202	0.25000	0.250
15 M,P-TOLUALDEHYDE	13.043	13.043	0.000	16909	0.50000	0.466
16 HEXANAL	14.303	14.303	0.000	11001	0.25000	0.250
17 2,5-Dimethylbenzaldehyde	14.829	14.829	0.000	8373	0.25000	0.250

0127

Data File: /chem/hplcf.i/19Aug2009.b/f0819010.d
Date : 19-AUG-2009 12:48
Client ID: 3
Sample Info: ;1331-138-0.25;3
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819015.d
Lab Smp Id: 1331-138-0.5 Client Smp ID: L4
Inj Date : 19-AUG-2009 14:33
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.5;L4
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 14:33 Cal File: f0819015.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.022	3.022	0.000	9587	0.50000	
2 FORMALDEHYDE	4.082	4.082	0.000	57256	0.50000	0.524
3 ACETALDEHYDE	4.928	4.928	0.000	43191	0.50000	0.510
4 ACROLEIN	5.922	5.922	0.000	38632	0.50000	0.513
5 ACETONE	6.175	6.175	0.000	30120	0.50000	0.501
6 PROPANAL	6.528	6.528	0.000	31195	0.50000	0.502
7 CROTONAL	7.882	7.882	0.000	29220	0.50000	0.506
9 BUTYRALS/MEK	8.822	8.822	0.000	28632	0.50000	0.518
10 BENZALDEHYDE	10.355	10.355	0.000	20194	0.50000	0.480
11 ISO-PENTANAL	11.408	11.408	0.000	23490	0.50000	0.501
12 PENTANAL	11.948	11.948	0.000	23141	0.50000	0.490
14 O-TOLUALDEHYDE	12.815	12.815	0.000	17662	0.50000	0.483
15 M,P-TOLUALDEHYDE	13.055	13.055	0.000	32890	1.00000	0.937
16 HEXANAL	14.315	14.315	0.000	20886	0.50000	0.485
17 2,5-Dimethylbenzaldehyde	14.841	14.841	0.000	15679	0.50000	0.483

Data File: /chem/hplcf.i/19Aug2009.b/f0819015.d

Date : 19-AUG-2009 14:33

Client ID: L4

Instrument: hplcf.i

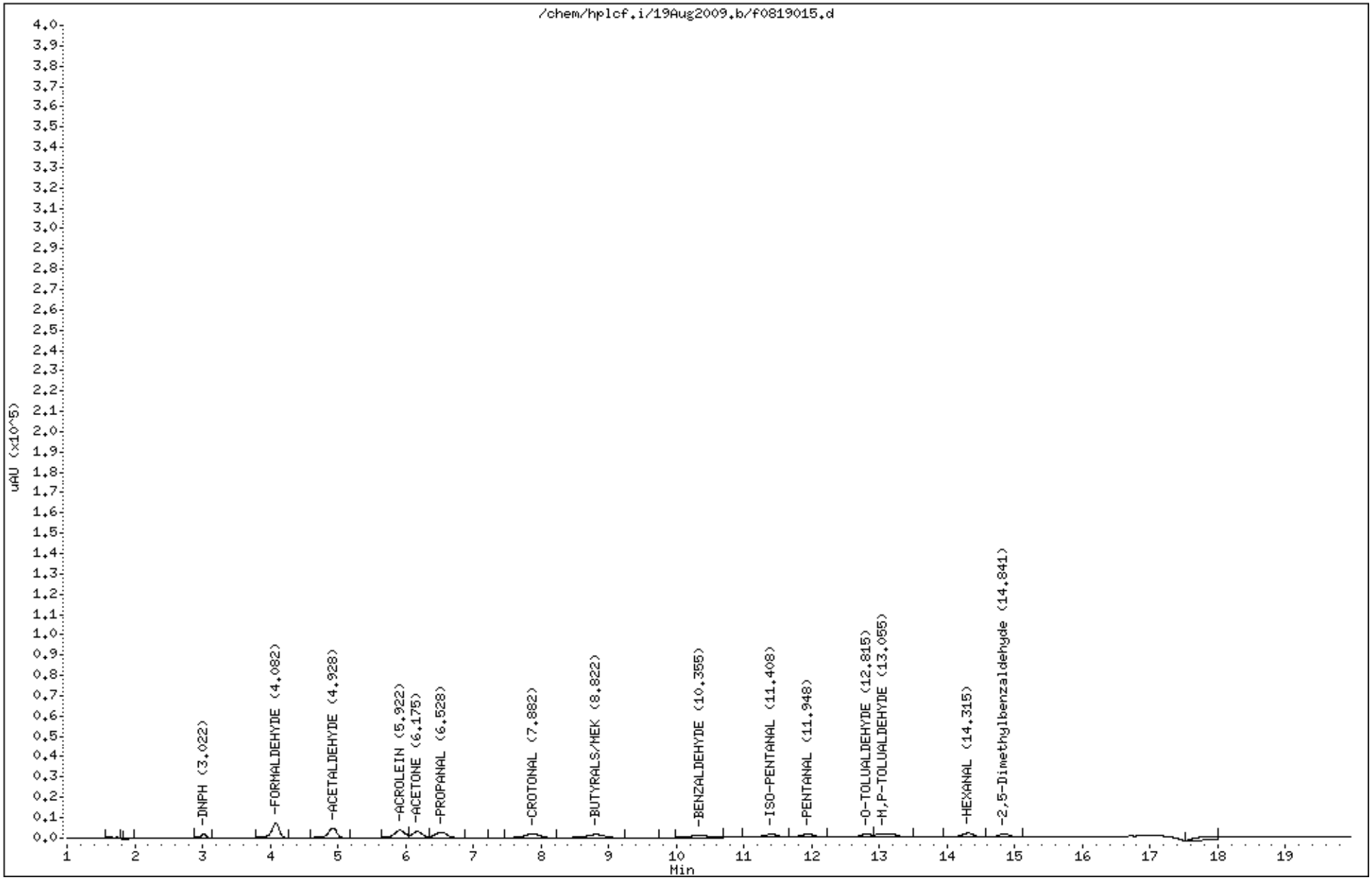
Sample Info: ;1331-138-0.5;L4

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0129

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819014.d
Lab Smp Id: 1331-138-0.5 Client Smp ID: L4
Inj Date : 19-AUG-2009 14:12
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.5;L4
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 14:12 Cal File: f0819014.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

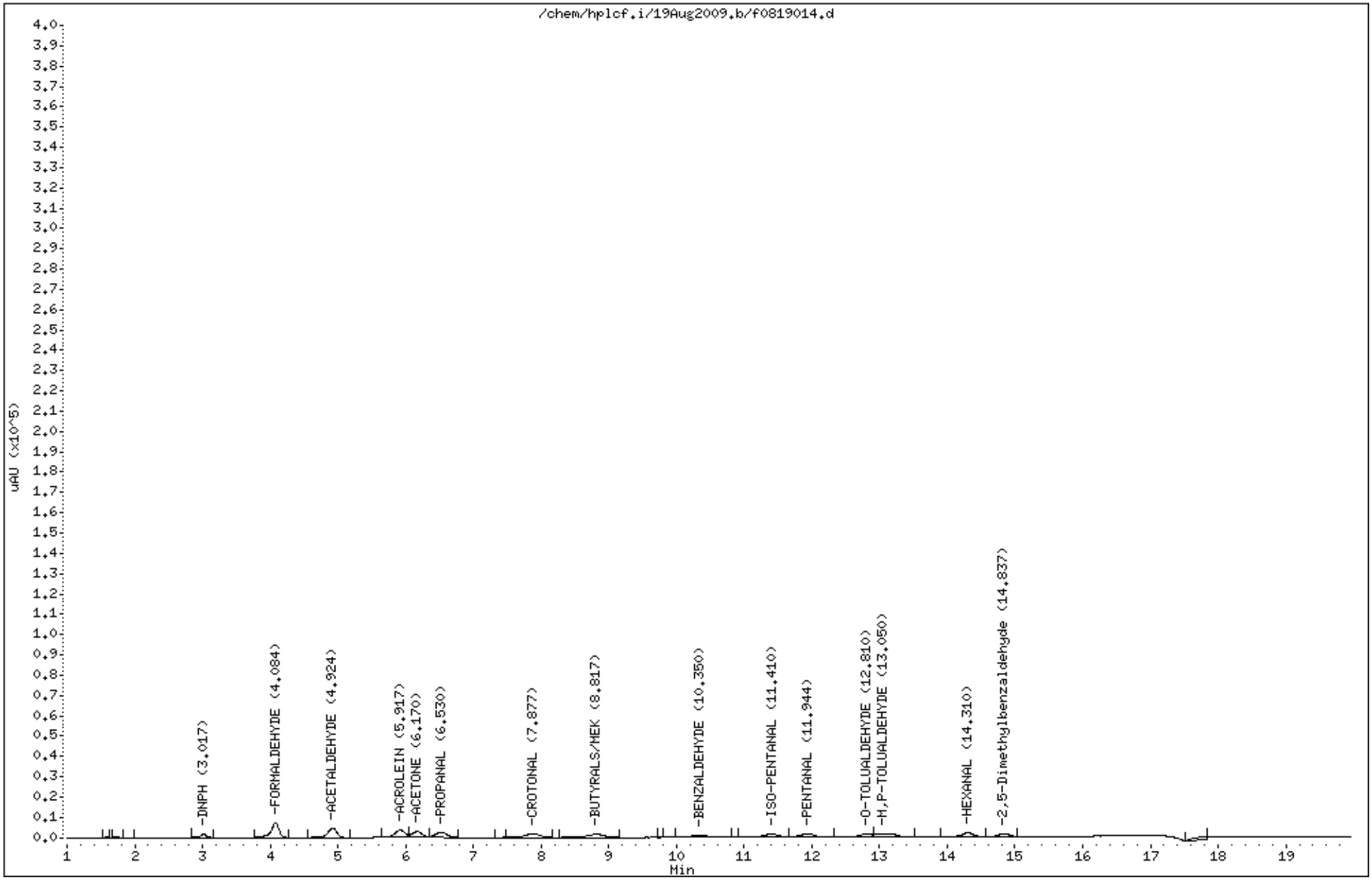
Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.017	3.017	0.000	10531	0.50000	
2 FORMALDEHYDE	4.084	4.084	0.000	58510	0.50000	0.538
3 ACETALDEHYDE	4.924	4.924	0.000	44318	0.50000	0.525
4 ACROLEIN	5.917	5.917	0.000	37771	0.50000	0.504
5 ACETONE	6.170	6.170	0.000	29965	0.50000	0.499
6 PROPANAL	6.530	6.530	0.000	30743	0.50000	0.496
7 CROTONAL	7.877	7.877	0.000	29246	0.50000	0.508
9 BUTYRALS/MEK	8.817	8.817	0.000	27551	0.50000	0.502
10 BENZALDEHYDE	10.350	10.350	0.000	20859	0.50000	0.492
11 ISO-PENTANAL	11.410	11.410	0.000	24927	0.50000	0.532
12 PENTANAL	11.944	11.944	0.000	24426	0.50000	0.515
14 O-TOLUALDEHYDE	12.810	12.810	0.000	18470	0.50000	0.502
15 M,P-TOLUALDEHYDE	13.050	13.050	0.000	34373	1.00000	0.971
16 HEXANAL	14.310	14.310	0.000	21467	0.50000	0.496
17 2,5-Dimethylbenzaldehyde	14.837	14.837	0.000	15425	0.50000	0.472

Data File: /chem/hplcf.i/19Aug2009.b/f0819014.d
Date : 19-AUG-2009 14:12
Client ID: L4
Sample Info: ;1331-138-0.5;L4
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819013.d
Lab Smp Id: 1331-138-0.5 Client Smp ID: L4
Inj Date : 19-AUG-2009 13:51
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-0.5;L4
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 13:51 Cal File: f0819013.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

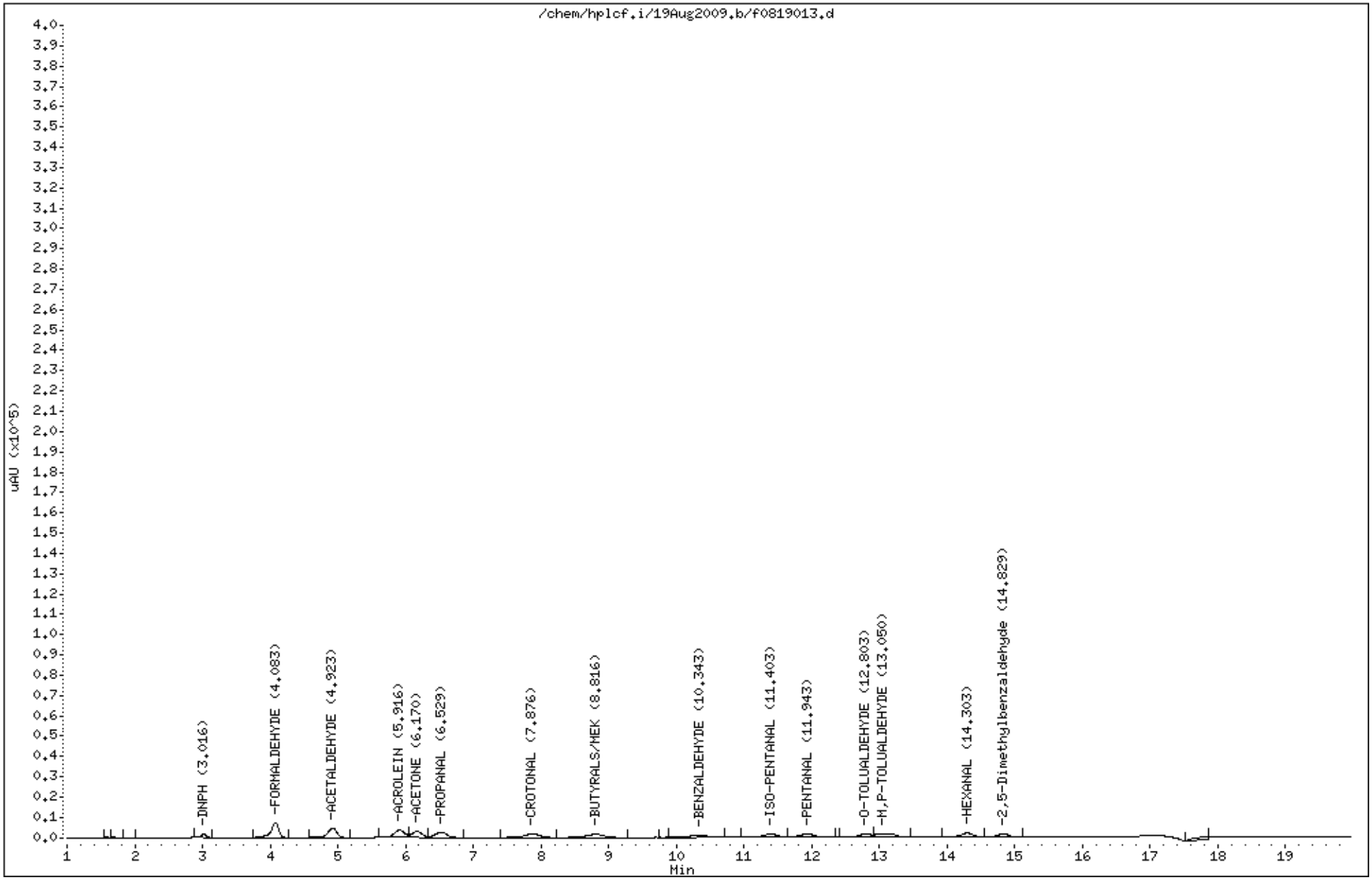
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.016	3.016	0.000	9870	0.50000	
2 FORMALDEHYDE	4.083	4.083	0.000	58493	0.50000	0.542
3 ACETALDEHYDE	4.923	4.923	0.000	43974	0.50000	0.525
4 ACROLEIN	5.916	5.916	0.000	38956	0.50000	0.521
5 ACETONE	6.170	6.170	0.000	30483	0.50000	0.507
6 PROPANAL	6.529	6.529	0.000	31657	0.50000	0.509
7 CROTONAL	7.876	7.876	0.000	29384	0.50000	0.512
9 BUTYRALS/MEK	8.816	8.816	0.000	28326	0.50000	0.517
10 BENZALDEHYDE	10.343	10.343	0.000	20768	0.50000	0.488
11 ISO-PENTANAL	11.403	11.403	0.000	23450	0.50000	0.508
12 PENTANAL	11.943	11.943	0.000	23536	0.50000	0.500
14 O-TOLUALDEHYDE	12.803	12.803	0.000	18192	0.50000	0.494
15 M,P-TOLUALDEHYDE	13.050	13.050	0.000	32773	1.00000	0.922
16 HEXANAL	14.303	14.303	0.000	21066	0.50000	0.486
17 2,5-Dimethylbenzaldehyde	14.829	14.829	0.000	15827	0.50000	0.477

0133

Data File: /chem/hplcf.i/19Aug2009.b/f0819013.d
Date : 19-AUG-2009 13:51
Client ID: L4
Sample Info: ;1331-138-0.5;L4
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819018.d
Lab Smp Id: 1331-138-1.0 Client Smp ID: L5
Inj Date : 19-AUG-2009 15:35
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-1.0;L5
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 15:35 Cal File: f0819018.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.019	3.019	0.000	21186	1.00000	
2 FORMALDEHYDE	4.086	4.086	0.000	115697	1.00000	1.04
3 ACETALDEHYDE	4.933	4.933	0.000	86984	1.00000	1.02
4 ACROLEIN	5.926	5.926	0.000	81611	1.00000	1.06
5 ACETONE	6.179	6.179	0.000	63170	1.00000	1.04
6 PROPANAL	6.532	6.532	0.000	63753	1.00000	1.02
7 CROTONAL	7.886	7.886	0.000	58100	1.00000	1.01
9 BUTYRALS/MEK	8.819	8.819	0.000	55272	1.00000	1.00
10 BENZALDEHYDE	10.346	10.346	0.000	40915	1.00000	0.981
11 ISO-PENTANAL	11.412	11.412	0.000	48224	1.00000	1.02
12 PENTANAL	11.946	11.946	0.000	46345	1.00000	0.985
14 O-TOLUALDEHYDE	12.806	12.806	0.000	35385	1.00000	0.973
15 M,P-TOLUALDEHYDE	13.053	13.053	0.000	64650	2.00000	1.87
16 HEXANAL	14.306	14.306	0.000	41106	1.00000	0.969
17 2,5-Dimethylbenzaldehyde	14.839	14.839	0.000	29608	1.00000	0.936

Data File: /chem/hplcf.i/19Aug2009.b/f0819018.d

Date : 19-AUG-2009 15:35

Client ID: L5

Instrument: hplcf.i

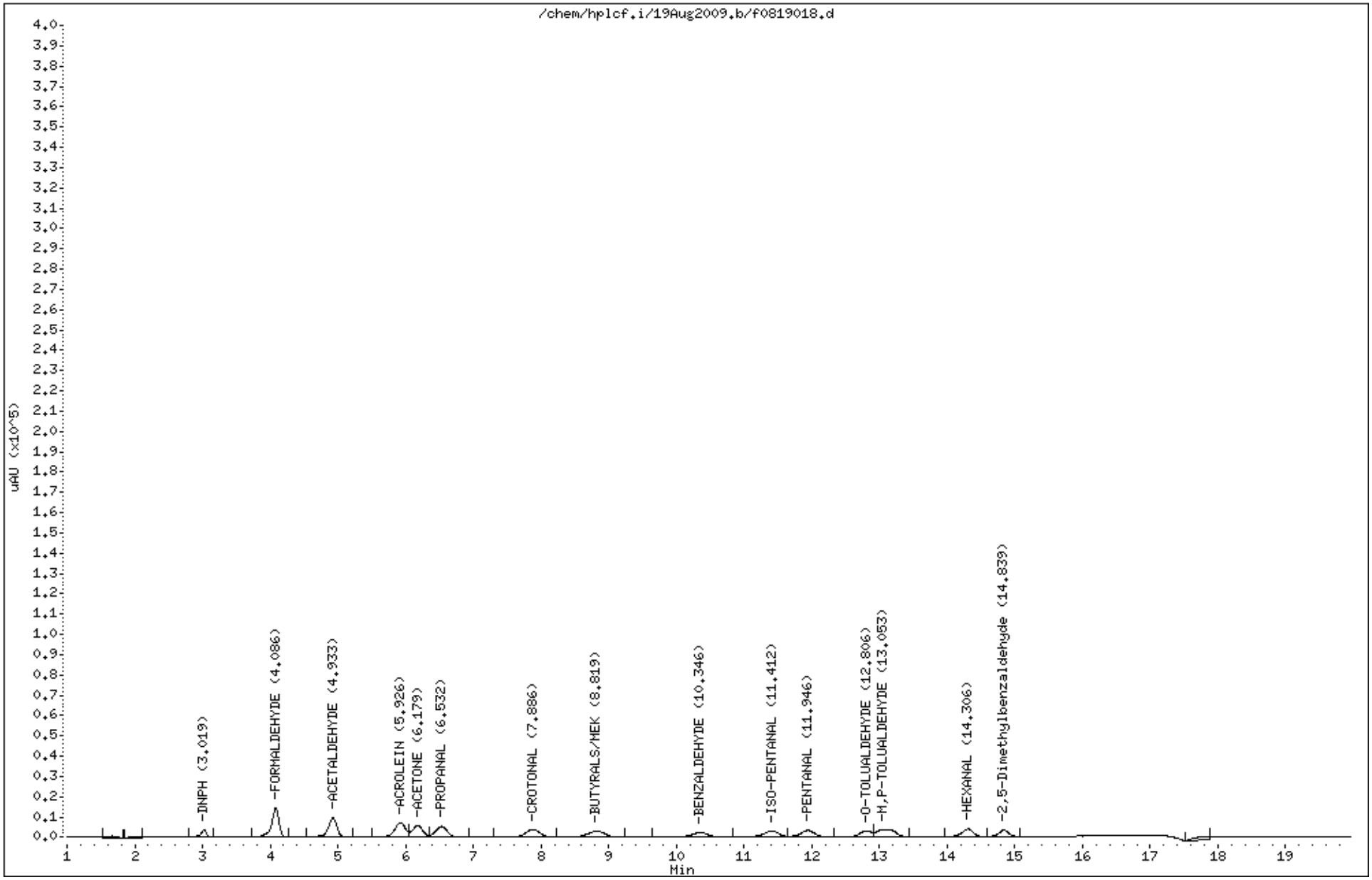
Sample Info: ;1331-138-1.0;L5

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0135

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819017.d
Lab Smp Id: 1331-138-1.0 Client Smp ID: L5
Inj Date : 19-AUG-2009 15:14
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-1.0;L5
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 15:14 Cal File: f0819017.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.025	3.025	0.000	21440	1.00000	
2 FORMALDEHYDE	4.085	4.085	0.000	116575	1.00000	1.06
3 ACETALDEHYDE	4.925	4.925	0.000	87377	1.00000	1.03
4 ACROLEIN	5.925	5.925	0.000	82795	1.00000	1.08
5 ACETONE	6.178	6.178	0.000	63425	1.00000	1.05
6 PROPANAL	6.532	6.532	0.000	63714	1.00000	1.02
7 CROTONAL	7.878	7.878	0.000	57897	1.00000	1.00
9 BUTYRALS/MEK	8.825	8.825	0.000	55647	1.00000	1.01
10 BENZALDEHYDE	10.351	10.351	0.000	41098	1.00000	0.983
11 ISO-PENTANAL	11.412	11.412	0.000	48863	1.00000	1.03
12 PENTANAL	11.951	11.951	0.000	47165	1.00000	1.00
14 O-TOLUALDEHYDE	12.812	12.812	0.000	36859	1.00000	1.01
15 M,P-TOLUALDEHYDE	13.058	13.058	0.000	65508	2.00000	1.89
16 HEXANAL	14.305	14.305	0.000	41171	1.00000	0.967
17 2,5-Dimethylbenzaldehyde	14.838	14.838	0.000	30221	1.00000	0.947

Data File: /chem/hplcf.i/19Aug2009.b/f0819017.d

Date : 19-AUG-2009 15:14

Client ID: L5

Instrument: hplcf.i

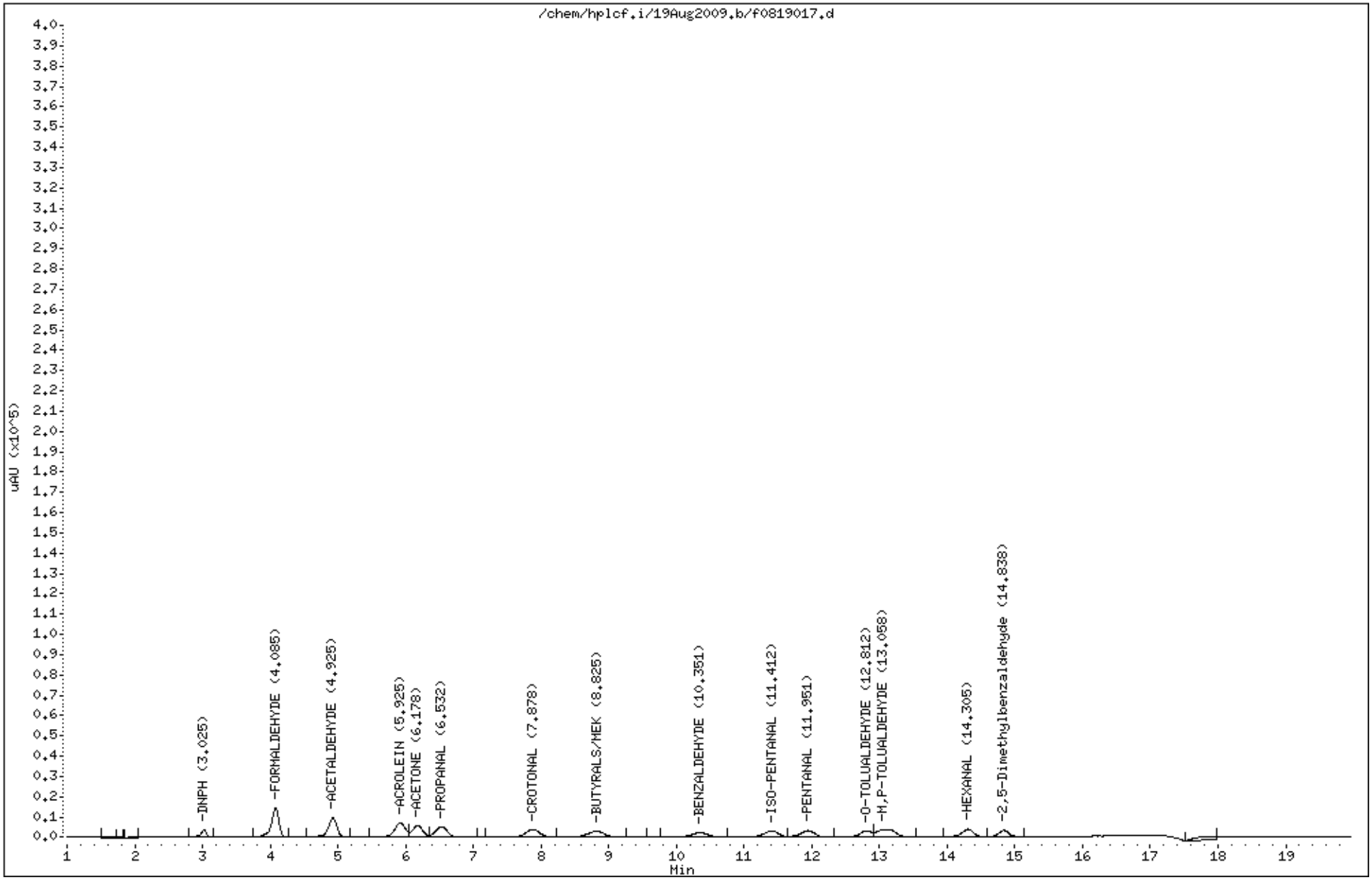
Sample Info: ;1331-138-1.0;L5

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0137

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819016.d
Lab Smp Id: 1331-138-1.0 Client Smp ID: L5
Inj Date : 19-AUG-2009 14:53
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-1.0;L5
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:12 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 14:53 Cal File: f0819016.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

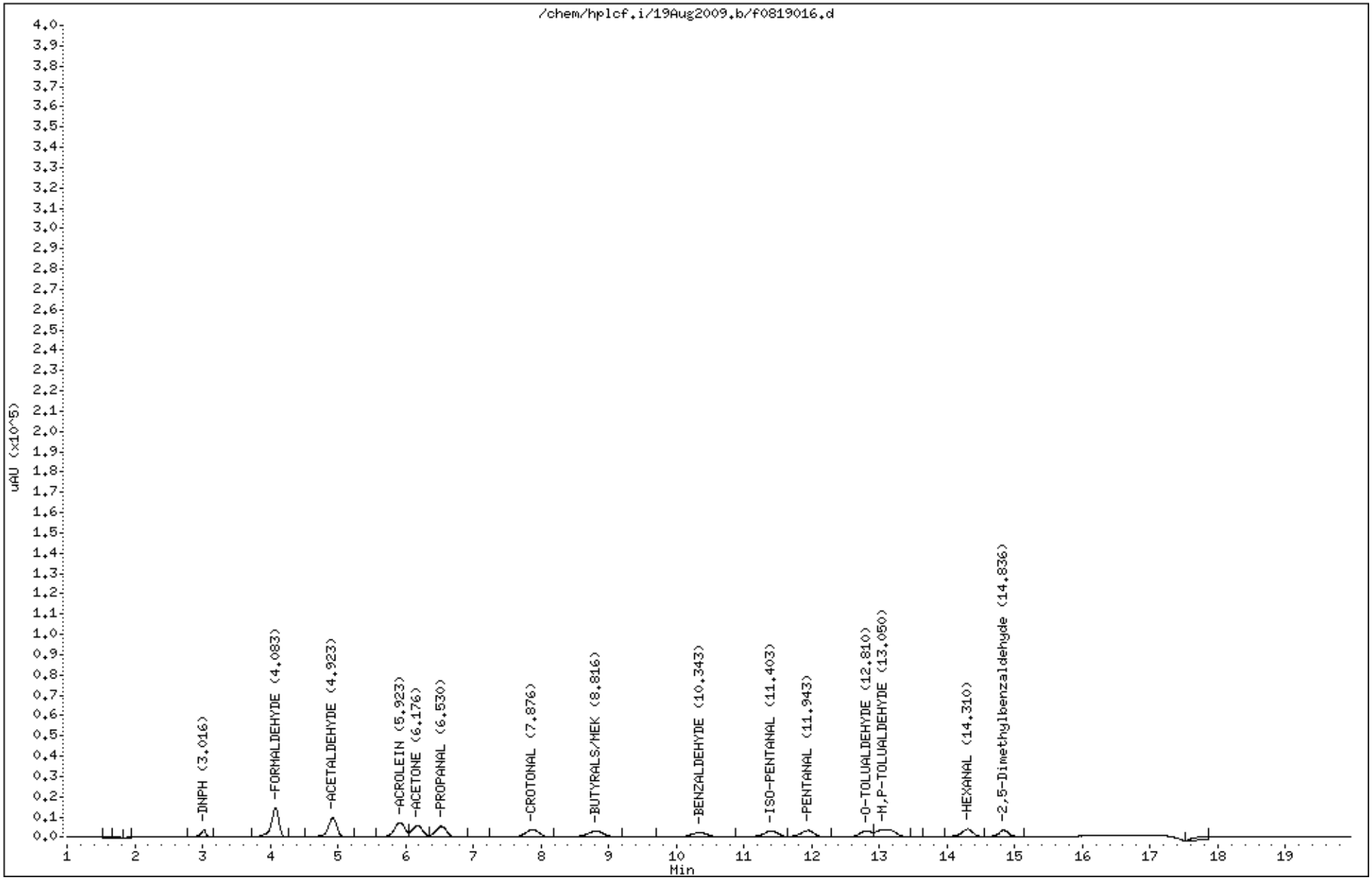
Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.016	3.016	0.000	21402	1.00000	
2 FORMALDEHYDE	4.083	4.083	0.000	116616	1.00000	1.06
3 ACETALDEHYDE	4.923	4.923	0.000	87493	1.00000	1.03
4 ACROLEIN	5.923	5.923	0.000	77808	1.00000	1.03
5 ACETONE	6.176	6.176	0.000	60871	1.00000	1.01
6 PROPANAL	6.530	6.530	0.000	61694	1.00000	0.994
7 CROTONAL	7.876	7.876	0.000	56756	1.00000	0.986
9 BUTYRALS/MEK	8.816	8.816	0.000	54179	1.00000	0.983
10 BENZALDEHYDE	10.343	10.343	0.000	40916	1.00000	0.976
11 ISO-PENTANAL	11.403	11.403	0.000	48271	1.00000	1.02
12 PENTANAL	11.943	11.943	0.000	46491	1.00000	0.986
14 O-TOLUALDEHYDE	12.810	12.810	0.000	35454	1.00000	0.974
15 M,P-TOLUALDEHYDE	13.050	13.050	0.000	65441	2.00000	1.88
16 HEXANAL	14.310	14.310	0.000	41319	1.00000	0.965
17 2,5-Dimethylbenzaldehyde	14.836	14.836	0.000	30165	1.00000	0.938

Data File: /chem/hplcf.i/19Aug2009.b/f0819016.d
Date : 19-AUG-2009 14:53
Client ID: L5
Sample Info: ;1331-138-1.0;L5
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819021.d
Lab Smp Id: 1331-138-4.0 Client Smp ID: L6
Inj Date : 19-AUG-2009 16:38
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-4.0;L6
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 16:38 Cal File: f0819021.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

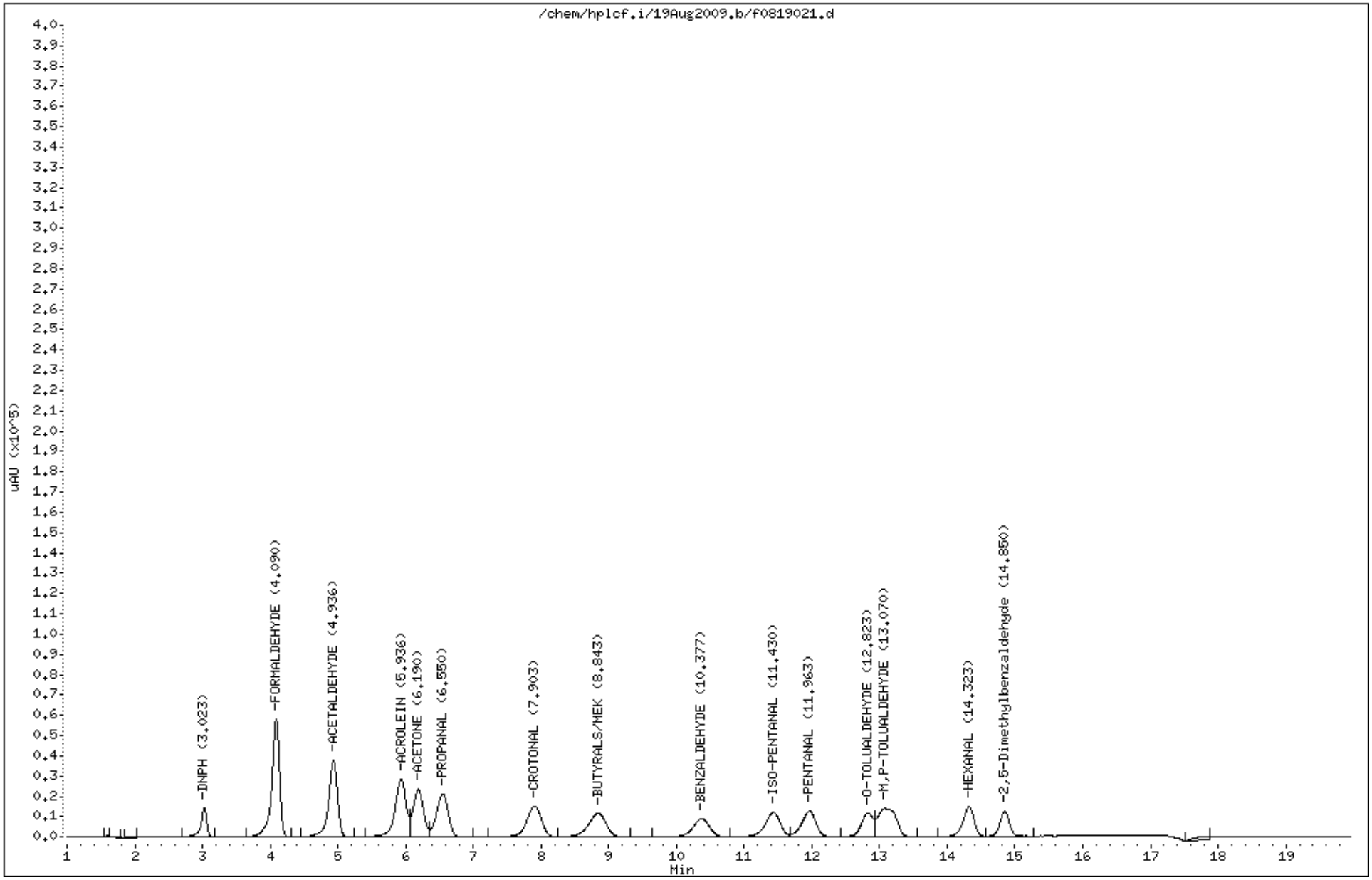
Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.023	3.023	0.000	86481	4.00000	
2 FORMALDEHYDE	4.090	4.090	0.000	464998	4.00000	4.17
3 ACETALDEHYDE	4.936	4.936	0.000	345359	4.00000	4.04
4 ACROLEIN	5.936	5.936	0.000	329098	4.00000	4.19
5 ACETONE	6.190	6.190	0.000	252264	4.00000	4.11
6 PROPANAL	6.550	6.550	0.000	255367	4.00000	4.07
7 CROTONAL	7.903	7.903	0.000	228619	4.00000	3.98
9 BUTYRALS/MEK	8.843	8.843	0.000	217403	4.00000	3.96
10 BENZALDEHYDE	10.377	10.377	0.000	155756	4.00000	3.80
11 ISO-PENTANAL	11.430	11.430	0.000	187051	4.00000	3.97
12 PENTANAL	11.963	11.963	0.000	182957	4.00000	3.92
14 O-TOLUALDEHYDE	12.823	12.823	0.000	138582	4.00000	3.86
15 M,P-TOLUALDEHYDE	13.070	13.070	0.000	259529	8.00000	7.62
16 HEXANAL	14.323	14.323	0.000	160689	4.00000	3.84
17 2,5-Dimethylbenzaldehyde	14.850	14.850	0.000	117362	4.00000	3.78

Data File: /chem/hplcf.i/19Aug2009.b/f0819021.d
Date : 19-AUG-2009 16:38
Client ID: L6
Sample Info: ;1331-138-4.0;L6
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819020.d
Lab Smp Id: 1331-138-4.0 Client Smp ID: L6
Inj Date : 19-AUG-2009 16:17
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-4.0;L6
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 16:17 Cal File: f0819020.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

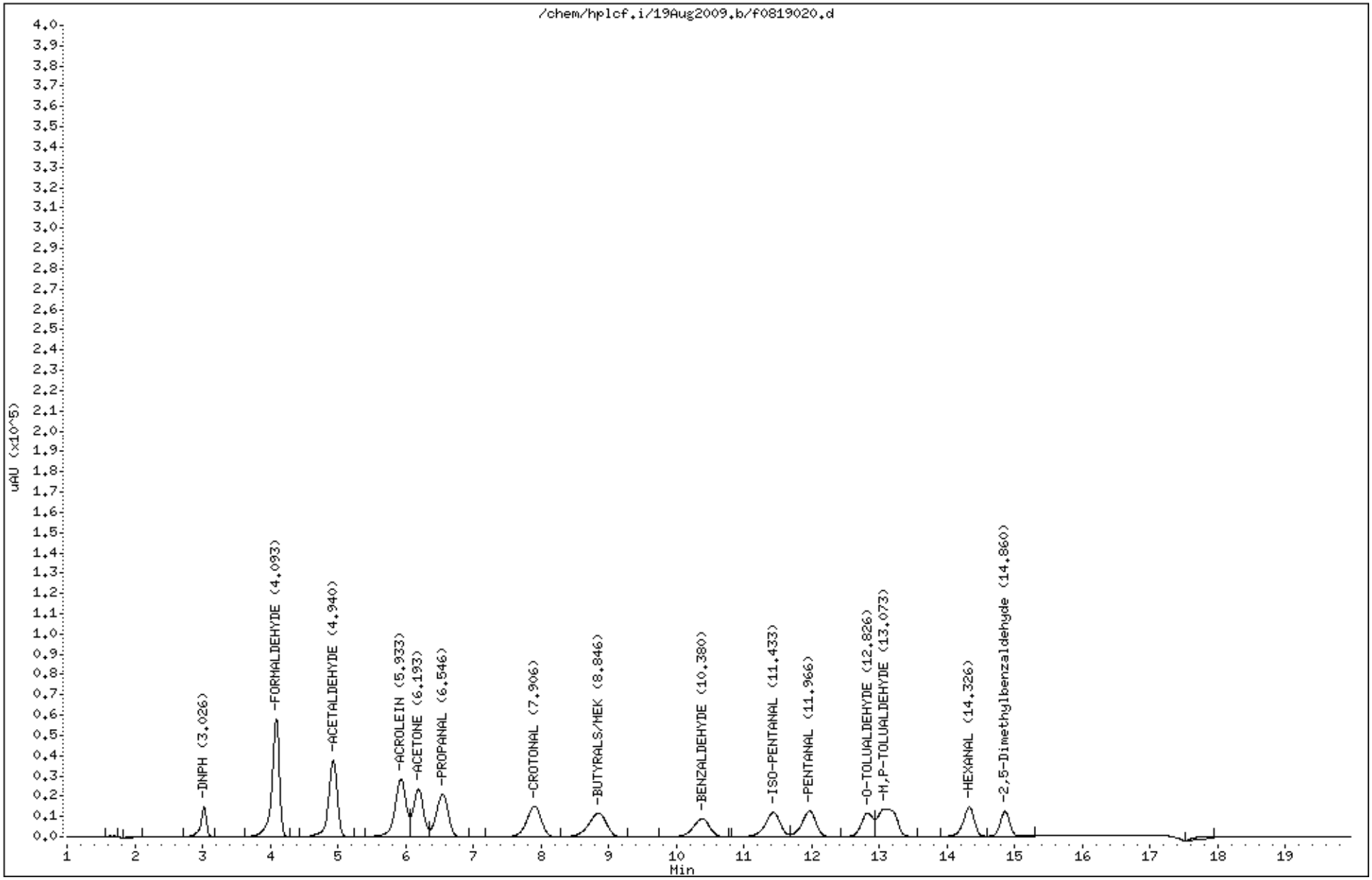
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.026	3.026	0.000	85723	4.00000	
2 FORMALDEHYDE	4.093	4.093	0.000	464653	4.00000	4.17
3 ACETALDEHYDE	4.940	4.940	0.000	346088	4.00000	4.05
4 ACROLEIN	5.933	5.933	0.000	329418	4.00000	4.22
5 ACETONE	6.193	6.193	0.000	250896	4.00000	4.10
6 PROPANAL	6.546	6.546	0.000	254892	4.00000	4.07
7 CROTONAL	7.906	7.906	0.000	228573	4.00000	3.97
9 BUTYRALS/MEK	8.846	8.846	0.000	217059	4.00000	3.95
10 BENZALDEHYDE	10.380	10.380	0.000	155362	4.00000	3.77
11 ISO-PENTANAL	11.433	11.433	0.000	185898	4.00000	3.94
12 PENTANAL	11.966	11.966	0.000	183421	4.00000	3.92
14 O-TOLUALDEHYDE	12.826	12.826	0.000	139299	4.00000	3.86
15 M,P-TOLUALDEHYDE	13.073	13.073	0.000	258751	8.00000	7.57
16 HEXANAL	14.326	14.326	0.000	160387	4.00000	3.82
17 2,5-Dimethylbenzaldehyde	14.860	14.860	0.000	116914	4.00000	3.75

0143

Data File: /chem/hplcf.i/19Aug2009.b/f0819020.d
Date : 19-AUG-2009 16:17
Client ID: L6
Sample Info: ;1331-138-4.0;L6
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819019.d
Lab Smp Id: 1331-138-4.0 Client Smp ID: L6
Inj Date : 19-AUG-2009 15:56
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-4.0;L6
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 15:56 Cal File: f0819019.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

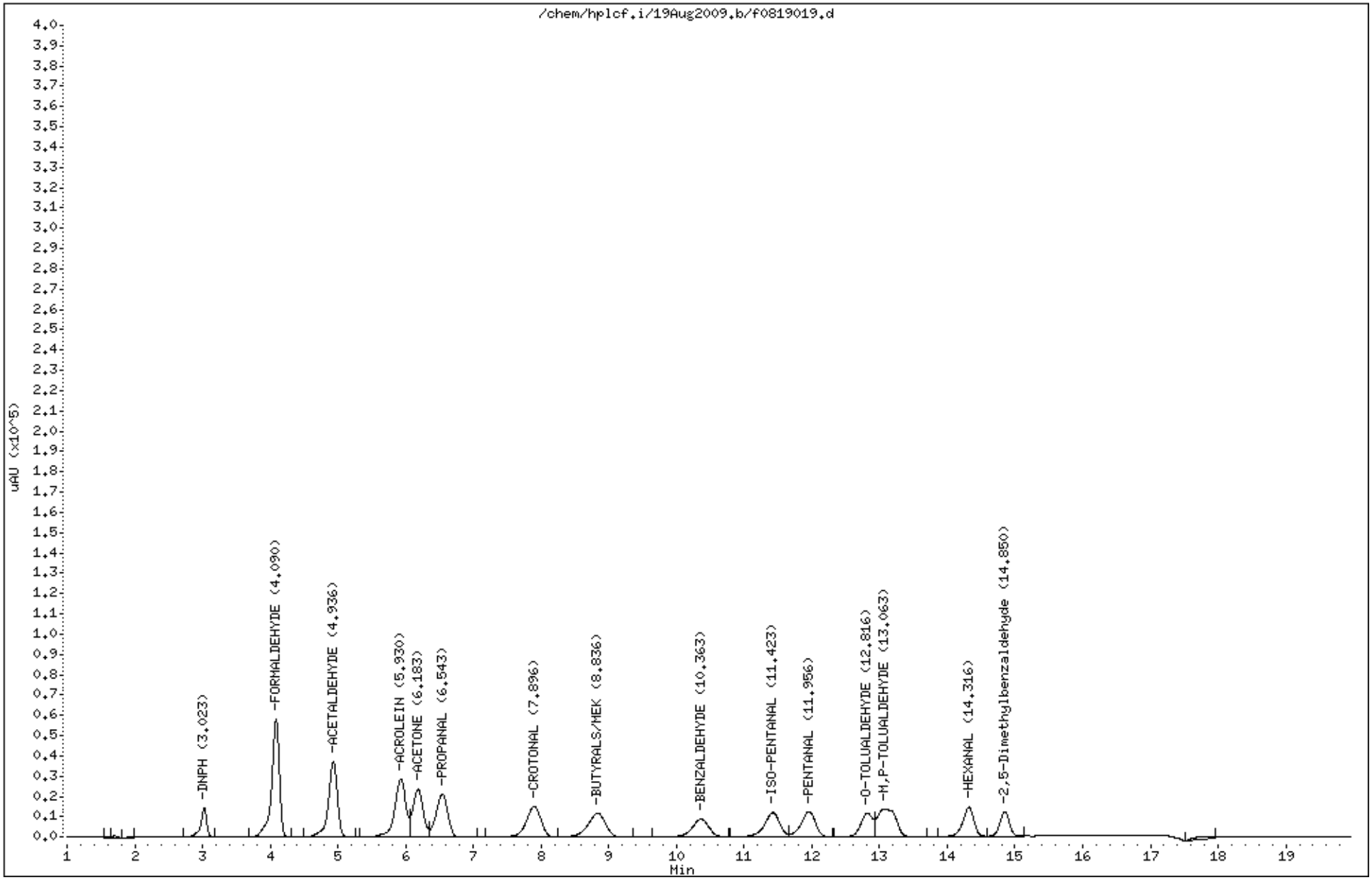
Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.023	3.023	0.000	87401	4.00000	
2 FORMALDEHYDE	4.090	4.090	0.000	464648	4.00000	4.19
3 ACETALDEHYDE	4.936	4.936	0.000	345379	4.00000	4.04
4 ACROLEIN	5.930	5.930	0.000	332758	4.00000	4.28
5 ACETONE	6.183	6.183	0.000	248146	4.00000	4.07
6 PROPANAL	6.543	6.543	0.000	253066	4.00000	4.05
7 CROTONAL	7.896	7.896	0.000	226524	4.00000	3.93
9 BUTYRALS/MEK	8.836	8.836	0.000	215259	4.00000	3.91
10 BENZALDEHYDE	10.363	10.363	0.000	154334	4.00000	3.73
11 ISO-PENTANAL	11.423	11.423	0.000	183898	4.00000	3.89
12 PENTANAL	11.956	11.956	0.000	179067	4.00000	3.82
14 O-TOLUALDEHYDE	12.816	12.816	0.000	138163	4.00000	3.82
15 M,P-TOLUALDEHYDE	13.063	13.063	0.000	257297	8.00000	7.50
16 HEXANAL	14.316	14.316	0.000	160638	4.00000	3.81
17 2,5-Dimethylbenzaldehyde	14.850	14.850	0.000	116025	4.00000	3.70

Data File: /chem/hplcf.i/19Aug2009.b/f0819019.d
Date : 19-AUG-2009 15:56
Client ID: L6
Sample Info: ;1331-138-4.0;L6
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819024.d
Lab Smp Id: 1331-138-10 Client Smp ID: L7
Inj Date : 19-AUG-2009 17:41
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-10;L7
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 17:41 Cal File: f0819024.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

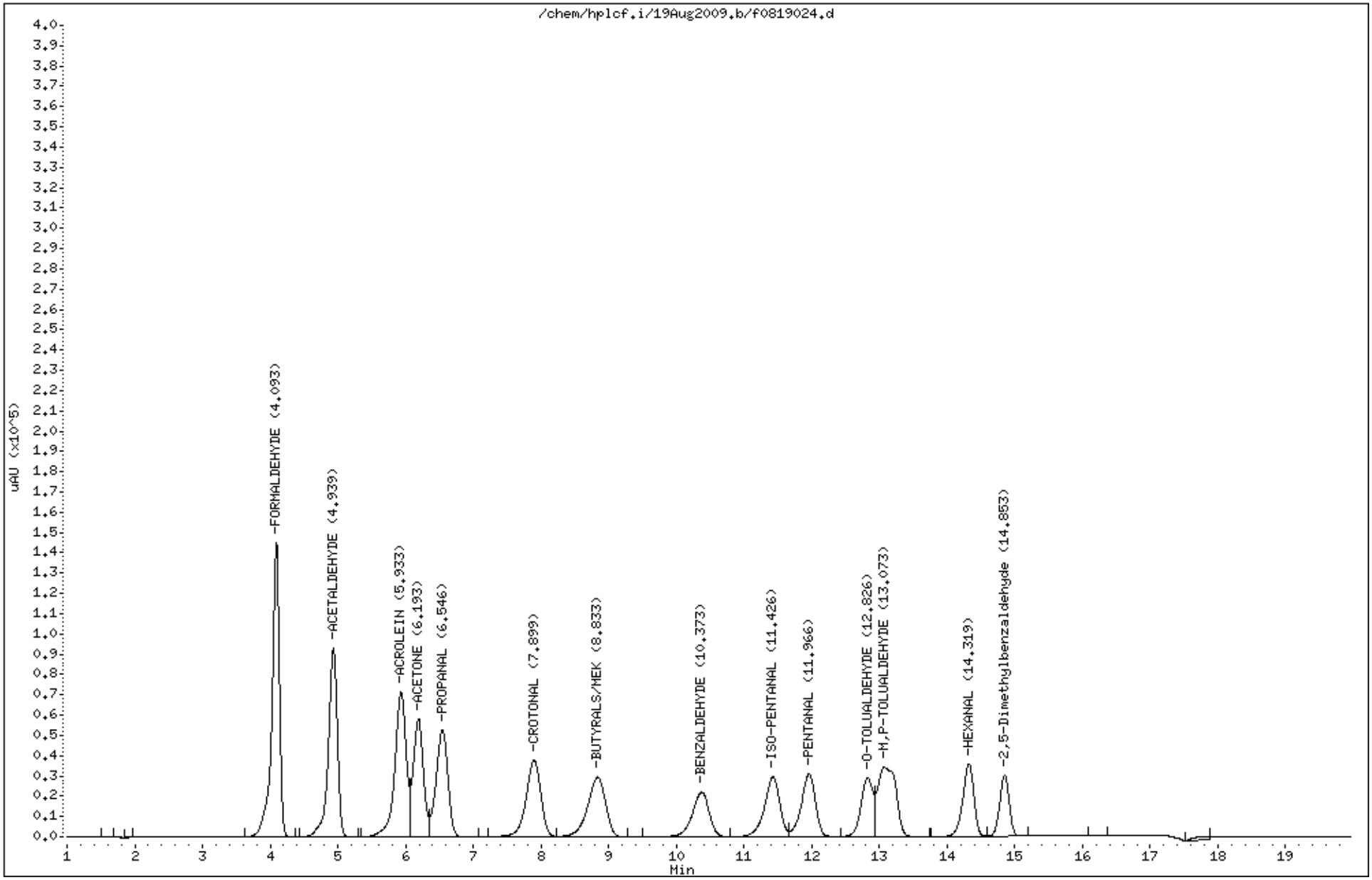
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	Compound Not Detected.					
2 FORMALDEHYDE	4.093	4.093	0.000	1160792	10.0000	10.3
3 ACETALDEHYDE	4.939	4.939	0.000	861005	10.0000	10.0
4 ACROLEIN	5.933	5.933	0.000	832689	10.0000	10.5
5 ACETONE	6.193	6.193	0.000	625050	10.0000	10.1
6 PROPANAL	6.546	6.546	0.000	630060	10.0000	10.0
7 CROTONAL	7.899	7.899	0.000	568885	10.0000	9.91
9 BUTYRALS/MEK	8.833	8.833	0.000	540455	10.0000	9.87
10 BENZALDEHYDE	10.373	10.373	0.000	388413	10.0000	9.58
11 ISO-PENTANAL	11.426	11.426	0.000	464312	10.0000	9.87
12 PENTANAL	11.966	11.966	0.000	452628	10.0000	9.76
14 O-TOLUALDEHYDE	12.826	12.826	0.000	349775	10.0000	9.80
15 M,P-TOLUALDEHYDE	13.073	13.073	0.000	638302	20.0000	18.9
16 HEXANAL	14.319	14.319	0.000	400417	10.0000	9.65
17 2,5-Dimethylbenzaldehyde	14.853	14.853	0.000	288379	10.0000	9.42

0147

Data File: /chem/hplcf.i/19Aug2009.b/f0819024.d
Date : 19-AUG-2009 17:41
Client ID: L7
Sample Info: ;1331-138-10;L7
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819023.d
Lab Smp Id: 1331-138-10 Client Smp ID: L7
Inj Date : 19-AUG-2009 17:20
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-10;L7
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 17:20 Cal File: f0819023.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

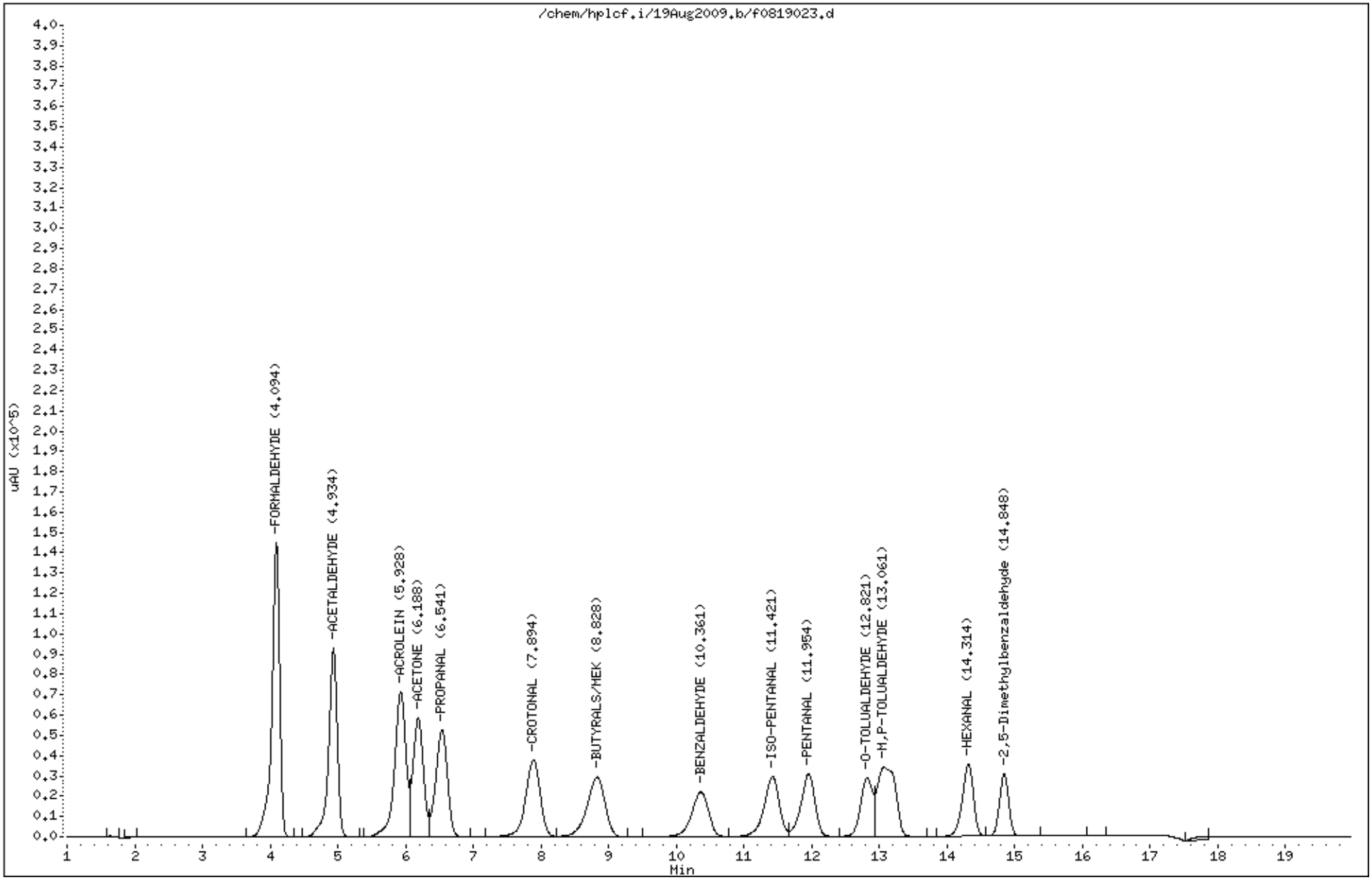
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	Compound Not Detected.					
2 FORMALDEHYDE	4.094	4.094	0.000	1161251	10.0000	10.4
3 ACETALDEHYDE	4.934	4.934	0.000	861245	10.0000	10.1
4 ACROLEIN	5.928	5.928	0.000	828163	10.0000	10.5
5 ACETONE	6.188	6.188	0.000	628750	10.0000	10.2
6 PROPANAL	6.541	6.541	0.000	630799	10.0000	10.0
7 CROTONAL	7.894	7.894	0.000	569157	10.0000	9.91
9 BUTYRALS/MEK	8.828	8.828	0.000	541060	10.0000	9.87
10 BENZALDEHYDE	10.361	10.361	0.000	388590	10.0000	9.55
11 ISO-PENTANAL	11.421	11.421	0.000	464879	10.0000	9.88
12 PENTANAL	11.954	11.954	0.000	452277	10.0000	9.74
14 O-TOLUALDEHYDE	12.821	12.821	0.000	350516	10.0000	9.80
15 M,P-TOLUALDEHYDE	13.061	13.061	0.000	637876	20.0000	18.9
16 HEXANAL	14.314	14.314	0.000	399335	10.0000	9.60
17 2,5-Dimethylbenzaldehyde	14.848	14.848	0.000	289220	10.0000	9.41

0149

Data File: /chem/hplcf.i/19Aug2009.b/f0819023.d
Date : 19-AUG-2009 17:20
Client ID: L7
Sample Info: ;1331-138-10;L7
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819022.d
Lab Smp Id: 1331-138-10 Client Smp ID: L7
Inj Date : 19-AUG-2009 16:59
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-10;L7
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 16:59 Cal File: f0819022.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	Compound Not Detected.					
2 FORMALDEHYDE	4.088	4.088	0.000	1162679	10.0000	10.4
3 ACETALDEHYDE	4.934	4.934	0.000	861919	10.0000	10.1
4 ACROLEIN	5.934	5.934	0.000	825566	10.0000	10.5
5 ACETONE	6.188	6.188	0.000	629423	10.0000	10.2
6 PROPANAL	6.541	6.541	0.000	633251	10.0000	10.1
7 CROTONAL	7.894	7.894	0.000	569442	10.0000	9.91
9 BUTYRALS/MEK	8.834	8.834	0.000	540622	10.0000	9.85
10 BENZALDEHYDE	10.367	10.367	0.000	388480	10.0000	9.52
11 ISO-PENTANAL	11.428	11.428	0.000	465577	10.0000	9.88
12 PENTANAL	11.961	11.961	0.000	452114	10.0000	9.71
14 O-TOLUALDEHYDE	12.828	12.828	0.000	344484	10.0000	9.62
15 M,P-TOLUALDEHYDE	13.068	13.068	0.000	643463	20.0000	19.0
16 HEXANAL	14.321	14.321	0.000	400309	10.0000	9.60
17 2,5-Dimethylbenzaldehyde	14.854	14.854	0.000	289174	10.0000	9.37

Data File: /chem/hplcf.i/19Aug2009.b/f0819022.d

Date : 19-AUG-2009 16:59

Client ID: L7

Sample Info: ;1331-138-10;L7

Purge Volume: 5.0

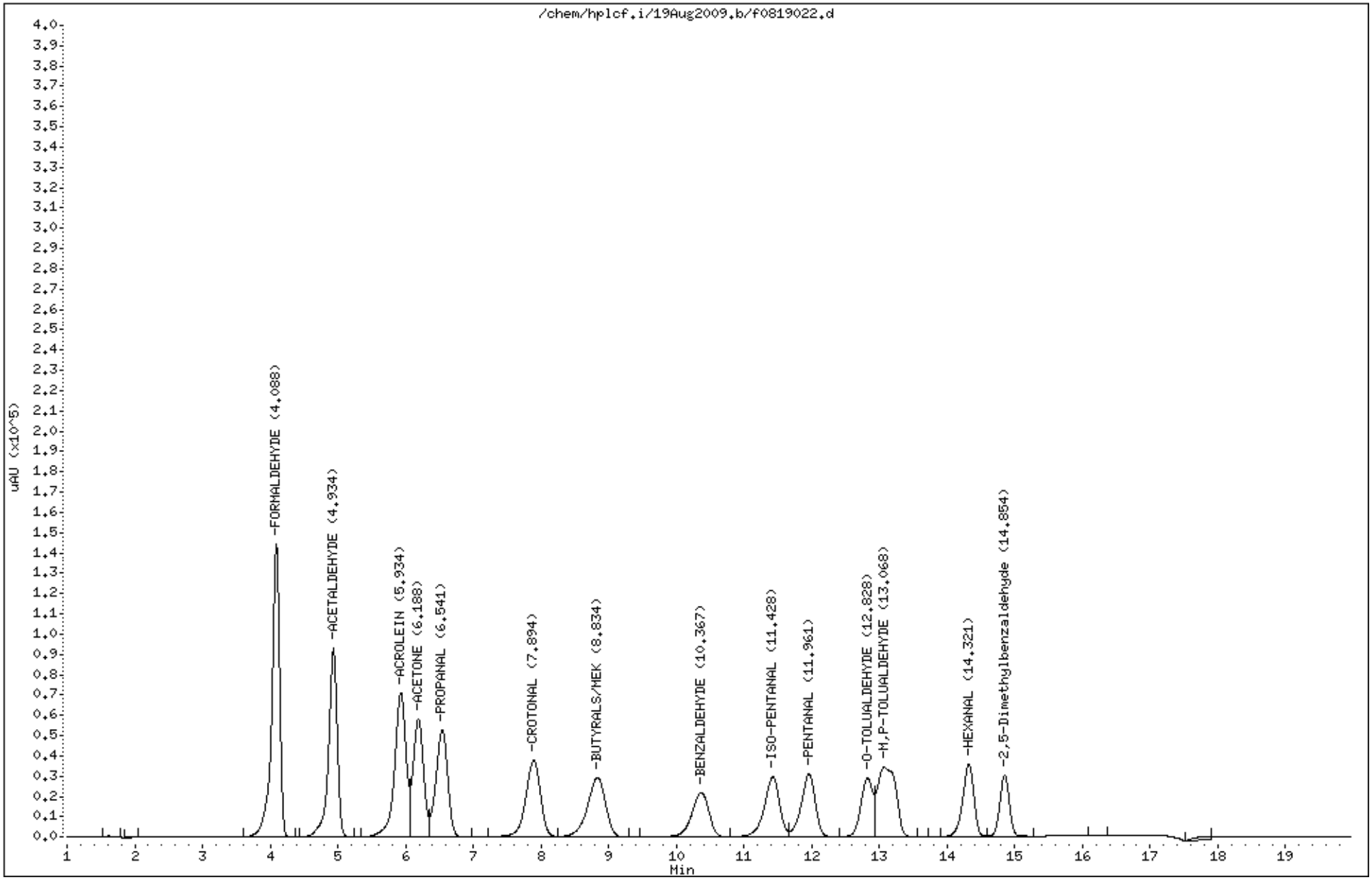
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: LZ

Column diameter: 2.00

0151



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819027.d
Lab Smp Id: 1331-138-20 Client Smp ID: L8
Inj Date : 19-AUG-2009 18:43
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-20;L8
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 18:43 Cal File: f0819027.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.092	3.092	0.000	4287	20.0000	
2 FORMALDEHYDE	4.092	4.092	0.000	2327000	20.0000	20.6
3 ACETALDEHYDE	4.939	4.939	0.000	1724398	20.0000	20.1
4 ACROLEIN	5.932	5.932	0.000	1663354	20.0000	20.8
5 ACETONE	6.192	6.192	0.000	1255989	20.0000	20.3
6 PROPANAL	6.545	6.545	0.000	1264402	20.0000	20.1
7 CROTONAL	7.899	7.899	0.000	1142131	20.0000	19.9
9 BUTYRALS/MEK	8.839	8.839	0.000	1084877	20.0000	19.8
10 BENZALDEHYDE	10.372	10.372	0.000	777222	20.0000	19.3
11 ISO-PENTANAL	11.425	11.425	0.000	929571	20.0000	19.8
12 PENTANAL	11.959	11.959	0.000	906906	20.0000	19.6
14 O-TOLUALDEHYDE	12.825	12.825	0.000	703201	20.0000	19.8
15 M,P-TOLUALDEHYDE	13.065	13.065	0.000	1278103	40.0000	38.2
16 HEXANAL	14.319	14.319	0.000	802045	20.0000	19.4
17 2,5-Dimethylbenzaldehyde	14.845	14.845	0.000	579193	20.0000	19.1

Data File: /chem/hplcf.i/19Aug2009.b/f0819027.d

Date : 19-AUG-2009 18:43

Client ID: L8

Instrument: hplcf.i

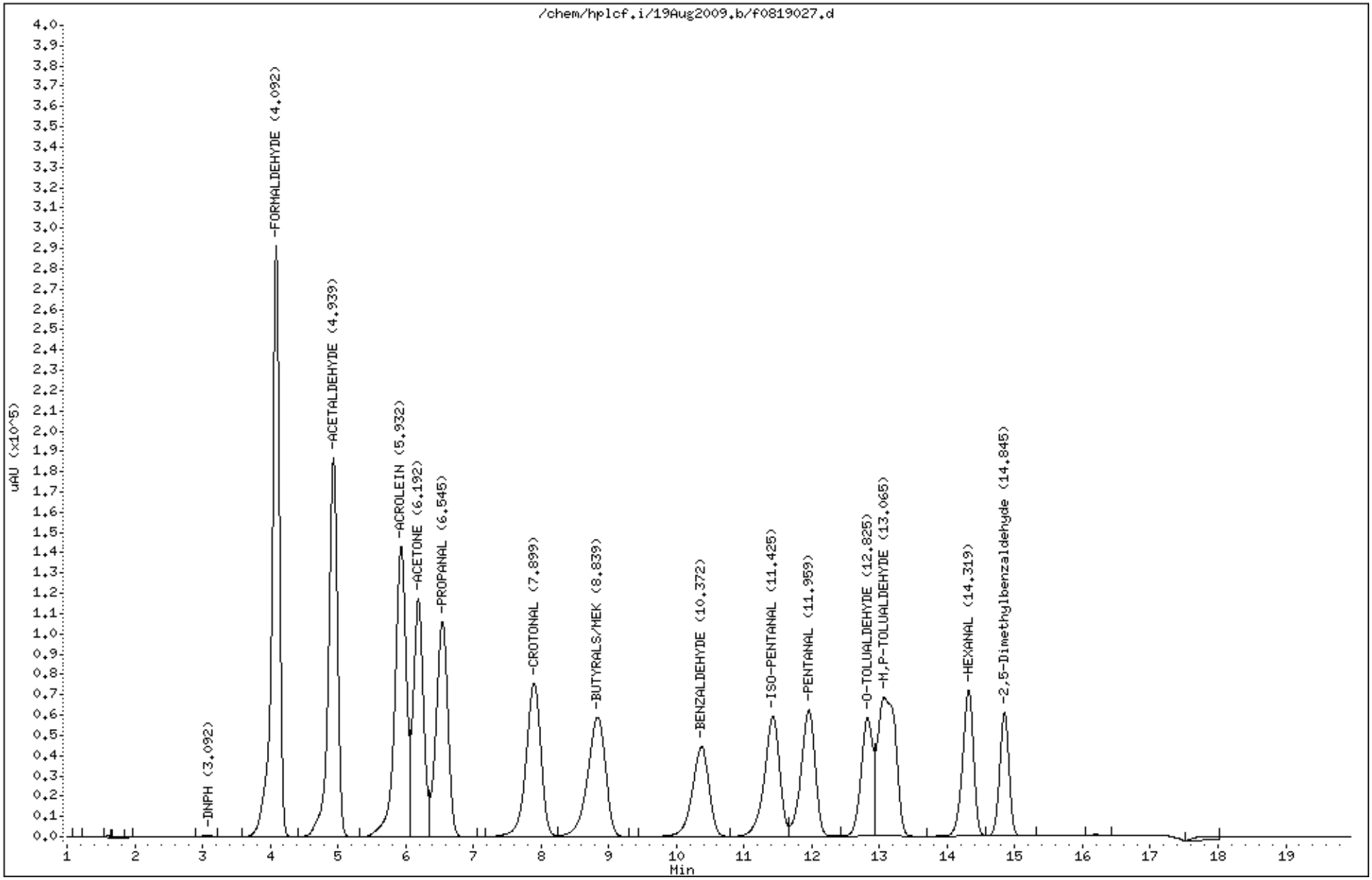
Sample Info: ;1331-138-20;L8

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0153

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819026.d
Lab Smp Id: 1331-138-20 Client Smp ID: L8
Inj Date : 19-AUG-2009 18:23
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-20;L8
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 18:23 Cal File: f0819026.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.044	3.044	0.000	1771	20.0000	
2 FORMALDEHYDE	4.091	4.091	0.000	2327435	20.0000	20.7
3 ACETALDEHYDE	4.938	4.938	0.000	1726343	20.0000	20.1
4 ACROLEIN	5.938	5.938	0.000	1657382	20.0000	20.8
5 ACETONE	6.191	6.191	0.000	1259816	20.0000	20.4
6 PROPANAL	6.544	6.544	0.000	1269907	20.0000	20.2
7 CROTONAL	7.898	7.898	0.000	1143755	20.0000	19.9
9 BUTYRALS/MEK	8.831	8.831	0.000	1087360	20.0000	19.9
10 BENZALDEHYDE	10.364	10.364	0.000	778010	20.0000	19.3
11 ISO-PENTANAL	11.424	11.424	0.000	930723	20.0000	19.8
12 PENTANAL	11.958	11.958	0.000	909171	20.0000	19.6
14 O-TOLUALDEHYDE	12.824	12.824	0.000	692251	20.0000	19.4
15 M,P-TOLUALDEHYDE	13.064	13.064	0.000	1291538	40.0000	38.5
16 HEXANAL	14.318	14.318	0.000	803037	20.0000	19.4
17 2,5-Dimethylbenzaldehyde	14.851	14.851	0.000	579170	20.0000	19.0

Data File: /chem/hplcf.i/19Aug2009.b/f0819026.d

Date : 19-AUG-2009 18:23

Client ID: L8

Sample Info: ;1331-138-20;L8

Purge Volume: 5.0

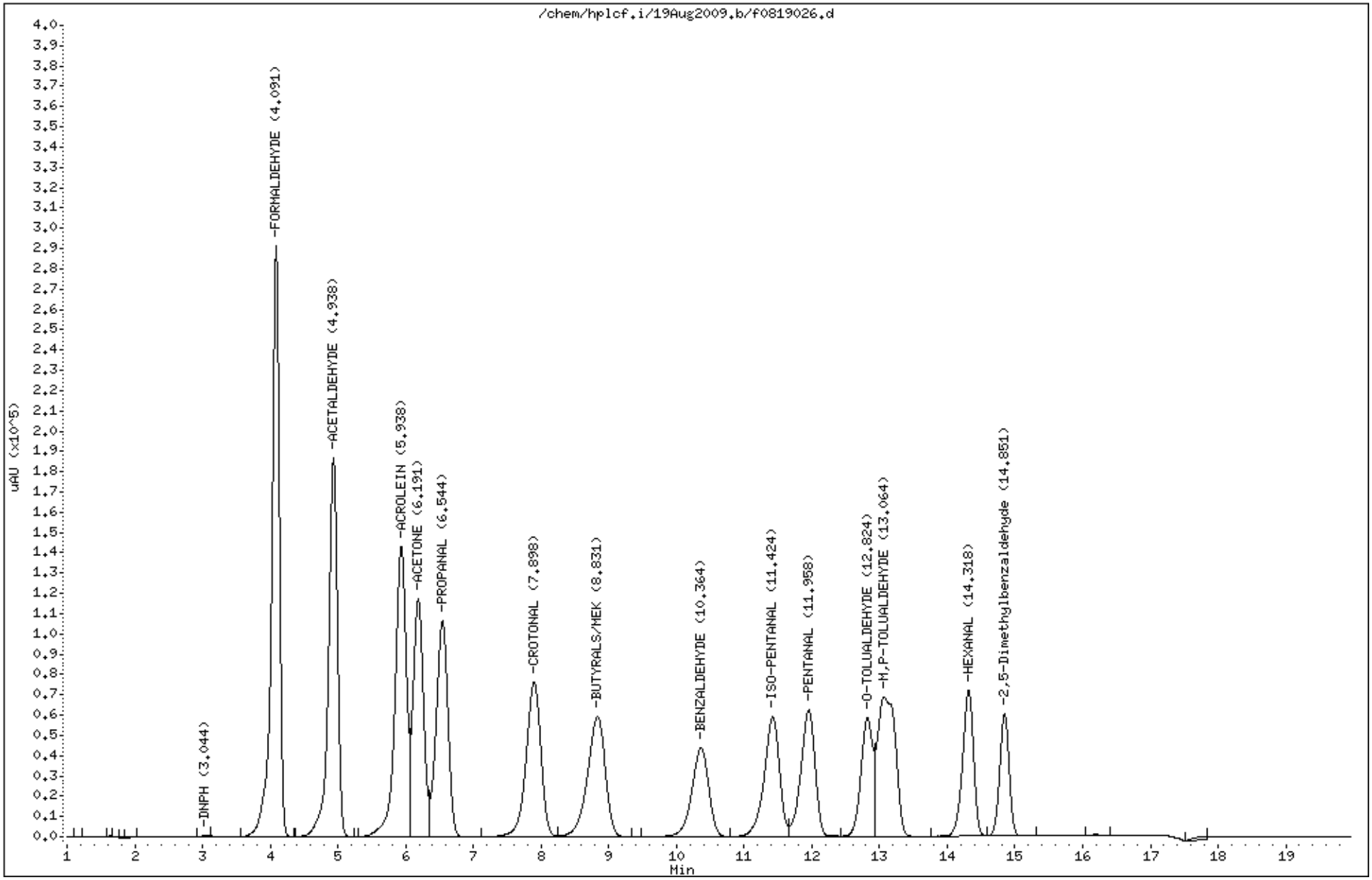
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: LZ

Column diameter: 2.00

0155



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819025.d
Lab Smp Id: 1331-138-20 Client Smp ID: L8
Inj Date : 19-AUG-2009 18:02
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-20;L8
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 18:02 Cal File: f0819025.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.044	3.044	0.000	3514	20.0000	
2 FORMALDEHYDE	4.091	4.091	0.000	2326198	20.0000	20.7
3 ACETALDEHYDE	4.944	4.944	0.000	1726678	20.0000	20.2
4 ACROLEIN	5.944	5.944	0.000	1651764	20.0000	20.8
5 ACETONE	6.197	6.197	0.000	1259653	20.0000	20.4
6 PROPANAL	6.551	6.551	0.000	1274389	20.0000	20.3
7 CROTONAL	7.911	7.911	0.000	1144761	20.0000	20.0
9 BUTYRALS/MEK	8.851	8.851	0.000	1089940	20.0000	19.9
10 BENZALDEHYDE	10.384	10.384	0.000	778484	20.0000	19.2
11 ISO-PENTANAL	11.438	11.438	0.000	929698	20.0000	19.8
12 PENTANAL	11.964	11.964	0.000	911402	20.0000	19.7
14 O-TOLUALDEHYDE	12.831	12.831	0.000	700133	20.0000	19.6
15 M,P-TOLUALDEHYDE	13.078	13.078	0.000	1285434	40.0000	38.2
16 HEXANAL	14.324	14.324	0.000	801919	20.0000	19.4
17 2,5-Dimethylbenzaldehyde	14.851	14.851	0.000	578574	20.0000	19.0

Data File: /chem/hplcf.i/19Aug2009.b/f0819025.d

Date : 19-AUG-2009 18:02

Client ID: L8

Sample Info: ;1331-138-20;L8

Purge Volume: 5.0

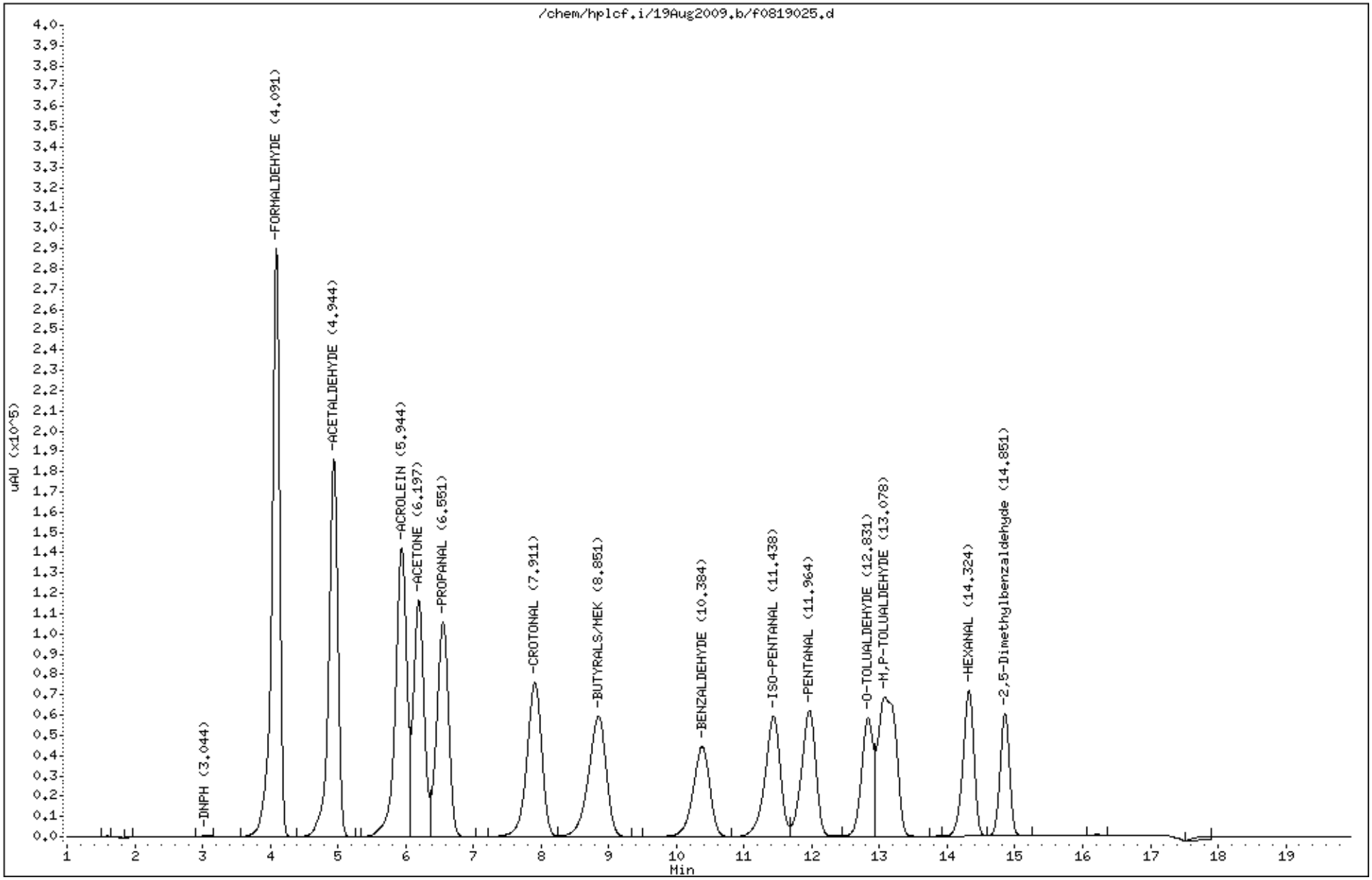
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: LZ

Column diameter: 2.00

0157



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819030.d
Lab Smp Id: 1331-138-50 Client Smp ID: L9
Inj Date : 19-AUG-2009 19:46
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-50;L9
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 19:46 Cal File: f0819030.d
Als bottle: 1 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.042	3.042	0.000	3907	50.0000	
2 FORMALDEHYDE	4.089	4.089	0.000	5856519	50.0000	51.7
3 ACETALDEHYDE	4.935	4.935	0.000	4341787	50.0000	50.6
4 ACROLEIN	5.929	5.929	0.000	4214220	50.0000	52.4
5 ACETONE	6.182	6.182	0.000	3132318	50.0000	50.5
6 PROPANAL	6.535	6.535	0.000	3190715	50.0000	50.6
7 CROTONAL	7.889	7.889	0.000	2903279	50.0000	50.6
9 BUTYRALS/MEK	8.822	8.822	0.000	2756958	50.0000	50.4
10 BENZALDEHYDE	10.362	10.362	0.000	1955012	50.0000	48.7
11 ISO-PENTANAL	11.415	11.415	0.000	2337569	50.0000	49.8
12 PENTANAL	11.942	11.942	0.000	2280605	50.0000	49.4
14 O-TOLUALDEHYDE	12.815	12.815	0.000	1746219	50.0000	49.1
15 M,P-TOLUALDEHYDE	13.055	13.055	0.000	3241394	100.000	97.3
16 HEXANAL	14.302	14.302	0.000	2018868	50.0000	49.1
17 2,5-Dimethylbenzaldehyde	14.842	14.842	0.000	1456712	50.0000	48.3

Data File: /chem/hplcf.i/19Aug2009.b/f0819030.d

Date : 19-AUG-2009 19:46

Client ID: L9

Sample Info: ;1331-138-50;L9

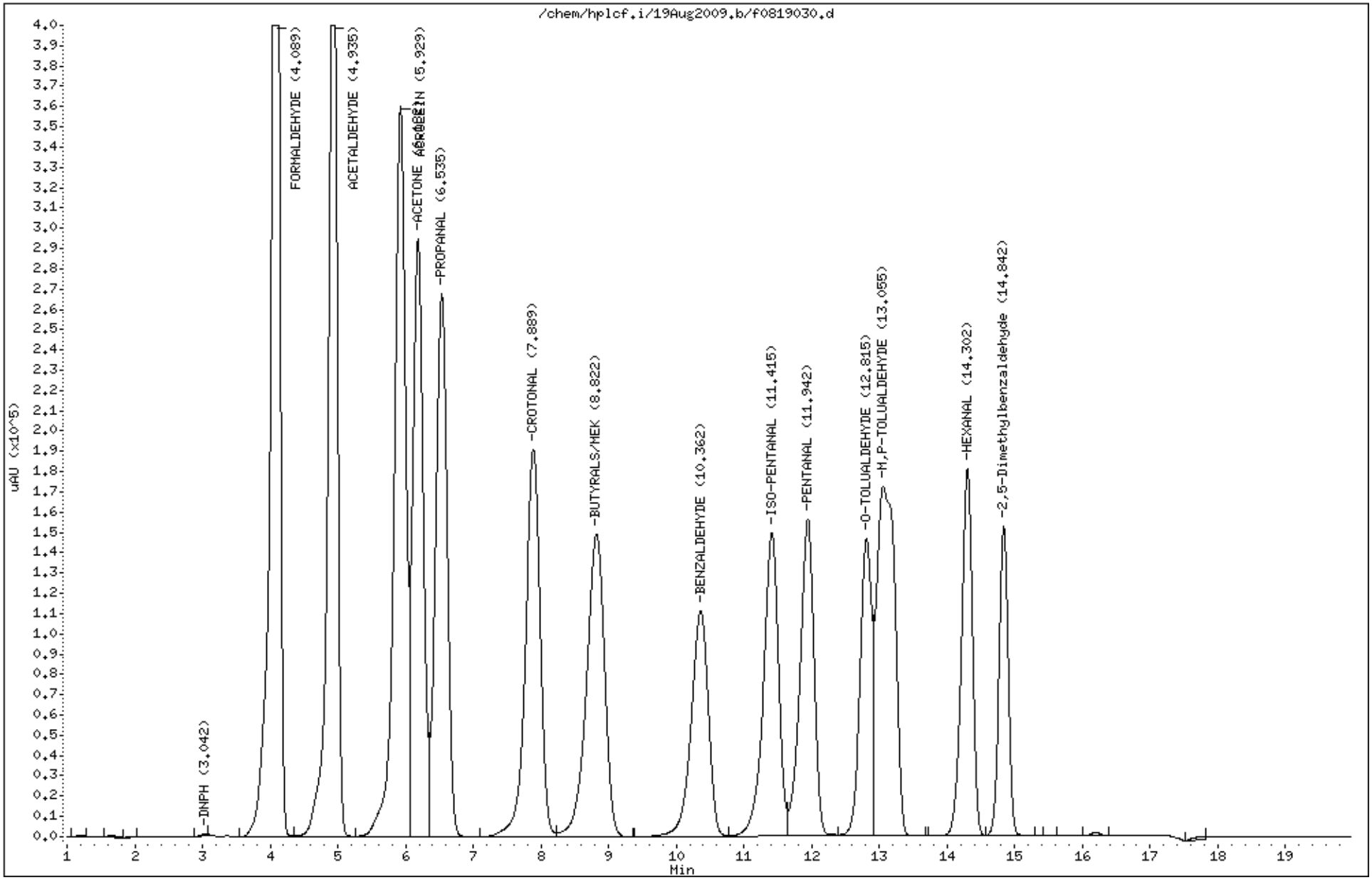
Purge Volume: 5.0

Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: LZ

Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819029.d
Lab Smp Id: 1331-138-50 Client Smp ID: L9
Inj Date : 19-AUG-2009 19:25
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-50;L9
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 19:25 Cal File: f0819029.d
Als bottle: 1 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.035	3.035	0.000	3628	50.0000	
2 FORMALDEHYDE	4.088	4.088	0.000	5855194	50.0000	51.8
3 ACETALDEHYDE	4.935	4.935	0.000	4340372	50.0000	50.6
4 ACROLEIN	5.935	5.935	0.000	4171469	50.0000	51.9
5 ACETONE	6.188	6.188	0.000	3172591	50.0000	51.2
6 PROPANAL	6.542	6.542	0.000	3189975	50.0000	50.6
7 CROTONAL	7.895	7.895	0.000	2875815	50.0000	50.1
9 BUTYRALS/MEK	8.828	8.828	0.000	2732926	50.0000	50.0
10 BENZALDEHYDE	10.361	10.361	0.000	1954003	50.0000	48.7
11 ISO-PENTANAL	11.422	11.422	0.000	2335709	50.0000	49.8
12 PENTANAL	11.948	11.948	0.000	2282270	50.0000	49.4
14 O-TOLUALDEHYDE	12.822	12.822	0.000	1779136	50.0000	50.0
15 M,P-TOLUALDEHYDE	13.062	13.062	0.000	3205569	100.000	96.1
16 HEXANAL	14.315	14.315	0.000	2017641	50.0000	49.0
17 2,5-Dimethylbenzaldehyde	14.841	14.841	0.000	1455891	50.0000	48.2

Data File: /chem/hplcf.i/19Aug2009.b/f0819029.d

Date : 19-AUG-2009 19:25

Client ID: L9

Sample Info: ;1331-138-50;L9

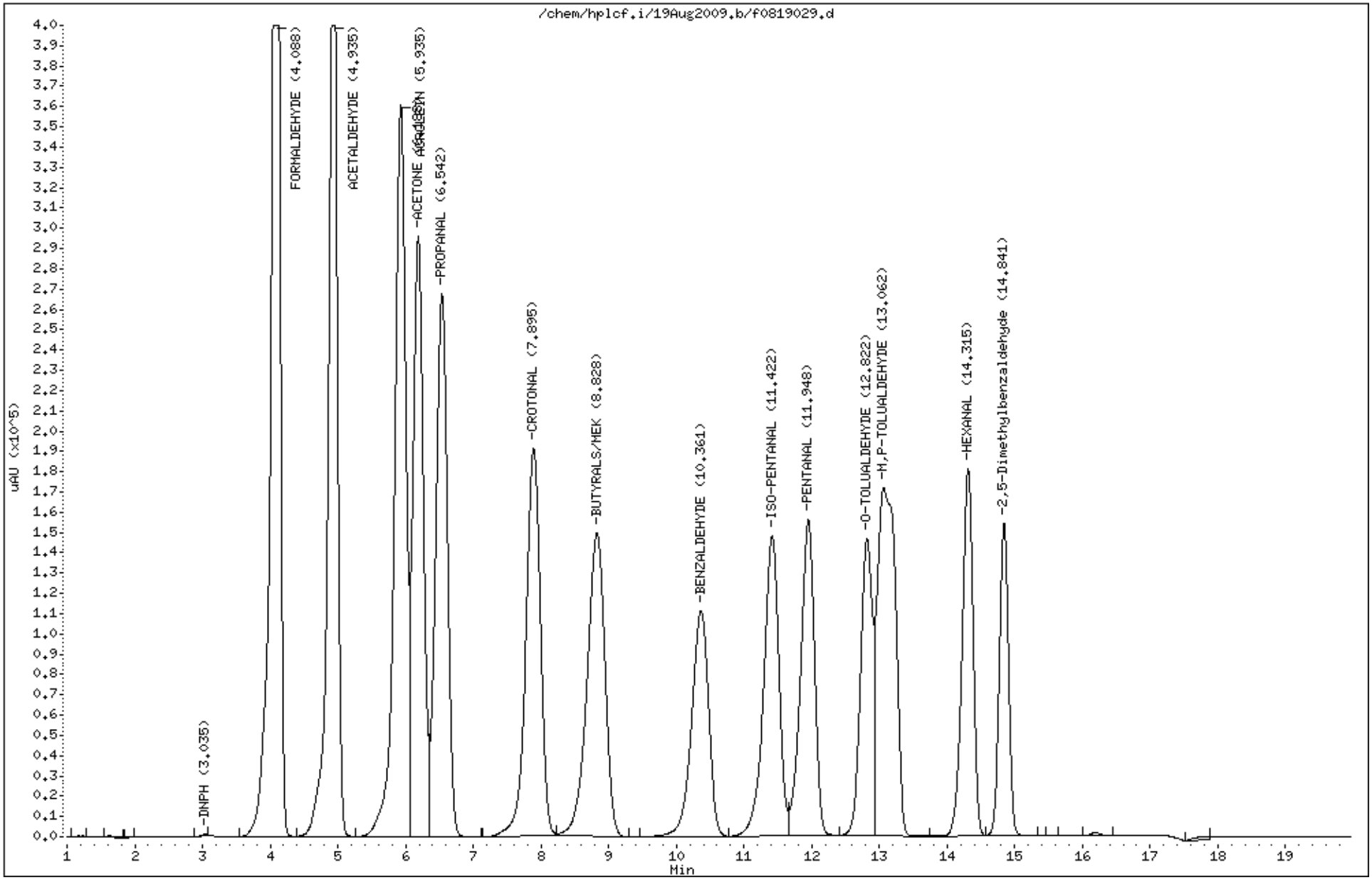
Purge Volume: 5.0

Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: LZ

Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819028.d
Lab Smp Id: 1331-138-50 Client Smp ID: L9
Inj Date : 19-AUG-2009 19:04
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-50;L9
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 19:04 Cal File: f0819028.d
Als bottle: 1 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.036	3.036	0.000	4072	50.0000	
2 FORMALDEHYDE	4.090	4.090	0.000	5855197	50.0000	51.8
3 ACETALDEHYDE	4.936	4.936	0.000	4341401	50.0000	50.6
4 ACROLEIN	5.936	5.936	0.000	4176438	50.0000	52.1
5 ACETONE	6.190	6.190	0.000	3174715	50.0000	51.3
6 PROPANAL	6.543	6.543	0.000	3185573	50.0000	50.6
7 CROTONAL	7.896	7.896	0.000	2876102	50.0000	50.1
9 BUTYRALS/MEK	8.830	8.830	0.000	2734186	50.0000	50.0
10 BENZALDEHYDE	10.370	10.370	0.000	1954164	50.0000	48.6
11 ISO-PENTANAL	11.423	11.423	0.000	2340569	50.0000	49.9
12 PENTANAL	11.956	11.956	0.000	2279519	50.0000	49.4
14 O-TOLUALDEHYDE	12.823	12.823	0.000	1768707	50.0000	49.7
15 M,P-TOLUALDEHYDE	13.063	13.063	0.000	3218663	100.000	96.3
16 HEXANAL	14.310	14.310	0.000	2019071	50.0000	49.0
17 2,5-Dimethylbenzaldehyde	14.850	14.850	0.000	1457104	50.0000	48.1

Data File: /chem/hplcf.i/19Aug2009.b/f0819028.d

Date : 19-AUG-2009 19:04

Client ID: L9

Sample Info: ;1331-138-50;L9

Purge Volume: 5.0

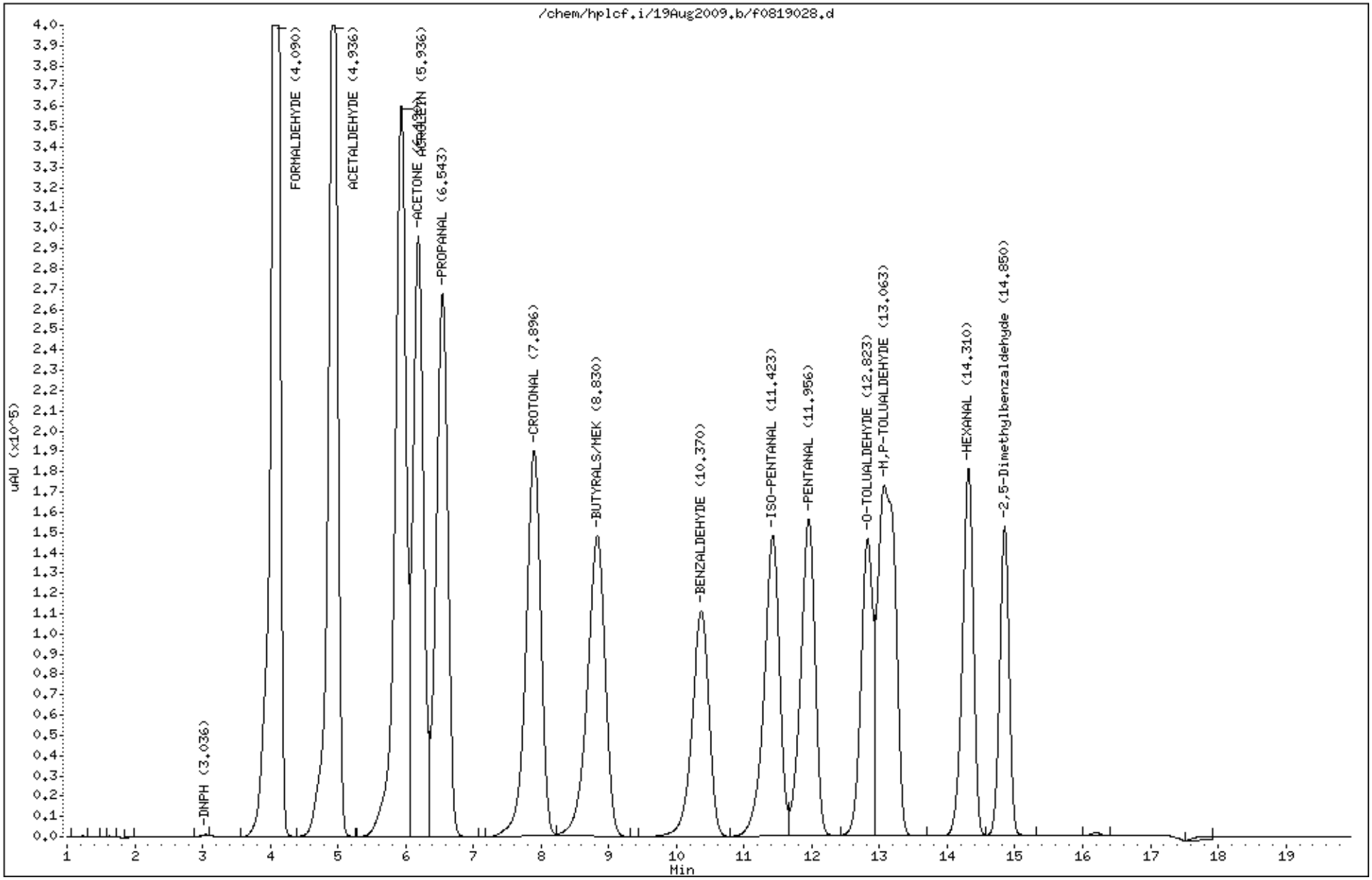
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: LZ

Column diameter: 2.00

0163



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819033.d
Lab Smp Id: 1331-138-75 Client Smp ID: L10
Inj Date : 19-AUG-2009 20:49
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-75;L10
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.032	3.032	0.000	15072	75.0000	
2 FORMALDEHYDE	4.086	4.086	0.000	8760098	75.0000	77.1(A)
3 ACETALDEHYDE	4.932	4.932	0.000	6508786	75.0000	75.7(A)
4 ACROLEIN	5.926	5.926	0.000	6253630	75.0000	77.4(A)
5 ACETONE	6.179	6.179	0.000	4753346	75.0000	76.4(A)
6 PROPANAL	6.532	6.532	0.000	4787785	75.0000	75.8(A)
7 CROTONAL	7.886	7.886	0.000	4315812	75.0000	75.2
9 BUTYRALS/MEK	8.819	8.819	0.000	4101975	75.0000	75.0
10 BENZALDEHYDE	10.359	10.359	0.000	2931154	75.0000	73.3
11 ISO-PENTANAL	11.412	11.412	0.000	3508625	75.0000	74.8
12 PENTANAL	11.946	11.946	0.000	3425968	75.0000	74.4
14 O-TOLUALDEHYDE	12.812	12.812	0.000	2642016	75.0000	74.4
15 M,P-TOLUALDEHYDE	13.059	13.059	0.000	4841070	150.000	146
16 HEXANAL	14.299	14.299	0.000	3023093	75.0000	73.7
17 2,5-Dimethylbenzaldehyde	14.839	14.839	0.000	2182983	75.0000	72.7

QC Flag Legend

A - Target compound detected but, quantitated amount
exceeded maximum amount.

Data File: /chem/hplcf.i/19Aug2009.b/f0819033.d

Date : 19-AUG-2009 20:49

Client ID: L10

Sample Info: ;1331-138-75;L10

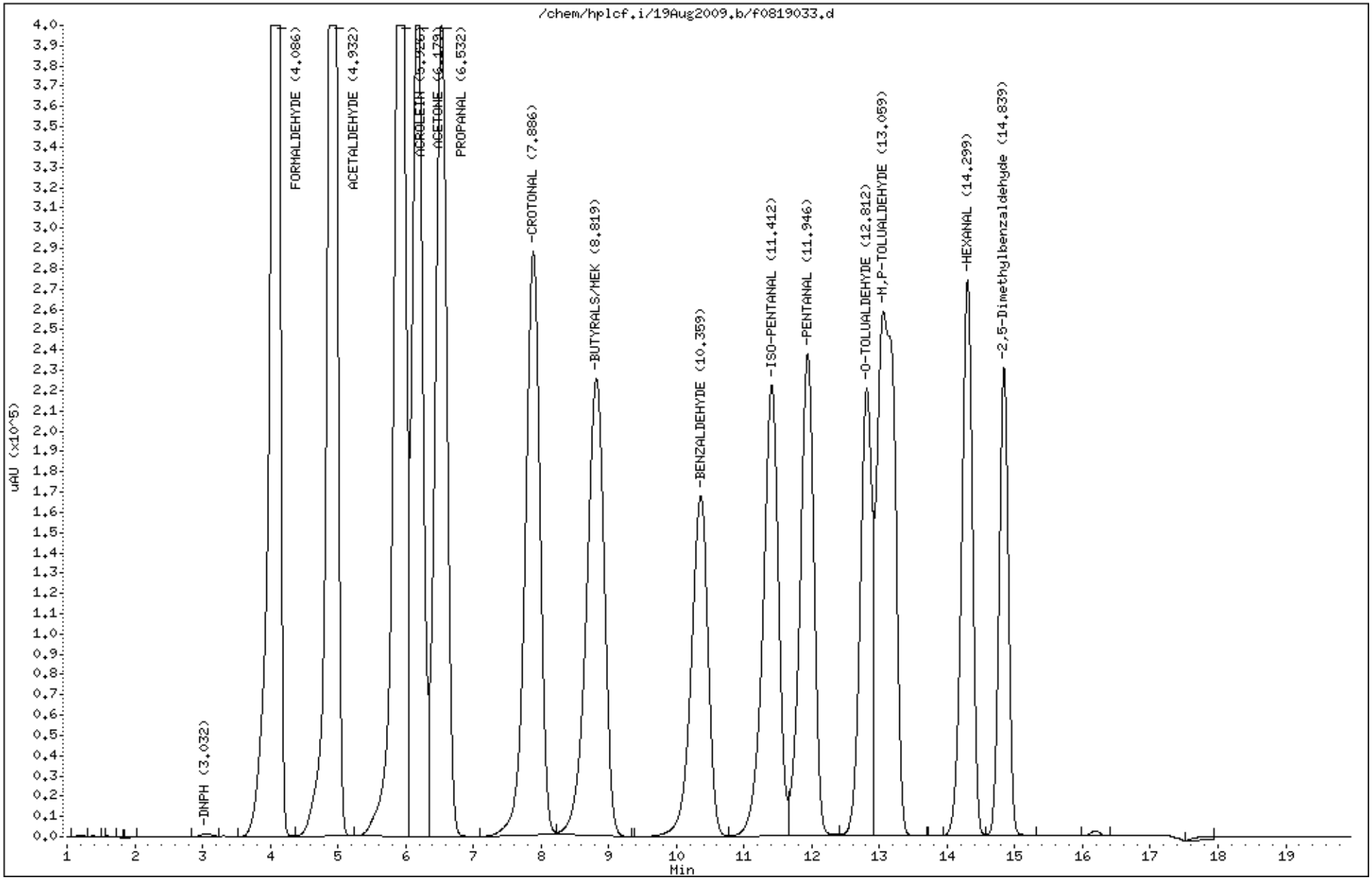
Purge Volume: 5.0

Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: LZ

Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819032.d
Lab Smp Id: 1331-138-75 Client Smp ID: L10
Inj Date : 19-AUG-2009 20:28
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-75;L10
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:28 Cal File: f0819032.d
Als bottle: 1 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

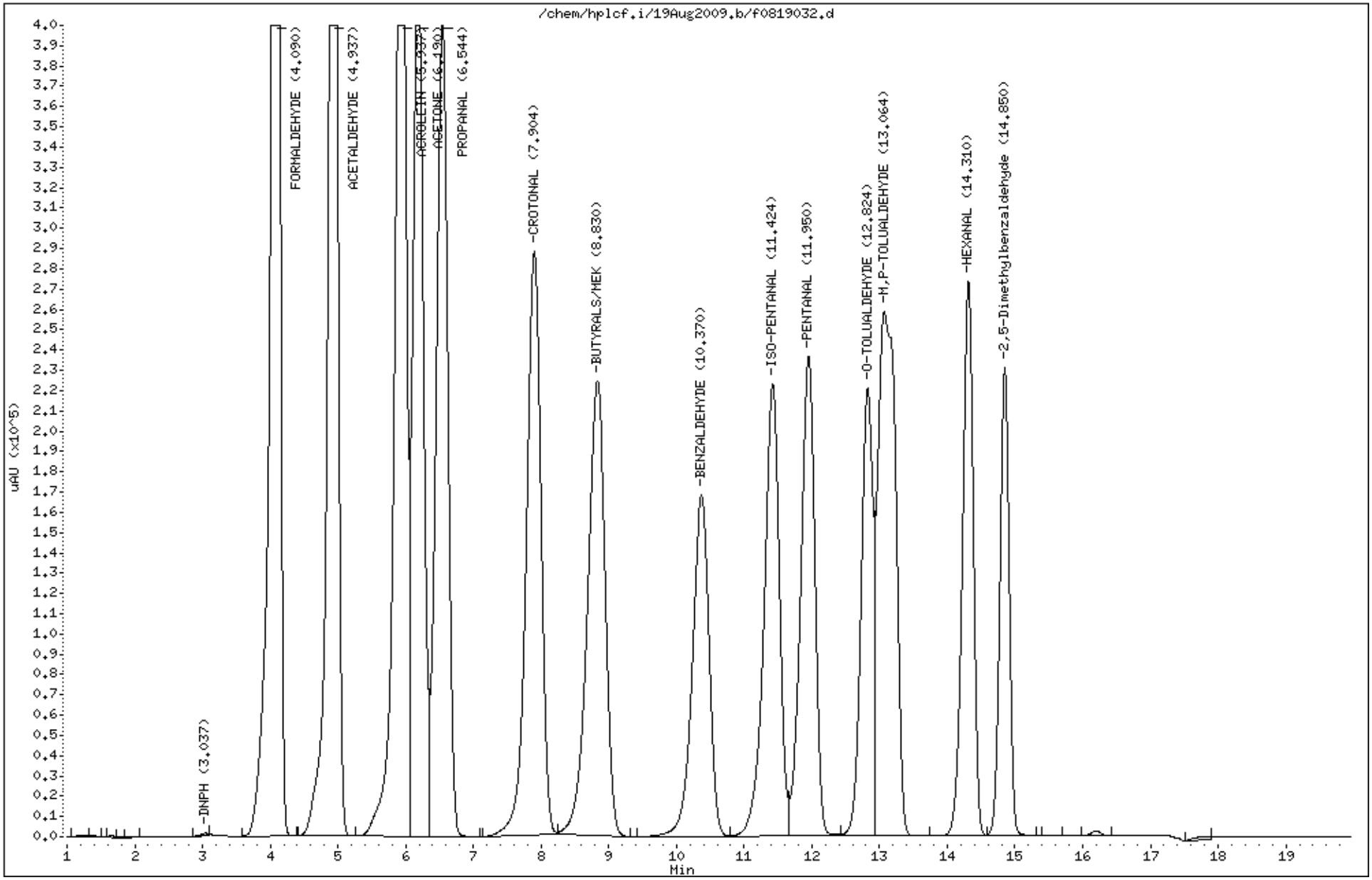
Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.037	3.037	0.000	6286	75.0000	
2 FORMALDEHYDE	4.090	4.090	0.000	8747741	75.0000	77.1(A)
3 ACETALDEHYDE	4.937	4.937	0.000	6495471	75.0000	75.6(A)
4 ACROLEIN	5.937	5.937	0.000	6253408	75.0000	77.4(A)
5 ACETONE	6.190	6.190	0.000	4736007	75.0000	76.2(A)
6 PROPANAL	6.544	6.544	0.000	4772575	75.0000	75.6(A)
7 CROTONAL	7.904	7.904	0.000	4305516	75.0000	75.0
9 BUTYRALS/MEK	8.830	8.830	0.000	4089175	75.0000	74.7
10 BENZALDEHYDE	10.370	10.370	0.000	2923207	75.0000	73.1
11 ISO-PENTANAL	11.424	11.424	0.000	3501031	75.0000	74.7
12 PENTANAL	11.950	11.950	0.000	3413659	75.0000	74.1
14 O-TOLUALDEHYDE	12.824	12.824	0.000	2643615	75.0000	74.4
15 M,P-TOLUALDEHYDE	13.064	13.064	0.000	4820080	150.000	145
16 HEXANAL	14.310	14.310	0.000	3019110	75.0000	73.5
17 2,5-Dimethylbenzaldehyde	14.850	14.850	0.000	2179261	75.0000	72.5

QC Flag Legend

A - Target compound detected but, quantitated amount
exceeded maximum amount.

Data File: /chem/hplcf.i/19Aug2009.b/f0819032.d
Date : 19-AUG-2009 20:28
Client ID: L10
Sample Info: ;1331-138-75;L10
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/19Aug2009.b/f0819031.d
Lab Smp Id: 1331-138-75 Client Smp ID: L10
Inj Date : 19-AUG-2009 20:07
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-75;L10
Misc Info :
Comment :
Method : /chem/hplcf.i/19Aug2009.b/F09D0819.m
Meth Date : 24-Aug-2009 18:13 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:07 Cal File: f0819031.d
Als bottle: 1 Calibration Sample, Level: 10
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 2.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.037	3.037	0.000	14641	75.0000	
2 FORMALDEHYDE	4.090	4.090	0.000	8746467	75.0000	77.2(A)
3 ACETALDEHYDE	4.937	4.937	0.000	6497445	75.0000	75.6(A)
4 ACROLEIN	5.937	5.937	0.000	6236197	75.0000	77.4(A)
5 ACETONE	6.190	6.190	0.000	4745156	75.0000	76.4(A)
6 PROPANAL	6.543	6.543	0.000	4783611	75.0000	75.8(A)
7 CROTONAL	7.904	7.904	0.000	4343599	75.0000	75.6(A)
9 BUTYRALS/MEK	8.837	8.837	0.000	4122502	75.0000	75.3
10 BENZALDEHYDE	10.377	10.377	0.000	2921831	75.0000	72.9
11 ISO-PENTANAL	11.430	11.430	0.000	3499557	75.0000	74.6
12 PENTANAL	11.963	11.963	0.000	3407680	75.0000	73.9
14 O-TOLUALDEHYDE	12.830	12.830	0.000	2644665	75.0000	74.4
15 M,P-TOLUALDEHYDE	13.070	13.070	0.000	4817759	150.000	145
16 HEXANAL	14.317	14.317	0.000	3022890	75.0000	73.6
17 2,5-Dimethylbenzaldehyde	14.857	14.857	0.000	2180740	75.0000	72.4

QC Flag Legend

A - Target compound detected but, quantitated amount
exceeded maximum amount.

Data File: /chem/hplcf.i/19Aug2009.b/f0819031.d

Date : 19-AUG-2009 20:07

Client ID: L10

Sample Info: ;1331-138-75;L10

Purge Volume: 5.0

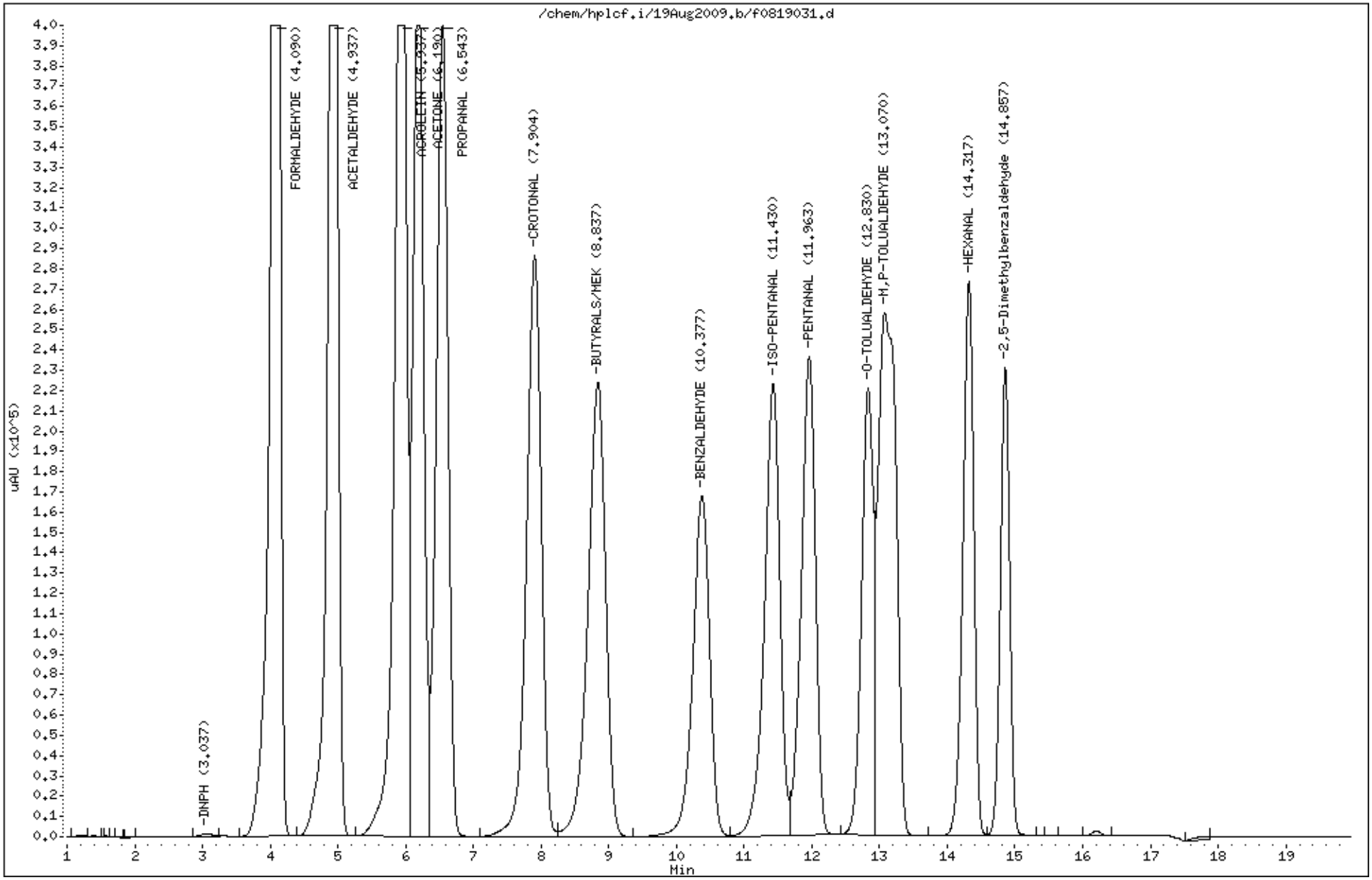
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: LZ

Column diameter: 2.00

0172



Report Date: 25-Aug-2009 12:20

Air Toxics Ltd.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplcf.i Injection Date: 25-AUG-2009 11:51
Lab File ID: f0825016.d Init. Cal. Date(s): 19-AUG-2009 19-AUG-2009
Analysis Type: AIR Init. Cal. Times: 10:43 20:49
Lab Sample ID: 1331-138-4 Quant Type: ESTD
Method: /chem/hplcf.i/25Aug2009a.b/F09D0819.m

COMPOUND	RRF / AMOUNT	RF4	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 DNPH	++++	24045	0.100	++++	10.00000	Averaged	<-
2 FORMALDEHYDE	113572	116659	0.010	-2.71824	10.00000	Averaged	
3 ACETALDEHYDE	85939	87581	0.010	-1.90999	10.00000	Averaged	
4 ACROLEIN	80844	82982	0.010	-2.64433	10.00000	Averaged	
5 ACETONE	62177	63916	0.010	-2.79645	10.00000	Averaged	
6 PROPANAL	63123	64211	0.010	-1.72458	10.00000	Averaged	
7 CROTONAL	57426	57653	0.010	-0.39550	10.00000	Averaged	
9 BUTYRALS/MEK	54717	55057	0.010	-0.62265	10.00000	Averaged	
10 BENZALDEHYDE	39968	39400	0.010	1.42225	10.00000	Averaged	
11 ISO-PENTANAL	46886	46833	0.010	0.11470	10.00000	Averaged	
12 PENTANAL	46057	46377	0.010	-0.69596	10.00000	Averaged	
14 O-TOLUALDEHYDE	35501	34468	0.010	2.90953	10.00000	Averaged	
15 M,P-TOLUALDEHYDE	33197	32721	0.010	1.43387	10.00000	Averaged	
16 HEXANAL	41026	40589	0.010	1.06569	10.00000	Averaged	
17 2,5-Dimethylbenzaldehyde	30022	29347	0.010	2.24924	10.00000	Averaged	

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/25Aug2009a.b/f0825016.d
Lab Smp Id: 1331-138-4 Client Smp ID: CCV
Inj Date : 25-AUG-2009 11:51
Operator : CRL Inst ID: hplcf.i
Smp Info : ;1331-138-4;CCV
Misc Info :
Comment :
Method : /chem/hplcf.i/25Aug2009a.b/F09D0819.m
Meth Date : 25-Aug-2009 12:20 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

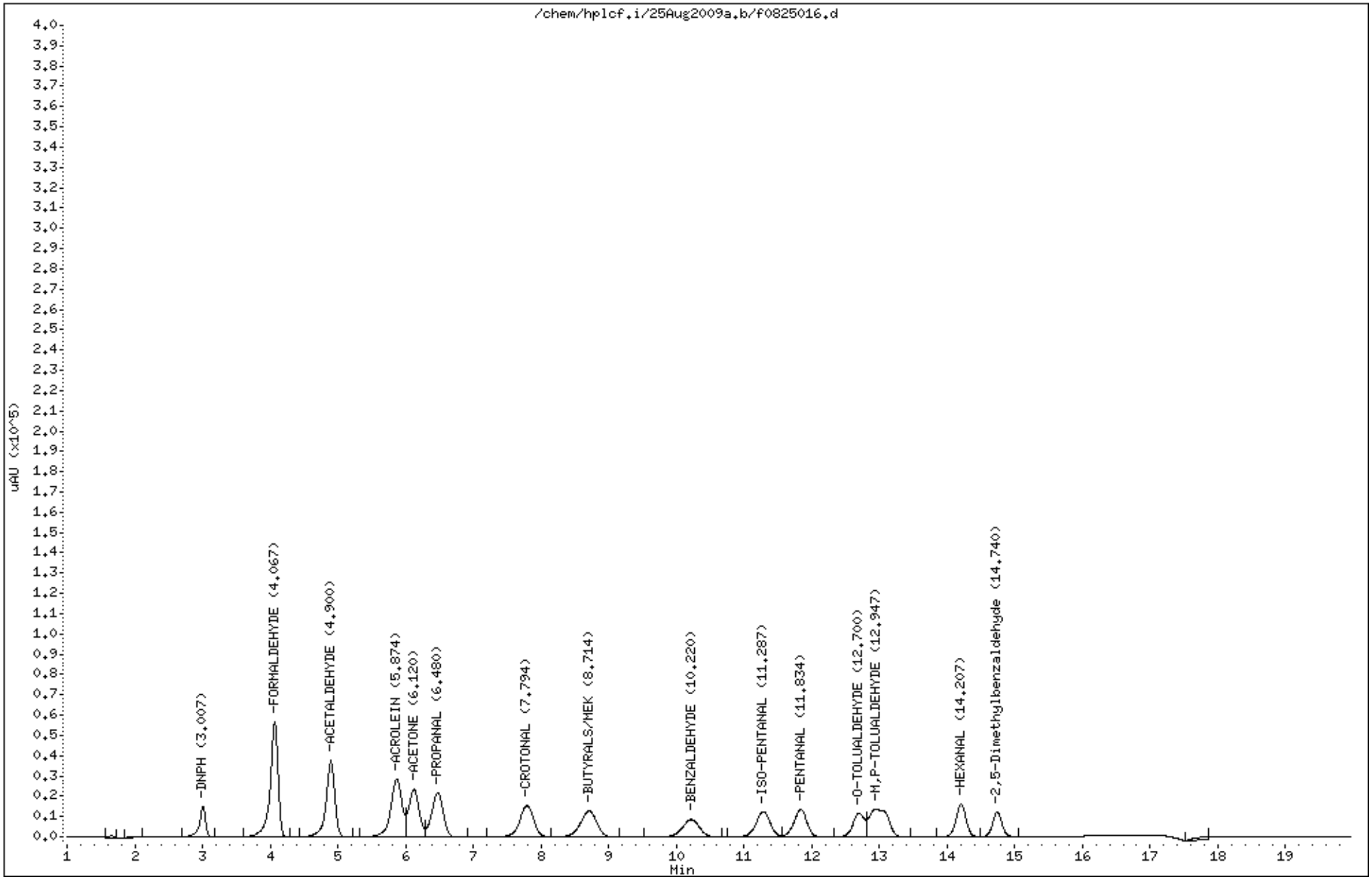
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	3.007	3.007	0.000	96179	4.00000	
2 FORMALDEHYDE	4.067	4.067	0.000	466637	4.00000	4.11
3 ACETALDEHYDE	4.900	4.900	0.000	350323	4.00000	4.08
4 ACROLEIN	5.874	5.874	0.000	331927	4.00000	4.10
5 ACETONE	6.120	6.120	0.000	255662	4.00000	4.11
6 PROPANAL	6.480	6.480	0.000	256844	4.00000	4.07
7 CROTONAL	7.794	7.794	0.000	230611	4.00000	4.02
9 BUTYRALS/MEK	8.714	8.714	0.000	220228	4.00000	4.02
10 BENZALDEHYDE	10.220	10.220	0.000	157598	4.00000	3.94
11 ISO-PENTANAL	11.287	11.287	0.000	187330	4.00000	4.00
12 PENTANAL	11.834	11.834	0.000	185508	4.00000	4.03
14 O-TOLUALDEHYDE	12.700	12.700	0.000	137872	4.00000	3.88
15 M,P-TOLUALDEHYDE	12.947	12.947	0.000	261769	8.00000	7.88
16 HEXANAL	14.207	14.207	0.000	162354	4.00000	3.96
17 2,5-Dimethylbenzaldehyde	14.740	14.740	0.000	117387	4.00000	3.91

0175

Data File: /chem/hplcf.i/25Aug2009a.b/f0825016.d
Date : 25-AUG-2009 11:51
Client ID: CCV
Sample Info: ;1331-138-4;CCV
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: CRL
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/25Aug2009a.b/f0825017.d
Lab Smp Id: CCB Client Smp ID: LAB BLANK
Inj Date : 25-AUG-2009 12:12
Operator : CRL Inst ID: hplcf.i
Smp Info : ;CCB;LAB BLANK
Misc Info :
Comment :
Method : /chem/hplcf.i/25Aug2009a.b/F09D0819.m
Meth Date : 25-Aug-2009 12:20 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable

Vs	5.00000	Sample Final Volume (mL)
Vo	5.00000	Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	Compound Not Detected.					
2 FORMALDEHYDE	Compound Not Detected.					
3 ACETALDEHYDE	Compound Not Detected.					
4 ACROLEIN	Compound Not Detected.					
5 ACETONE	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
7 CROTONAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	Compound Not Detected.					
14 O-TOLUALDEHYDE	Compound Not Detected.					
15 M,P-TOLUALDEHYDE	Compound Not Detected.					
16 HEXANAL	Compound Not Detected.					
17 2,5-Dimethylbenzaldehyde	Compound Not Detected.					

Data File: /chem/hplcf.i/25Aug2009a.b/f0825017.d

Date : 25-AUG-2009 12:12

Client ID: LAB BLANK

Instrument: hplcf.i

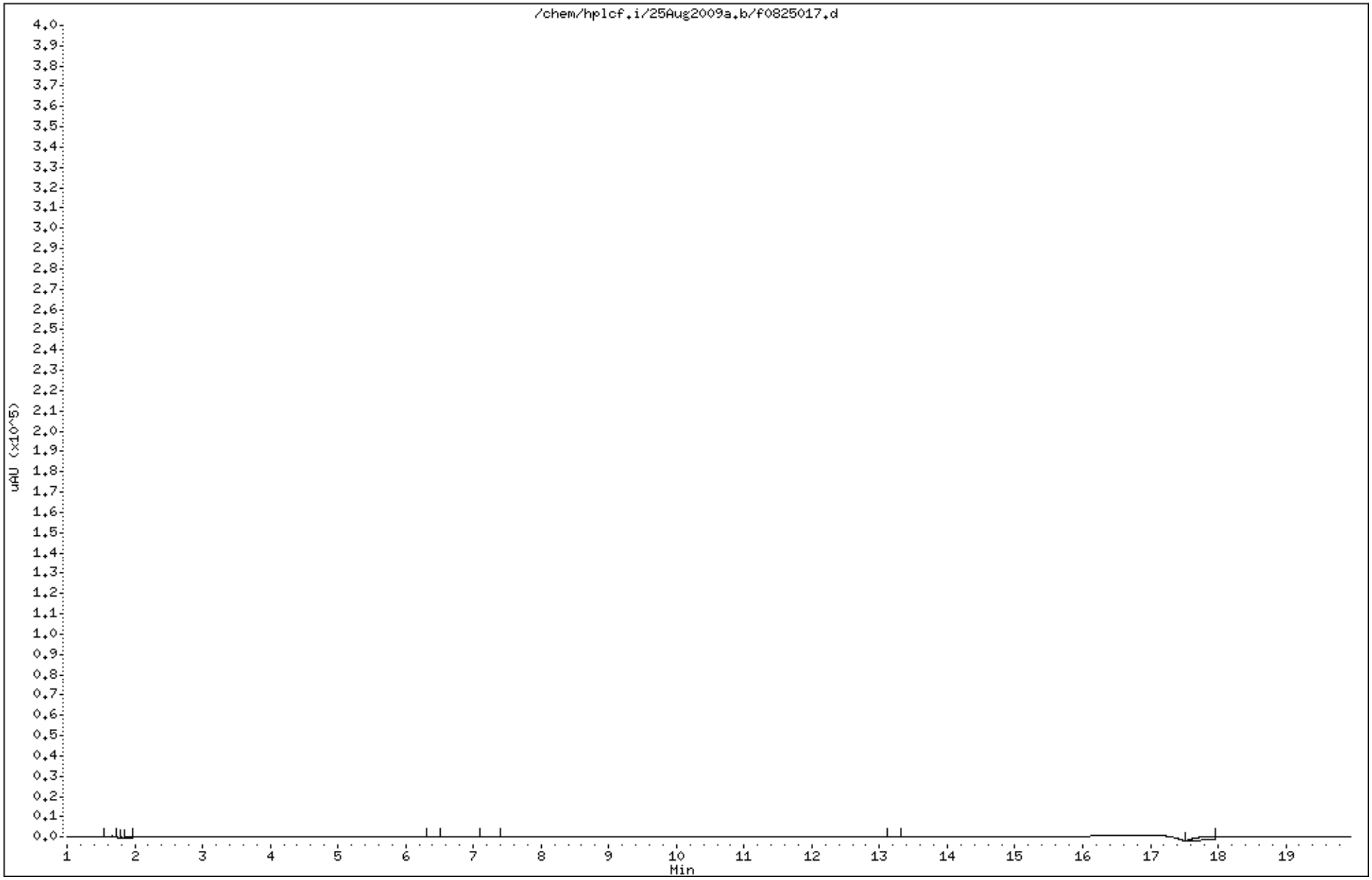
Sample Info: ;CCB;LAB BLANK

Purge Volume: 5.0

Operator: CRL

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0177

Air Toxics Ltd.

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1331-138-4
Sample Location:
Sample Date:
Sample Matrix: AIR
Analysis Type: OTHER
Data Type: LC DATA
Misc Info:

Client SDG: 25Aug2009a
Client Smp ID: CCV
Sample Point:
Date Received:
Quant Type: ESTD
Level: MED
Operator: CRL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug	Q
119-26-6	DNPH	0.00	
50-00-0	FORMALDEHYDE	4.10	
75-07-0	ACETALDEHYDE	4.05	
107-02-8	ACROLEIN	4.18	
67-64-1	ACETONE	4.08	
123-38-6	PROPANAL	3.98	
123-73-9	CROTONAL	4.02	
9999-9999-007	BUTYRALS/MEK	4.02	
100-52-7	BENZALDEHYDE	3.97	
590-86-3	ISO-PENTANAL	4.35	
110-62-3	PENTANAL	4.02	
529-20-4	O-TOLUALDEHYDE	3.93	
620-23-51	M,P-TOLUALDEHYDE	7.86	
66-25-1	HEXANAL	3.95	
5779-94-2	2,5-Dimethylbenzaldehyde	3.91	

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011

Data file : /chem/hplcf.i/25Aug2009a.b/f0825034.d
Lab Smp Id: 1331-138-4 Client Smp ID: CCV
Inj Date : 25-AUG-2009 18:18
Operator : CRL Inst ID: hplcf.i
Smp Info : ;1331-138-4;CCV
Misc Info :
Comment :
Method : /chem/hplcf.i/25Aug2009a.b/F09D0819.m
Meth Date : 25-Aug-2009 12:20 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.013	3.007	0.006	92794		
2 FORMALDEHYDE	4.066	4.067	-0.001	466019	4.10329	4.10
3 ACETALDEHYDE	4.906	4.900	0.006	348230	4.05205	4.05
4 ACROLEIN	5.880	5.874	0.006	337724	4.17748	4.18
5 ACETONE	6.133	6.120	0.013	253728	4.08075	4.08
6 PROPANAL	6.486	6.480	0.006	251267	3.98063	3.98
7 CROTONAL	7.813	7.794	0.019	230868	4.02031	4.02
9 BUTYRALS/MEK	8.733	8.714	0.019	219914	4.01916	4.02
10 BENZALDEHYDE	10.246	10.220	0.026	158830	3.97392	3.97
11 ISO-PENTANAL	11.306	11.287	0.019	204137	4.35389	4.35
12 PENTANAL	11.853	11.834	0.019	185137	4.01979	4.02
14 O-TOLUALDEHYDE	12.726	12.700	0.026	139491	3.92923	3.93
15 M,P-TOLUALDEHYDE	12.966	12.947	0.019	260788	7.85574	7.86
16 HEXANAL	14.226	14.207	0.019	162022	3.94928	3.95
17 2,5-Dimethylbenzaldehyde	14.760	14.740	0.020	117469	3.91274	3.91

Report Date: 26-Aug-2009 07:50

Air Toxics Ltd.

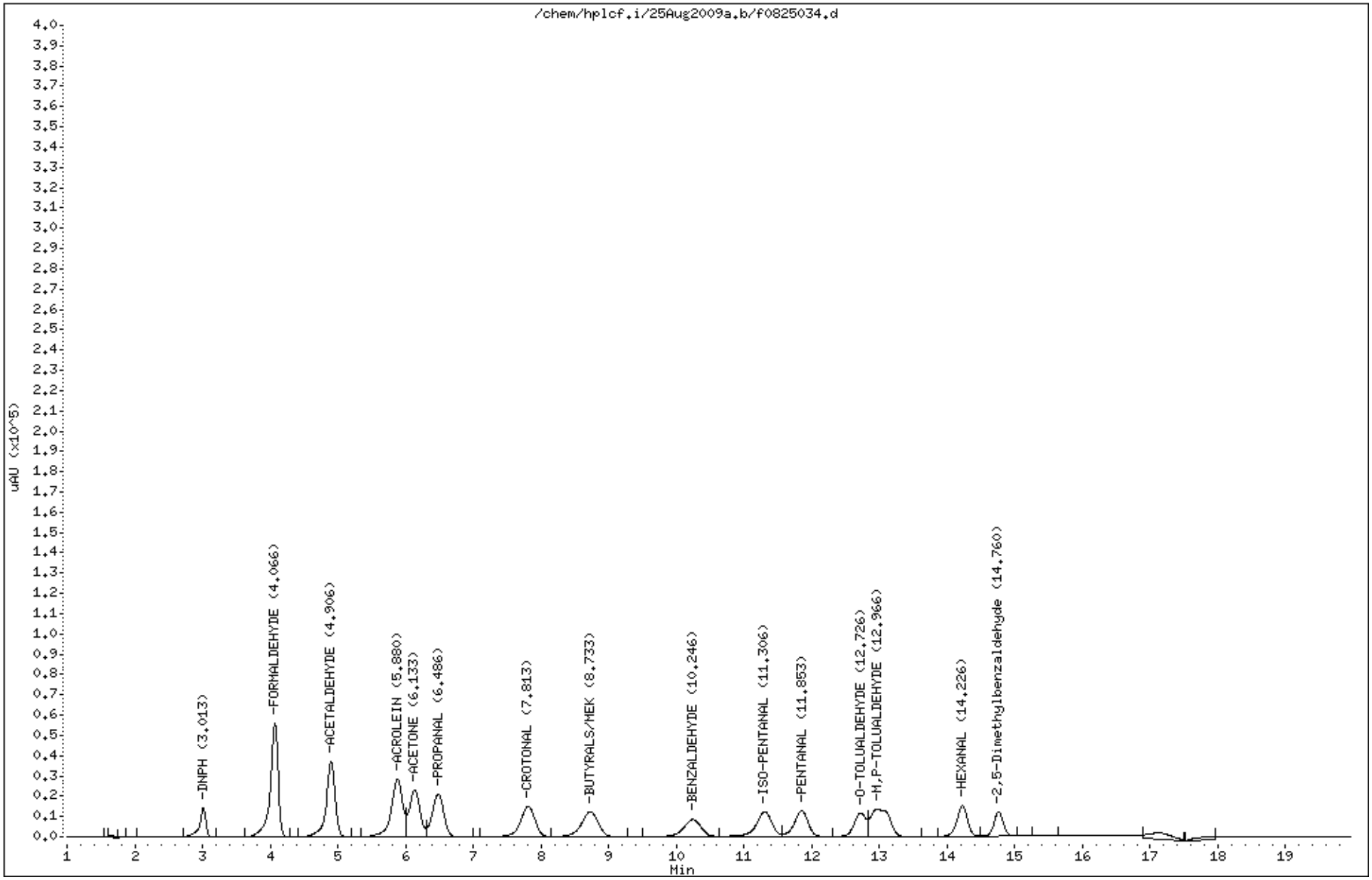
RECOVERY REPORT

Client Name:
Client SDG: 25Aug2009a
Sample Matrix: LIQUID
Fraction: OTHER
Lab Smp Id: 1331-138-4
Client Smp ID: CCV
Level: MED
Operator: CRL
Data Type: LC DATA
SampleType: METHSPIKE
SpikeList File: 4ug.spk
Quant Type: ESTD
Sublist File: TO-11+Acr+17.sub
Method File: /chem/hplcf.i/25Aug2009a.b/F09D0819.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 FORMALDEHYDE	4.00	4.10	102.58	90-110
3 ACETALDEHYDE	4.00	4.05	101.30	90-110
4 ACROLEIN	4.00	4.18	104.44	90-110
5 ACETONE	4.00	4.08	102.02	90-110
6 PROPANAL	4.00	3.98	99.52	90-110
7 CROTONAL	4.00	4.02	100.51	90-110
9 BUTYRALS/MEK	4.00	4.02	100.48	90-110
10 BENZALDEHYDE	4.00	3.97	99.35	90-110
11 ISO-PENTANAL	4.00	4.35	108.85	90-110
12 PENTANAL	4.00	4.02	100.49	90-110
14 O-TOLUALDEHYDE	4.00	3.93	98.23	90-110
15 M,P-TOLUALDEHYDE	8.00	7.86	98.20	90-110
16 HEXANAL	4.00	3.95	98.73	90-110
17 2,5-Dimethylbenzal	4.00	3.91	97.82	90-110

Data File: /chem/hplcf.i/25Aug2009a.b/f0825034.d
Date : 25-AUG-2009 18:18
Client ID: CCV
Sample Info: ;1331-138-4;CCV
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: CRL
Column diameter: 2.00



Air Toxics Ltd.

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1331-138-4
Sample Location:
Sample Date:
Sample Matrix: AIR
Analysis Type: OTHER
Data Type: LC DATA
Misc Info:

Client SDG: 27Aug2009a
Client Smp ID: CCV
Sample Point:
Date Received:
Quant Type: ESTD
Level: MED
Operator: CRL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug	Q
119-26-6	DNPH	0.00	
50-00-0	FORMALDEHYDE	4.11	
75-07-0	ACETALDEHYDE	4.06	
107-02-8	ACROLEIN	4.17	
67-64-1	ACETONE	4.00	
123-38-6	PROPANAL	3.97	
123-73-9	CROTONAL	3.92	
9999-9999-007	BUTYRALS/MEK	3.92	
100-52-7	BENZALDEHYDE	3.85	
590-86-3	ISO-PENTANAL	3.92	
110-62-3	PENTANAL	3.90	
529-20-4	O-TOLUALDEHYDE	3.76	
620-23-51	M,P-TOLUALDEHYDE	7.92	
66-25-1	HEXANAL	3.93	
5779-94-2	2,5-Dimethylbenzaldehyde	3.85	

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/27Aug2009a.b/f0827051.d
Lab Smp Id: 1331-138-4 Client Smp ID: CCV
Inj Date : 28-AUG-2009 02:24
Operator : CRL Inst ID: hplcf.i
Smp Info : ;1331-138-4;CCV
Misc Info :
Comment :
Method : /chem/hplcf.i/27Aug2009a.b/F09D0819.m
Meth Date : 27-Aug-2009 14:05 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.010	3.017	-0.007	110783		
2 FORMALDEHYDE	4.064	4.070	-0.006	467059	4.11245	4.11
3 ACETALDEHYDE	4.890	4.910	-0.020	349135	4.06257	4.06
4 ACROLEIN	5.864	5.883	-0.019	337208	4.17110	4.17
5 ACETONE	6.117	6.137	-0.020	248696	3.99983	4.00
6 PROPANAL	6.470	6.497	-0.027	250897	3.97476	3.97
7 CROTONAL	7.790	7.817	-0.027	225391	3.92493	3.92
9 BUTYRALS/MEK	8.697	8.737	-0.040	214680	3.92351	3.92
10 BENZALDEHYDE	10.210	10.250	-0.040	154016	3.85349	3.85
11 ISO-PENTANAL	11.270	11.310	-0.040	184032	3.92508	3.92
12 PENTANAL	11.817	11.857	-0.040	179394	3.89508	3.90
14 O-TOLUALDEHYDE	12.704	12.730	-0.026	133311	3.75515	3.76
15 M,P-TOLUALDEHYDE	12.997	12.983	0.014	263031	7.92329	7.92
16 HEXANAL	14.204	14.237	-0.033	161318	3.93212	3.93
17 2,5-Dimethylbenzaldehyde	14.737	14.764	-0.027	115665	3.85267	3.85

Report Date: 28-Aug-2009 06:53

Air Toxics Ltd.

RECOVERY REPORT

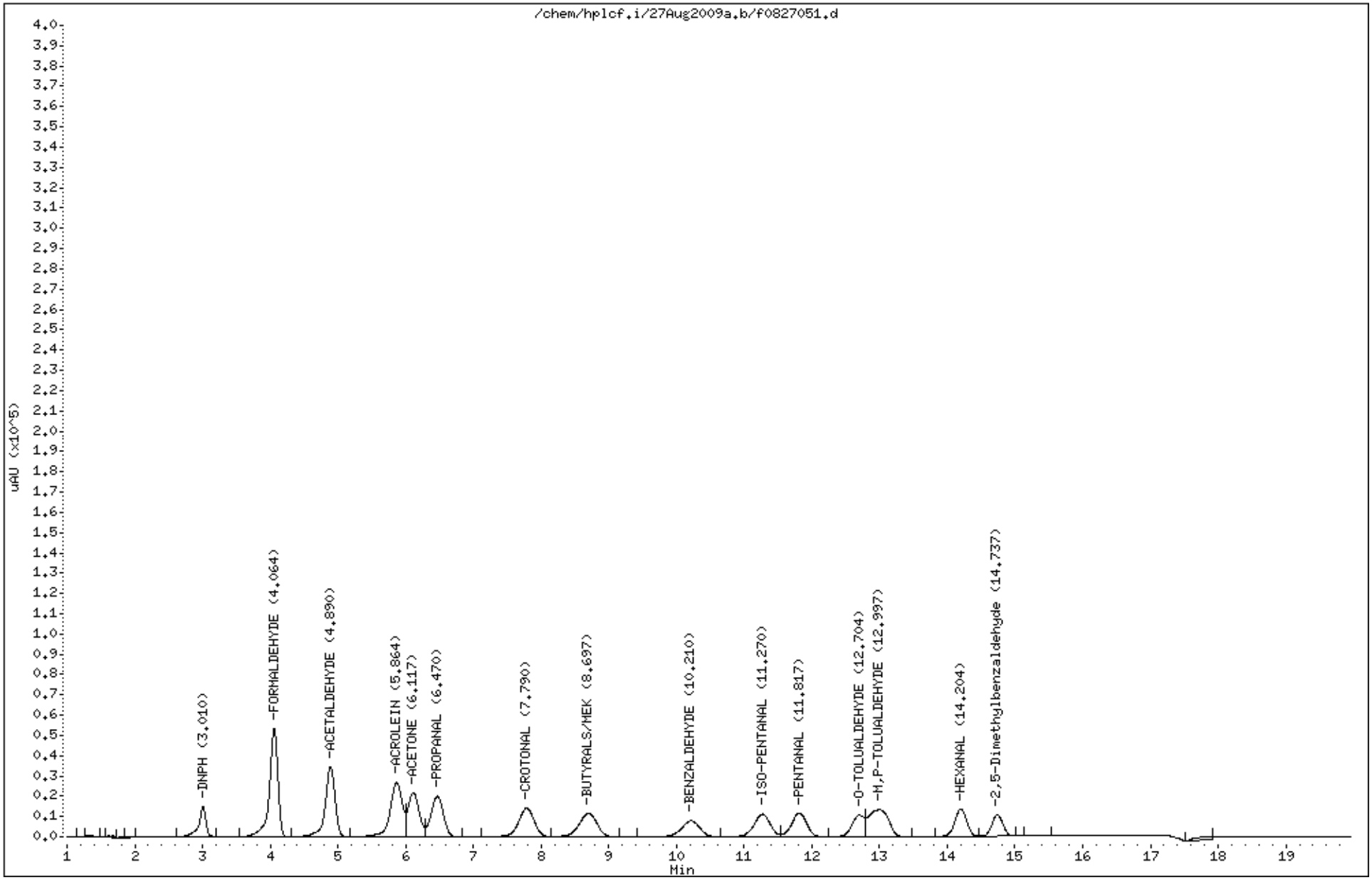
Client Name:
Client SDG: 27Aug2009a
Sample Matrix: LIQUID
Fraction: OTHER
Lab Smp Id: 1331-138-4
Client Smp ID: CCV
Level: MED
Operator: CRL
Data Type: LC DATA
SampleType: METHSPIKE
SpikeList File: 4ug.spk
Quant Type: ESTD
Sublist File: TO-11+Acr+17.sub
Method File: /chem/hplcf.i/27Aug2009a.b/F09D0819.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 FORMALDEHYDE	4.00	4.11	102.81	90-110
3 ACETALDEHYDE	4.00	4.06	101.56	90-110
4 ACROLEIN	4.00	4.17	104.28	90-110
5 ACETONE	4.00	4.00	100.00	90-110
6 PROPANAL	4.00	3.97	99.37	90-110
7 CROTONAL	4.00	3.92	98.12	90-110
9 BUTYRALS/MEK	4.00	3.92	98.09	90-110
10 BENZALDEHYDE	4.00	3.85	96.34	90-110
11 ISO-PENTANAL	4.00	3.92	98.13	90-110
12 PENTANAL	4.00	3.90	97.38	90-110
14 O-TOLUALDEHYDE	4.00	3.76	93.88	90-110
15 M,P-TOLUALDEHYDE	8.00	7.92	99.04	90-110
16 HEXANAL	4.00	3.93	98.30	90-110
17 2,5-Dimethylbenzal	4.00	3.85	96.32	90-110

0185

Data File: /chem/hplcf.i/27Aug2009a.b/f0827051.d
Date : 28-AUG-2009 02:24
Client ID: CCV
Sample Info: ;1331-138-4;CCV
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: CRL
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/27Aug2009a.b/f0827052.d
Lab Smp Id: CCB Client Smp ID: Lab Blank
Inj Date : 28-AUG-2009 02:45
Operator : CRL Inst ID: hplcf.i
Smp Info : ;CCB;
Misc Info :
Comment :
Method : /chem/hplcf.i/27Aug2009a.b/F09D0819.m
Meth Date : 28-Aug-2009 17:48 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	2.986	3.017	-0.031	12047		
2 FORMALDEHYDE	Compound Not Detected.					
3 ACETALDEHYDE	Compound Not Detected.					
4 ACROLEIN	Compound Not Detected.					
5 ACETONE	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
7 CROTONAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	Compound Not Detected.					
14 O-TOLUALDEHYDE	Compound Not Detected.					
15 M,P-TOLUALDEHYDE	Compound Not Detected.					
16 HEXANAL	Compound Not Detected.					
17 2,5-Dimethylbenzaldehyde	Compound Not Detected.					

Data File: /chem/hplcf.i/27Aug2009a.b/f0827052.d

Page 1

Date : 28-AUG-2009 02:45

Client ID: Lab Blank

Instrument: hplcf.i

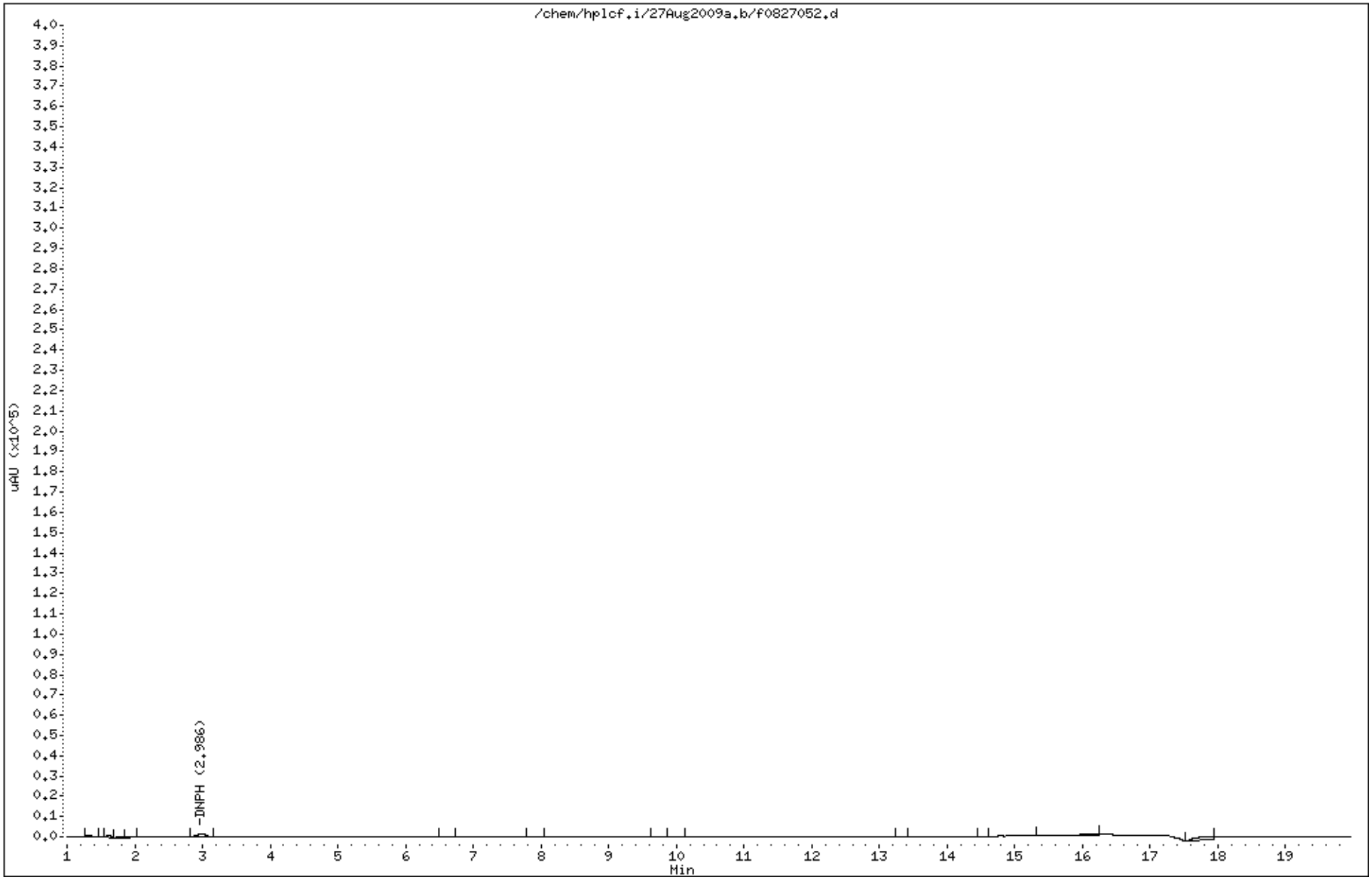
Sample Info: ;CCB;

Purge Volume: 5.0

Operator: CRL

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0187

Air Toxics Ltd.

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1331-138-4
Sample Location:
Sample Date:
Sample Matrix: AIR
Analysis Type: OTHER
Data Type: LC DATA
Misc Info:

Client SDG: 27Aug2009a
Client Smp ID: CCV
Sample Point:
Date Received:
Quant Type: ESTD
Level: MED
Operator: CRL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug	Q
119-26-6	DNPH	0.00	
50-00-0	FORMALDEHYDE	4.11	
75-07-0	ACETALDEHYDE	4.08	
107-02-8	ACROLEIN	4.21	
67-64-1	ACETONE	4.06	
123-38-6	PROPANAL	3.98	
123-73-9	CROTONAL	4.04	
9999-9999-007	BUTYRALS/MEK	4.00	
100-52-7	BENZALDEHYDE	3.92	
590-86-3	ISO-PENTANAL	4.05	
110-62-3	PENTANAL	4.00	
529-20-4	O-TOLUALDEHYDE	3.74	
620-23-51	M,P-TOLUALDEHYDE	8.06	
66-25-1	HEXANAL	3.96	
5779-94-2	2,5-Dimethylbenzaldehyde	3.93	

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/27Aug2009a.b/f0827065.d
Lab Smp Id: 1331-138-4 Client Smp ID: CCV
Inj Date : 28-AUG-2009 07:17
Operator : CRL Inst ID: hplcf.i
Smp Info : ;1331-138-4;CCV
Misc Info :
Comment :
Method : /chem/hplcf.i/27Aug2009a.b/F09D0819.m
Meth Date : 27-Aug-2009 14:05 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TO-11+Acr+17.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.009	3.017	-0.008	95739		
2 FORMALDEHYDE	4.062	4.070	-0.008	466692	4.10922	4.11
3 ACETALDEHYDE	4.896	4.910	-0.014	350524	4.07873	4.08
4 ACROLEIN	5.869	5.883	-0.014	340333	4.20975	4.21
5 ACETONE	6.116	6.137	-0.021	252399	4.05938	4.06
6 PROPANAL	6.469	6.497	-0.028	251353	3.98199	3.98
7 CROTONAL	7.782	7.817	-0.035	232036	4.04063	4.04
9 BUTYRALS/MEK	8.682	8.737	-0.055	219174	4.00564	4.00
10 BENZALDEHYDE	10.203	10.250	-0.047	156681	3.92015	3.92
11 ISO-PENTANAL	11.262	11.310	-0.048	189953	4.05137	4.05
12 PENTANAL	11.809	11.857	-0.048	184035	3.99586	4.00
14 O-TOLUALDEHYDE	12.703	12.730	-0.027	132940	3.74470	3.74
15 M,P-TOLUALDEHYDE	12.996	12.983	0.013	267437	8.05604	8.06
16 HEXANAL	14.196	14.237	-0.041	162402	3.95855	3.96
17 2,5-Dimethylbenzaldehyde	14.736	14.764	-0.028	118032	3.93150	3.93

Report Date: 28-Aug-2009 07:45

Air Toxics Ltd.

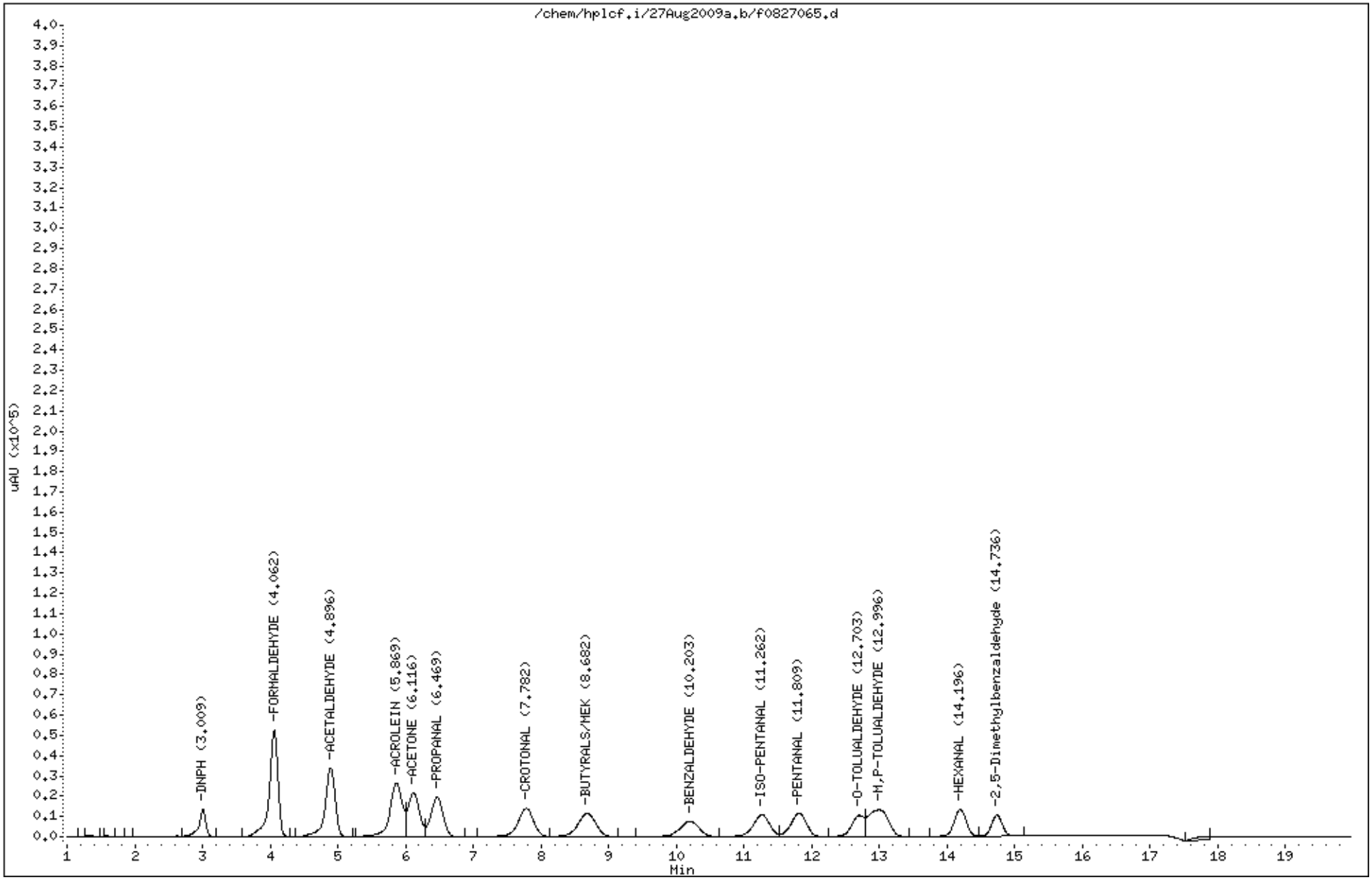
RECOVERY REPORT

Client Name:
Client SDG: 27Aug2009a
Sample Matrix: LIQUID
Fraction: OTHER
Lab Smp Id: 1331-138-4
Client Smp ID: CCV
Level: MED
Operator: CRL
Data Type: LC DATA
SampleType: METHSPIKE
SpikeList File: 4ug.spk
Quant Type: ESTD
Sublist File: TO-11+Acr+17.sub
Method File: /chem/hplcf.i/27Aug2009a.b/F09D0819.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 FORMALDEHYDE	4.00	4.11	102.73	90-110
3 ACETALDEHYDE	4.00	4.08	101.97	90-110
4 ACROLEIN	4.00	4.21	105.24	90-110
5 ACETONE	4.00	4.06	101.48	90-110
6 PROPANAL	4.00	3.98	99.55	90-110
7 CROTONAL	4.00	4.04	101.02	90-110
9 BUTYRALS/MEK	4.00	4.00	100.14	90-110
10 BENZALDEHYDE	4.00	3.92	98.00	90-110
11 ISO-PENTANAL	4.00	4.05	101.28	90-110
12 PENTANAL	4.00	4.00	99.90	90-110
14 O-TOLUALDEHYDE	4.00	3.74	93.62	90-110
15 M,P-TOLUALDEHYDE	8.00	8.06	100.70	90-110
16 HEXANAL	4.00	3.96	98.96	90-110
17 2,5-Dimethylbenzal	4.00	3.93	98.29	90-110

Data File: /chem/hplcf.i/27Aug2009a.b/f0827065.d
Date : 28-AUG-2009 07:17
Client ID: CCV
Sample Info: ;1331-138-4;CCV
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: CRL
Column diameter: 2.00



Air Toxics Ltd.

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1331-138-4
Sample Location:
Sample Date:
Sample Matrix: AIR
Analysis Type: OTHER
Data Type: LC DATA
Misc Info:

Client SDG: 28Aug2009
Client Smp ID: CCV
Sample Point:
Date Received:
Quant Type: ESTD
Level: MED
Operator: LZ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug	Q
119-26-6	DNPH	0.00	
50-00-0	FORMALDEHYDE	4.14	
75-07-0	ACETALDEHYDE	4.09	
107-02-8	ACROLEIN	4.23	
123-38-6	PROPANAL	3.95	
9999-9999-007	BUTYRALS/MEK	3.95	
100-52-7	BENZALDEHYDE	3.87	
590-86-3	ISO-PENTANAL	3.94	
110-62-3	PENTANAL	3.90	
66-25-1	HEXANAL	3.94	

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/28Aug2009.b/f0828039a.d
Lab Smp Id: 1331-138-4 Client Smp ID: CCV
Inj Date : 29-AUG-2009 01:10
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-4;CCV
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.005	3.014	-0.009	86923		
2 FORMALDEHYDE	4.045	4.074	-0.029	469834	4.13688	4.14
3 ACETALDEHYDE	4.878	4.907	-0.029	351870	4.09441	4.09
4 ACROLEIN	5.844	5.881	-0.037	341992	4.23027	4.23
6 PROPANAL	6.438	6.481	-0.043	249403	3.95109	3.95
9 BUTYRALS/MEK	8.651	8.721	-0.070	215995	3.94754	3.95
10 BENZALDEHYDE	10.158	10.241	-0.083	154770	3.87233	3.87
11 ISO-PENTANAL	11.225	11.301	-0.076	184660	3.93848	3.94
12 PENTANAL	11.778	11.841	-0.063	179602	3.89961	3.90
16 HEXANAL	14.165	14.221	-0.056	161818	3.94431	3.94

Report Date: 01-Sep-2009 15:06

Air Toxics Ltd.

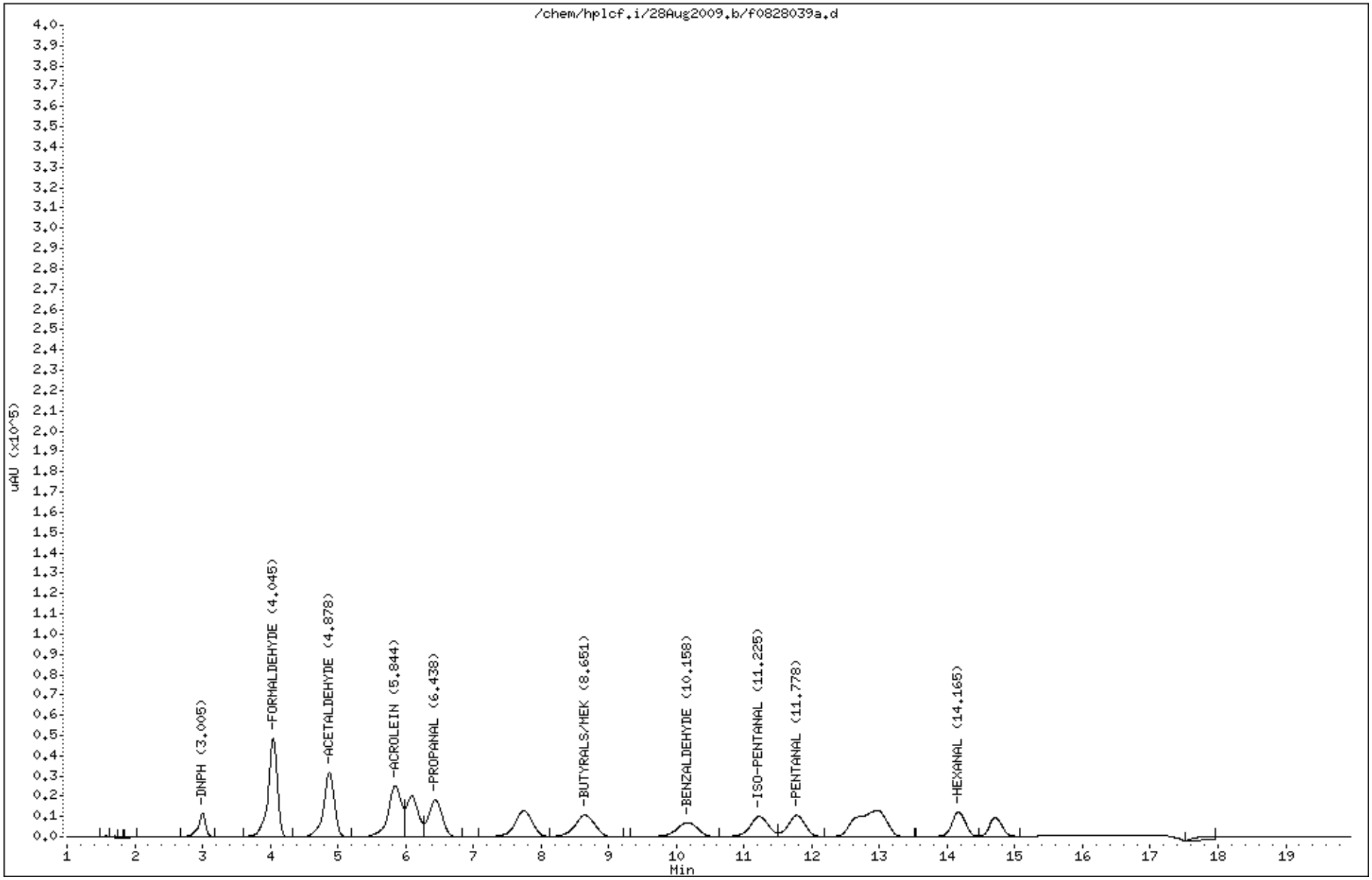
RECOVERY REPORT

Client Name:
Client SDG: 28Aug2009
Sample Matrix: LIQUID
Fraction: OTHER
Lab Smp Id: 1331-138-4
Client Smp ID: CCV
Level: MED
Operator: LZ
Data Type: LC DATA
SampleType: METHSPIKE
SpikeList File: R4ug.spk
Quant Type: ESTD
Sublist File: Rad165.sub
Method File: /chem/hplcf.i/28Aug2009.b/F09D0819.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 FORMALDEHYDE	4.00	4.14	103.42	90-110
3 ACETALDEHYDE	4.00	4.09	102.36	90-110
4 ACROLEIN	4.00	4.23	105.76	90-110
6 PROPANAL	4.00	3.95	98.78	90-110
9 BUTYRALS/MEK	4.00	3.95	98.69	90-110
10 BENZALDEHYDE	4.00	3.87	96.81	90-110
11 ISO-PENTANAL	4.00	3.94	98.46	90-110
12 PENTANAL	4.00	3.90	97.49	90-110
16 HEXANAL	4.00	3.94	98.61	90-110

Data File: /chem/hplcf.i/28Aug2009.b/f0828039a.d
Date : 29-AUG-2009 01:10
Client ID: CCV
Sample Info: ;1331-138-4;CCV
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828040.d
Lab Smp Id: CCB Client Smp ID: Lab Blank
Inj Date : 29-AUG-2009 01:31
Operator : LZ Inst ID: hplcf.i
Smp Info : ;CCB;
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.000	3.014	-0.014	6515		
2 FORMALDEHYDE	Compound Not Detected.					
3 ACETALDEHYDE	Compound Not Detected.					
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	Compound Not Detected.					
16 HEXANAL	Compound Not Detected.					

Data File: /chem/hplcf.i/28Aug2009.b/f0828040.d

Date : 29-AUG-2009 01:31

Client ID: Lab Blank

Instrument: hplcf.i

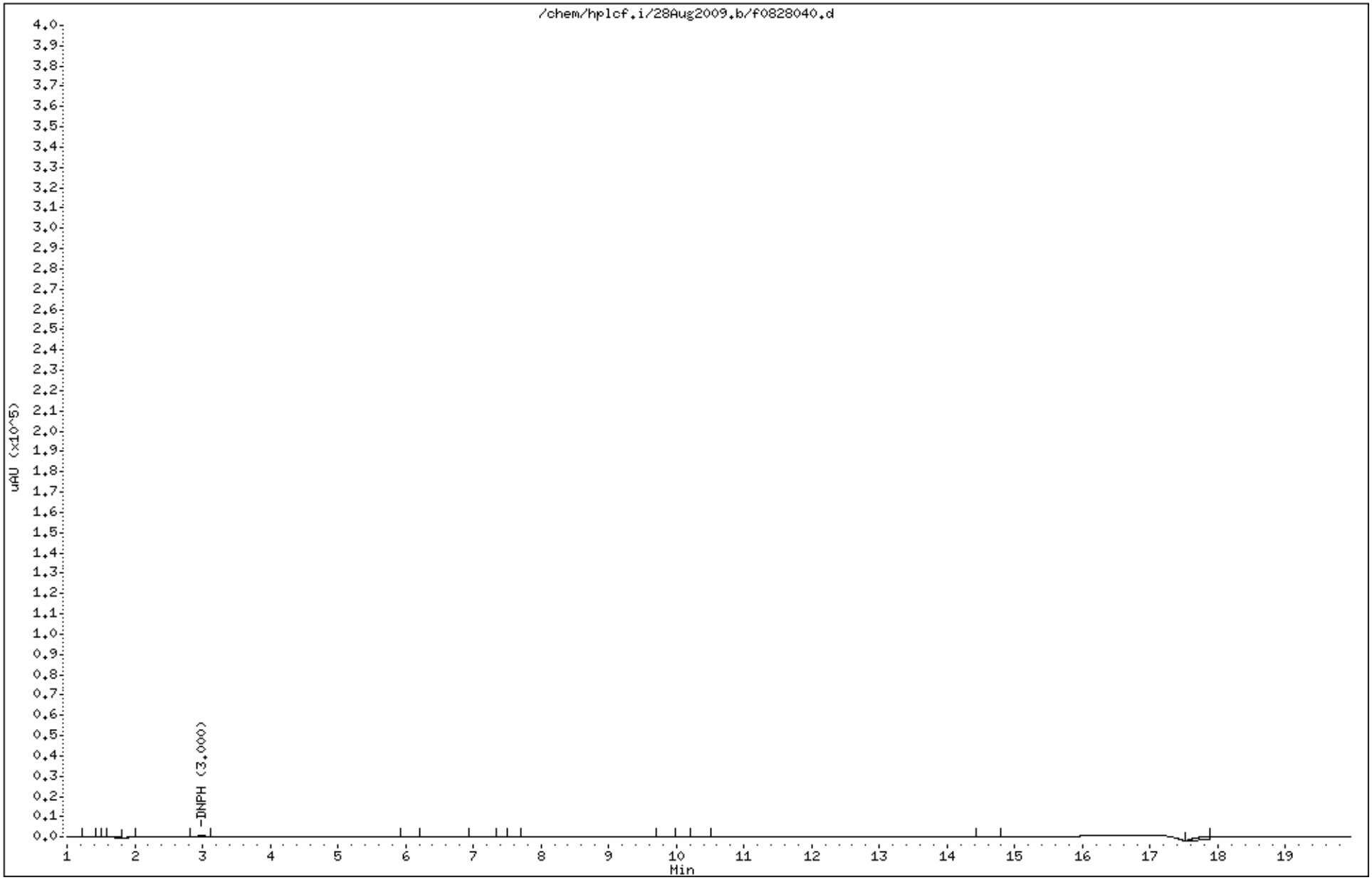
Sample Info: ;CCB;

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0197

Air Toxics Ltd.

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1331-138-4
Sample Location:
Sample Date:
Sample Matrix: AIR
Analysis Type: OTHER
Data Type: LC DATA
Misc Info:

Client SDG: 28Aug2009
Client Smp ID: CCV
Sample Point:
Date Received:
Quant Type: ESTD
Level: MED
Operator: LZ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug	Q
119-26-6	DNPH	0.00	
50-00-0	FORMALDEHYDE	4.08	
75-07-0	ACETALDEHYDE	4.03	
107-02-8	ACROLEIN	4.18	
123-38-6	PROPANAL	3.84	
9999-9999-007	BUTYRALS/MEK	3.87	
100-52-7	BENZALDEHYDE	3.82	
590-86-3	ISO-PENTANAL	3.88	
110-62-3	PENTANAL	3.82	
66-25-1	HEXANAL	3.89	

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/28Aug2009.b/f0828053.d
Lab Smp Id: 1331-138-4 Client Smp ID: CCV
Inj Date : 29-AUG-2009 06:02
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-4;CCV
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.018	3.014	0.004	85801		
2 FORMALDEHYDE	4.072	4.074	-0.002	463606	4.08204	4.08
3 ACETALDEHYDE	4.905	4.907	-0.002	346242	4.02891	4.03
4 ACROLEIN	5.878	5.881	-0.003	337723	4.17746	4.18
6 PROPANAL	6.478	6.481	-0.003	242240	3.83762	3.84
9 BUTYRALS/MEK	8.691	8.721	-0.030	211825	3.87133	3.87
10 BENZALDEHYDE	10.205	10.241	-0.036	152729	3.82128	3.82
11 ISO-PENTANAL	11.265	11.301	-0.036	181778	3.87700	3.88
12 PENTANAL	11.812	11.841	-0.029	176140	3.82444	3.82
16 HEXANAL	14.191	14.221	-0.030	159793	3.89496	3.89

Report Date: 01-Sep-2009 14:51

Air Toxics Ltd.

RECOVERY REPORT

Client Name:
Client SDG: 28Aug2009
Sample Matrix: LIQUID
Fraction: OTHER
Lab Smp Id: 1331-138-4
Client Smp ID: CCV
Level: MED
Operator: LZ
Data Type: LC DATA
SampleType: METHSPIKE
SpikeList File: R4ug.spk
Quant Type: ESTD
Sublist File: Rad165.sub
Method File: /chem/hplcf.i/28Aug2009.b/F09D0819.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 FORMALDEHYDE	4.00	4.08	102.05	90-110
3 ACETALDEHYDE	4.00	4.03	100.72	90-110
4 ACROLEIN	4.00	4.18	104.44	90-110
6 PROPANAL	4.00	3.84	95.94	90-110
9 BUTYRALS/MEK	4.00	3.87	96.78	90-110
10 BENZALDEHYDE	4.00	3.82	95.53	90-110
11 ISO-PENTANAL	4.00	3.88	96.92	90-110
12 PENTANAL	4.00	3.82	95.61	90-110
16 HEXANAL	4.00	3.89	97.37	90-110

Data File: /chem/hplcf.i/28Aug2009.b/f0828053.d

0201

Date : 29-AUG-2009 06:02

Client ID: CCV

Instrument: hplcf.i

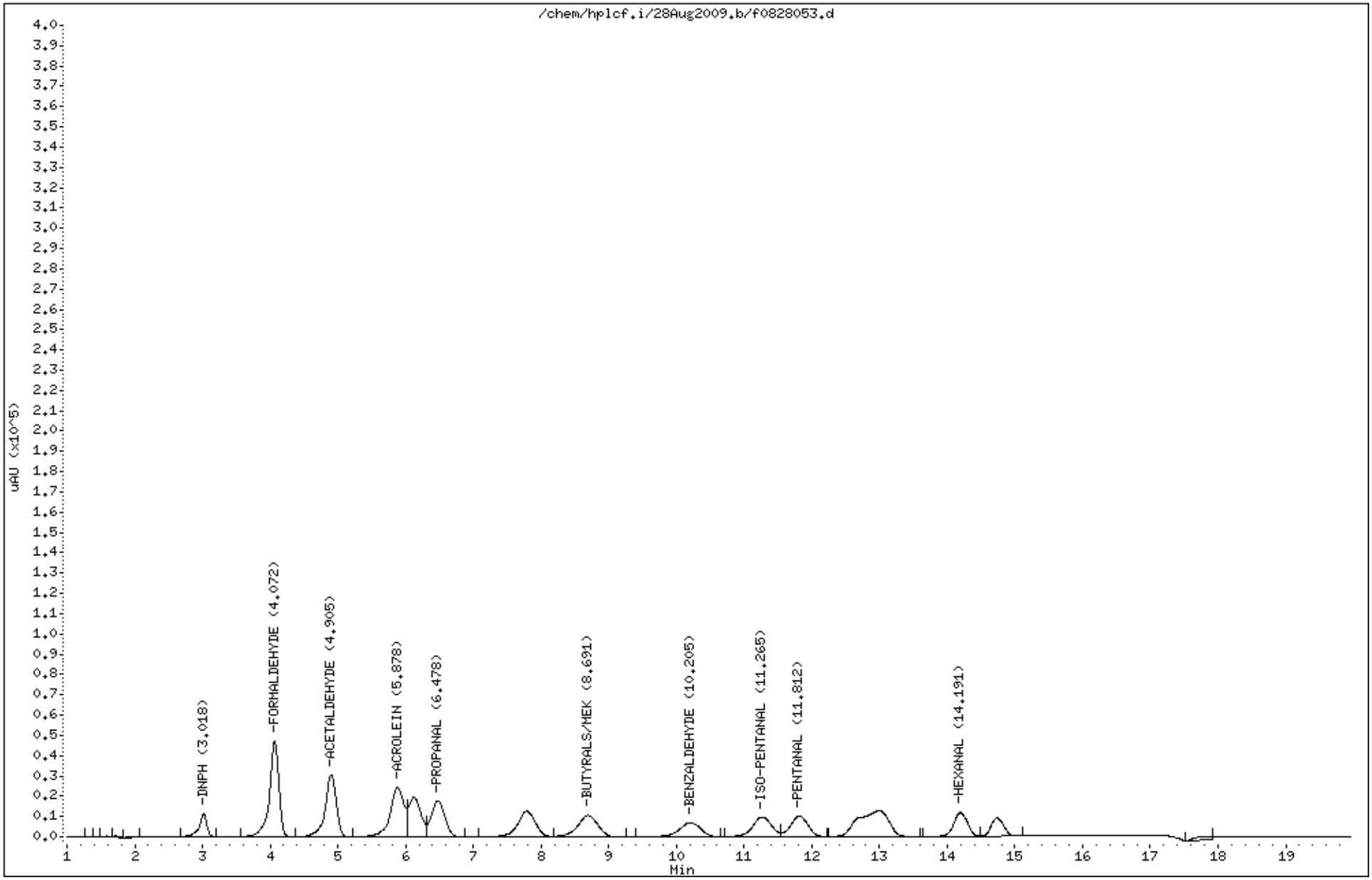
Sample Info: ;1331-138-4;CCV

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165
Data file : /chem/hplcf.i/28Aug2009.b/f0828054.d
Lab Smp Id: CCB Client Smp ID: Lab Blank
Inj Date : 29-AUG-2009 06:23
Operator : LZ Inst ID: hplcf.i
Smp Info : ;CCB;
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	3.010	3.014	-0.004	5181		
2 FORMALDEHYDE	Compound Not Detected.					
3 ACETALDEHYDE	Compound Not Detected.					
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	Compound Not Detected.					
16 HEXANAL	Compound Not Detected.					

Data File: /chem/hplcf.i/28Aug2009.b/f0828054.d

0203

Date : 29-AUG-2009 06:23

Client ID: Lab Blank

Instrument: hplcf.i

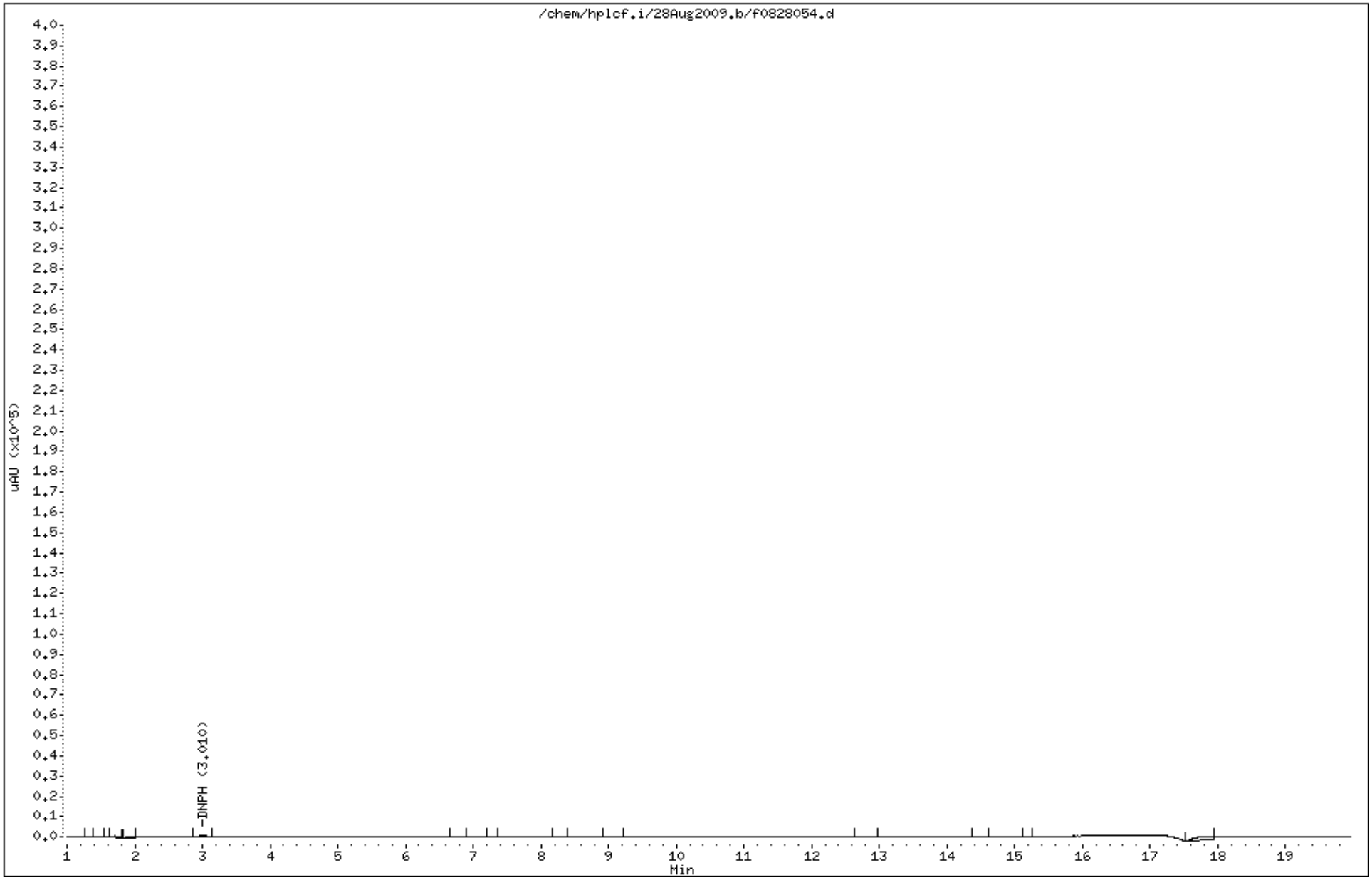
Sample Info: ;CCB;

Purge Volume: 5.0

Operator: LZ

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



Air Toxics Ltd.

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1331-138-4
Sample Location:
Sample Date:
Sample Matrix: AIR
Analysis Type: OTHER
Data Type: LC DATA
Misc Info:

Client SDG: 28Aug2009
Client Smp ID: CCV
Sample Point:
Date Received:
Quant Type: ESTD
Level: MED
Operator: LZ

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug	Q
119-26-6	DNPH	0.00	
50-00-0	FORMALDEHYDE	4.15	
75-07-0	ACETALDEHYDE	4.09	
107-02-8	ACROLEIN	4.30	
123-38-6	PROPANAL	3.96	
9999-9999-007	BUTYRALS/MEK	4.05	
100-52-7	BENZALDEHYDE	3.96	
590-86-3	ISO-PENTANAL	4.08	
110-62-3	PENTANAL	4.01	
66-25-1	HEXANAL	3.97	

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/28Aug2009.b/f0828068.d
Lab Smp Id: 1331-138-4 Client Smp ID: CCV
Inj Date : 29-AUG-2009 11:16
Operator : LZ Inst ID: hplcf.i
Smp Info : ;1331-138-4;CCV
Misc Info :
Comment :
Method : /chem/hplcf.i/28Aug2009.b/F09D0819.m
Meth Date : 28-Aug-2009 13:27 cleaf Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	2.998	3.014	-0.016	91611		
2 FORMALDEHYDE	4.045	4.074	-0.029	471498	4.15154	4.15
3 ACETALDEHYDE	4.871	4.907	-0.036	351360	4.08847	4.09
4 ACROLEIN	5.845	5.881	-0.036	347359	4.29666	4.30
6 PROPANAL	6.438	6.481	-0.043	249987	3.96035	3.96
9 BUTYRALS/MEK	8.645	8.721	-0.076	221546	4.04899	4.05
10 BENZALDEHYDE	10.151	10.241	-0.090	158283	3.96024	3.96
11 ISO-PENTANAL	11.218	11.301	-0.083	191247	4.07896	4.08
12 PENTANAL	11.765	11.841	-0.076	184771	4.01184	4.01
16 HEXANAL	14.158	14.221	-0.063	163073	3.97490	3.97

Report Date: 01-Sep-2009 14:54

Air Toxics Ltd.

RECOVERY REPORT

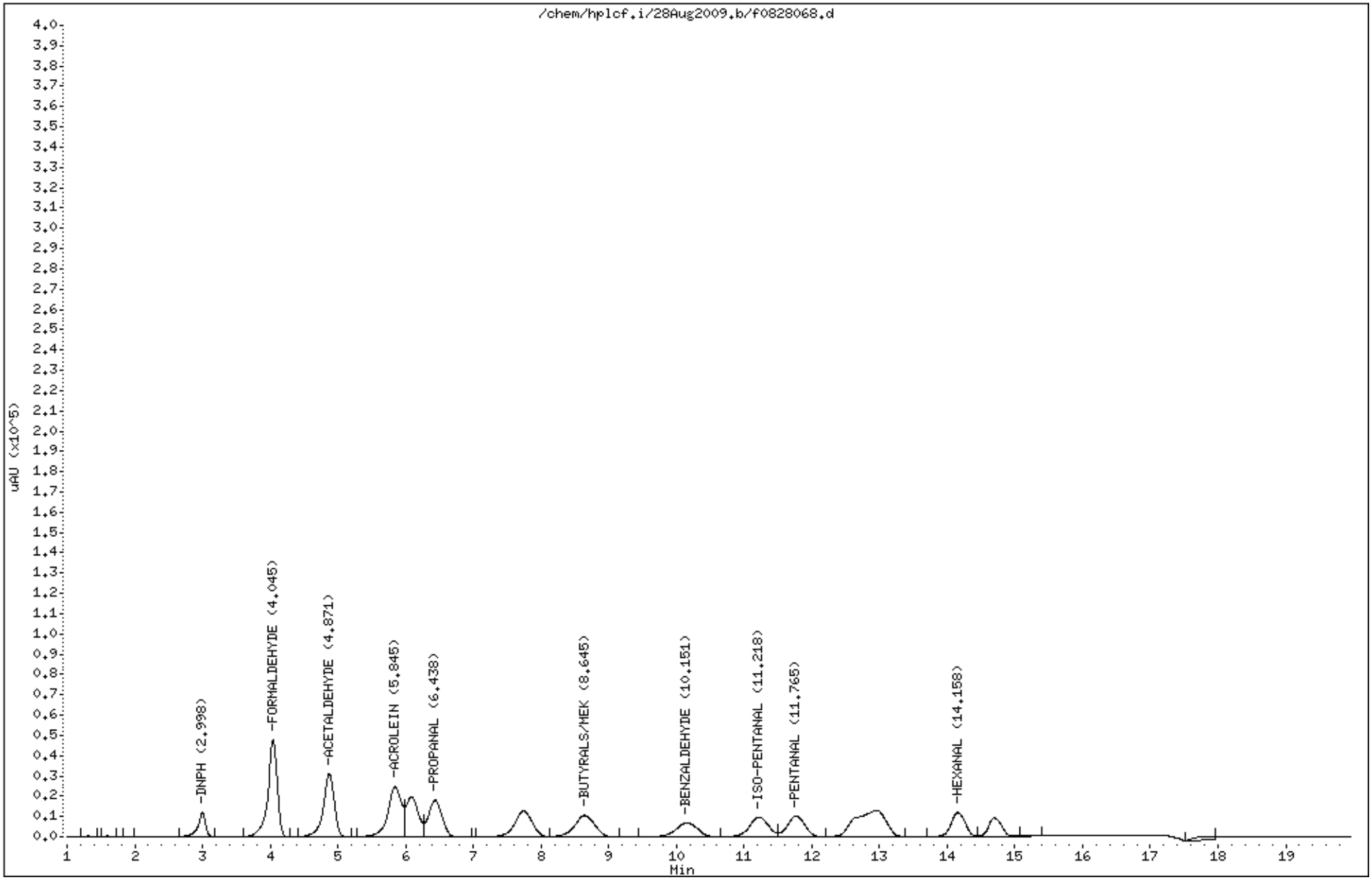
Client Name:
Client SDG: 28Aug2009
Sample Matrix: LIQUID
Fraction: OTHER
Lab Smp Id: 1331-138-4
Client Smp ID: CCV
Level: MED
Operator: LZ
Data Type: LC DATA
SampleType: METHSPIKE
SpikeList File: R4ug.spk
Quant Type: ESTD
Sublist File: Rad165.sub
Method File: /chem/hplcf.i/28Aug2009.b/F09D0819.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 FORMALDEHYDE	4.00	4.15	103.79	90-110
3 ACETALDEHYDE	4.00	4.09	102.21	90-110
4 ACROLEIN	4.00	4.30	107.42	90-110
6 PROPANAL	4.00	3.96	99.01	90-110
9 BUTYRALS/MEK	4.00	4.05	101.22	90-110
10 BENZALDEHYDE	4.00	3.96	99.01	90-110
11 ISO-PENTANAL	4.00	4.08	101.97	90-110
12 PENTANAL	4.00	4.01	100.30	90-110
16 HEXANAL	4.00	3.97	99.37	90-110

0207

Data File: /chem/hplcf.i/28Aug2009.b/f0828068.d
Date : 29-AUG-2009 11:16
Client ID: CCV
Sample Info: ;1331-138-4;CCV
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: LZ
Column diameter: 2.00



Report Date: 02-Sep-2009 15:57

Air Toxics Ltd.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: hplcf.i Injection Date: 31-AUG-2009 09:38
Lab File ID: f0831002a.d Init. Cal. Date(s): 19-AUG-2009 19-AUG-2009
Analysis Type: AIR Init. Cal. Times: 10:43 20:49
Lab Sample ID: 1331-138-4 Quant Type: ESTD
Method: /chem/hplcf.i/31Aug2009.b/F09D0819.m

COMPOUND	RRF / AMOUNT	RF4	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 DNPH	++++	24051	0.100	++++	10.00000	Averaged	<-
2 FORMALDEHYDE	113572	116781	0.010	-2.82561	10.00000	Averaged	
3 ACETALDEHYDE	85939	88257	0.010	-2.69653	10.00000	Averaged	
4 ACROLEIN	80844	78295	0.010	3.15276	10.00000	Averaged	
6 PROPANAL	63123	64500	0.010	-2.18274	10.00000	Averaged	
9 BUTYRALS/MEK	54717	55114	0.010	-0.72700	10.00000	Averaged	
10 BENZALDEHYDE	39968	39127	0.010	2.10417	10.00000	Averaged	
11 ISO-PENTANAL	46886	47106	0.010	-0.46873	10.00000	Averaged	
12 PENTANAL	46057	46367	0.010	-0.67295	10.00000	Averaged	
16 HEXANAL	41026	40885	0.010	0.34370	10.00000	Averaged	

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/31Aug2009.b/f0831002a.d
Lab Smp Id: 1331-138-4 Client Smp ID: CCV
Inj Date : 31-AUG-2009 09:38
Operator : CRL Inst ID: hplcf.i
Smp Info : ;1331-138-4;CCV
Misc Info :
Comment :
Method : /chem/hplcf.i/31Aug2009.b/F09D0819.m
Meth Date : 02-Sep-2009 15:57 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

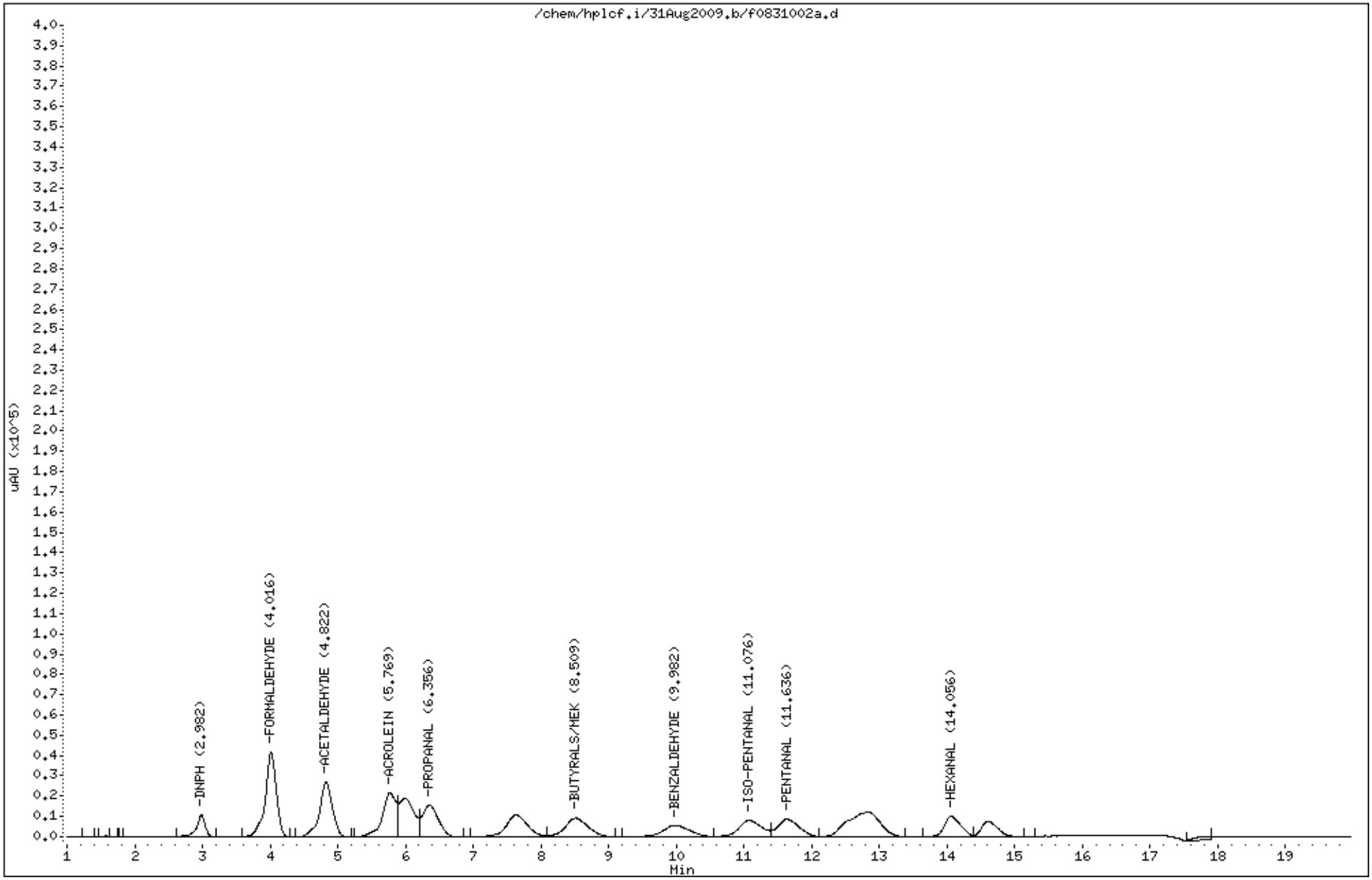
Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (UG)	AMOUNTS ON-COL (UG)
1 DNPH	2.982	2.982	0.000	96205	4.00000	
2 FORMALDEHYDE	4.016	4.016	0.000	467125	4.00000	4.11
3 ACETALDEHYDE	4.822	4.822	0.000	353027	4.00000	4.11
4 ACROLEIN	5.769	5.769	0.000	313181	4.00000	3.87
6 PROPANAL	6.356	6.356	0.000	258001	4.00000	4.09
9 BUTYRALS/MEK	8.509	8.509	0.000	220457	4.00000	4.03
10 BENZALDEHYDE	9.982	9.982	0.000	156508	4.00000	3.92
11 ISO-PENTANAL	11.076	11.076	0.000	188424	4.00000	4.02
12 PENTANAL	11.636	11.636	0.000	185466	4.00000	4.03
16 HEXANAL	14.056	14.056	0.000	163539	4.00000	3.99

0210

Data File: /chem/hplcf.i/31Aug2009.b/f0831002a.d
Date : 31-AUG-2009 09:38
Client ID: CCV
Sample Info: ;1331-138-4;CCV
Purge Volume: 5.0
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i
Operator: CRL
Column diameter: 2.00



Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/31Aug2009.b/f0831003a.d
Lab Smp Id: CCB Client Smp ID: Lab Blank
Inj Date : 31-AUG-2009 09:59
Operator : CRL Inst ID: hplcf.i
Smp Info : ;CCB;
Misc Info :
Comment :
Method : /chem/hplcf.i/31Aug2009.b/F09D0819.m
Meth Date : 02-Sep-2009 15:57 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable

Vs	5.00000	Sample Final Volume (mL)
Vo	5.00000	Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	Compound Not Detected.					
2 FORMALDEHYDE	Compound Not Detected.					
3 ACETALDEHYDE	Compound Not Detected.					
4 ACROLEIN	Compound Not Detected.					
6 PROPANAL	Compound Not Detected.					
9 BUTYRALS/MEK	Compound Not Detected.					
10 BENZALDEHYDE	Compound Not Detected.					
11 ISO-PENTANAL	Compound Not Detected.					
12 PENTANAL	Compound Not Detected.					
16 HEXANAL	Compound Not Detected.					

Data File: /chem/hplcf.i/31Aug2009.b/f0831003a.d

Date : 31-AUG-2009 09:59

Client ID: Lab Blank

Instrument: hplcf.i

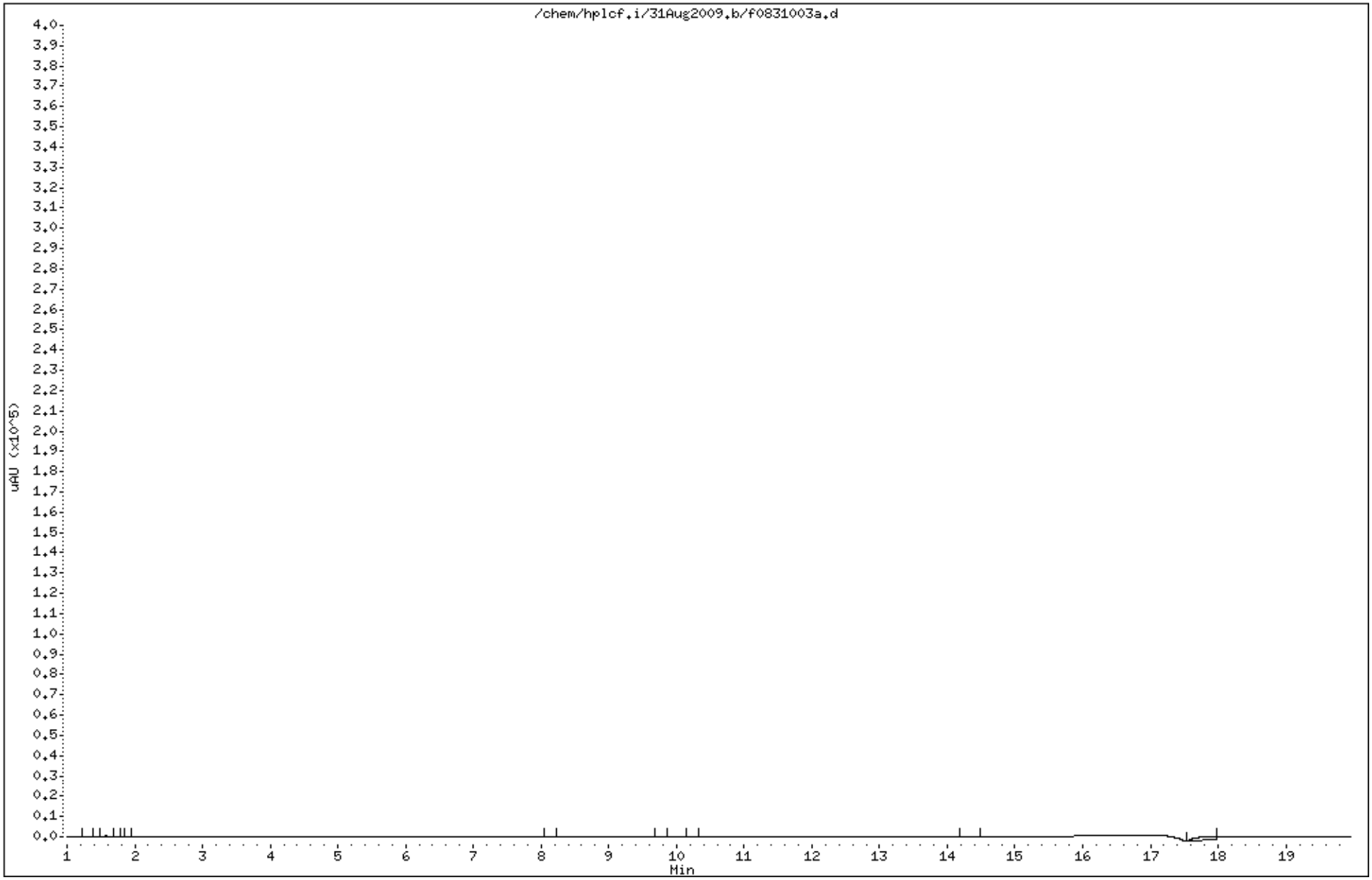
Sample Info: ;CCB;

Purge Volume: 5.0

Operator: CRL

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0212

Air Toxics Ltd.

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 1331-138-4
Sample Location:
Sample Date:
Sample Matrix: AIR
Analysis Type: OTHER
Data Type: LC DATA
Misc Info:

Client SDG: 31Aug2009
Client Smp ID: CCV
Sample Point:
Date Received:
Quant Type: ESTD
Level: MED
Operator: CRL

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) ug	Q
119-26-6	DNPH	0.00	
50-00-0	FORMALDEHYDE	4.14	
75-07-0	ACETALDEHYDE	4.10	
107-02-8	ACROLEIN	3.99	
123-38-6	PROPANAL	4.06	
9999-9999-007	BUTYRALS/MEK	4.03	
100-52-7	BENZALDEHYDE	3.94	
590-86-3	ISO-PENTANAL	4.04	
110-62-3	PENTANAL	3.96	
66-25-1	HEXANAL	3.98	

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/31Aug2009.b/f0831015.d
Lab Smp Id: 1331-138-4 Client Smp ID: CCV
Inj Date : 31-AUG-2009 15:25
Operator : CRL Inst ID: hplcf.i
Smp Info : ;1331-138-4;CCV
Misc Info :
Comment :
Method : /chem/hplcf.i/31Aug2009.b/F09D0819.m
Meth Date : 02-Sep-2009 15:57 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable
Vs 5.00000 Sample Final Volume (mL)
Vo 5.00000 Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	CONCENTRATIONS FINAL (ug)
1 DNPH	2.996	2.982	0.014	92711		
2 FORMALDEHYDE	4.036	4.016	0.020	470267	4.14069	4.14
3 ACETALDEHYDE	4.856	4.822	0.034	352115	4.09725	4.10
4 ACROLEIN	5.816	5.769	0.047	322955	3.99480	3.99
6 PROPANAL	6.409	6.356	0.053	256571	4.06465	4.06
9 BUTYRALS/MEK	8.602	8.509	0.093	220381	4.02771	4.03
10 BENZALDEHYDE	10.102	9.982	0.120	157695	3.94554	3.94
11 ISO-PENTANAL	11.176	11.076	0.100	189640	4.04469	4.04
12 PENTANAL	11.722	11.636	0.086	182530	3.96317	3.96
16 HEXANAL	14.122	14.056	0.066	163520	3.98579	3.98

Report Date: 02-Sep-2009 16:00

Air Toxics Ltd.

RECOVERY REPORT

Client Name:
Client SDG: 31Aug2009
Sample Matrix: LIQUID
Fraction: OTHER
Lab Smp Id: 1331-138-4
Client Smp ID: CCV
Level: MED
Operator: CRL
Data Type: LC DATA
SampleType: METHSPIKE
SpikeList File: R4ug.spk
Quant Type: ESTD
Sublist File: Rad165.sub
Method File: /chem/hplcf.i/31Aug2009.b/F09D0819.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 FORMALDEHYDE	4.00	4.14	103.52	90-110
3 ACETALDEHYDE	4.00	4.10	102.43	90-110
4 ACROLEIN	4.00	3.99	99.87	90-110
6 PROPANAL	4.00	4.06	101.62	90-110
9 BUTYRALS/MEK	4.00	4.03	100.69	90-110
10 BENZALDEHYDE	4.00	3.94	98.64	90-110
11 ISO-PENTANAL	4.00	4.04	101.12	90-110
12 PENTANAL	4.00	3.96	99.08	90-110
16 HEXANAL	4.00	3.98	99.64	90-110

Data File: /var/chem/hplcf.i/31Aug2009.b/f0831015.d

Date : 31-AUG-2009 15:25

Client ID: CCV

Instrument: hplcf.i

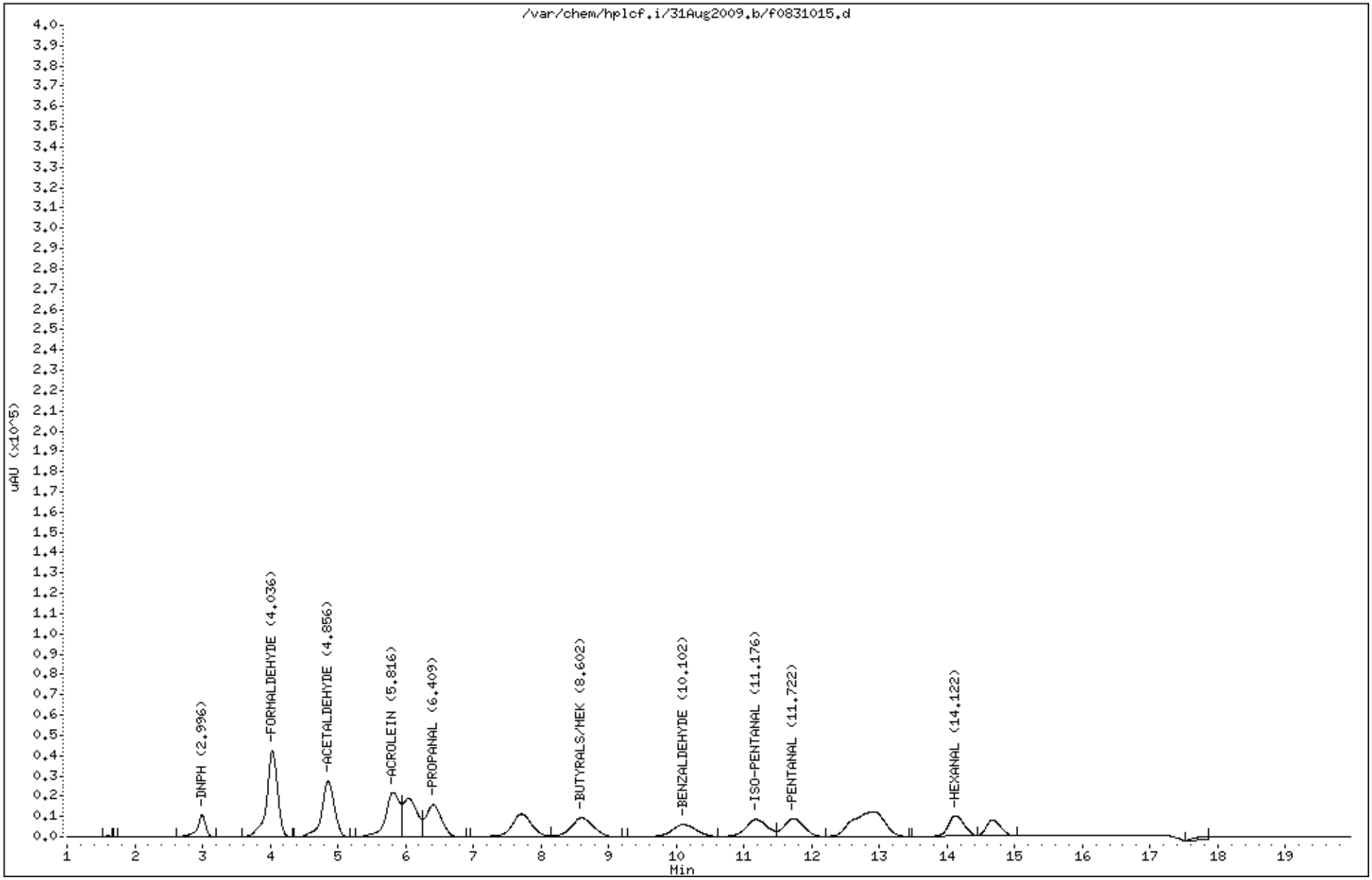
Sample Info: ;1331-138-4;CCV

Purge Volume: 5.0

Operator: CRL

Column phase: C-18 REVERSE PHASE

Column diameter: 2.00



0216

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0908458C-60A

RADIELLO ANALYSIS BY HPLC/UV

File Name:	**f0825027**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 8/25/09 03:52 PM**
		Date of Extraction: 8/25/09

Compound	**%Recovery**
Formaldehyde	117 Q
Acetaldehyde	112
Propanal	107
Methyl Ethyl Ketone/Butyraldehydes	104
Benzaldehyde	100
Pentanal	103
Isopentanal	104
Hexanal	98
Acrolein	107

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Report Date: 01-Sep-2009 11:00

Air Toxics Ltd.

RECOVERY REPORT

Client Name:
Client SDG: 25Aug2009a
Sample Matrix: LIQUID
Fraction: OTHER
Lab Smp Id: 0908458C-LCS
Client Smp ID: LCS
Level: MED
Operator: CRL
Data Type: LC DATA
SampleType: LCS
SpikeList File: Rvarlcs.spk
Quant Type: ESTD
Sublist File: Rad165.sub
Method File: /chem/hplcf.i/25Aug2009a.b/F09D0819.m
Misc Info:

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
2 FORMALDEHYDE	2.86	3.36	117.58*	85-115
3 ACETALDEHYDE	3.93	4.40	111.84	85-115
4 ACROLEIN	4.75	5.09	107.14	85-115
6 PROPANAL	4.87	5.20	106.79	85-115
9 BUTYRALS/MEK	5.71	5.96	104.42	85-115
10 BENZALDEHYDE	7.41	7.43	100.29	85-115
11 ISO-PENTANAL	6.47	6.71	103.68	85-115
12 PENTANAL	6.47	6.68	103.27	85-115
16 HEXANAL	7.14	7.03	98.50	85-115

Air Toxics Ltd.

Aldehydes/Ketones To-11,TO-5,CARB430,0011, Radiello 165

Data file : /chem/hplcf.i/25Aug2009a.b/f0825027.d
Lab Smp Id: 0908458C-LCS Client Smp ID: LCS
Inj Date : 25-AUG-2009 15:52
Operator : CRL Inst ID: hplcf.i
Smp Info : ;0908458C-LCS;
Misc Info :
Comment :
Method : /chem/hplcf.i/25Aug2009a.b/F09D0819.m
Meth Date : 26-Aug-2009 16:15 lzhang Quant Type: ESTD
Cal Date : 19-AUG-2009 20:49 Cal File: f0819033.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Rad165.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * Vs/Vo * CpndVariable

Vs	2.00000	Sample Final Volume (mL)
Vo	5.00000	Curve baesed Volume (mL)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (UG)	FINAL (ug)
1 DNPH	3.014	3.007	0.007	40384921		
2 FORMALDEHYDE	4.067	4.067	0.000	954812	8.40710	3.36(R)
3 ACETALDEHYDE	4.900	4.900	0.000	944342	10.9885	4.40
4 ACROLEIN	5.880	5.874	0.006	1028584	12.7231	5.09
6 PROPANAL	6.480	6.480	0.000	820710	13.0018	5.20
9 BUTYRALS/MEK	8.720	8.714	0.006	815575	14.9055	5.96
10 BENZALDEHYDE	10.240	10.220	0.020	742570	18.5790	7.43
11 ISO-PENTANAL	11.307	11.287	0.020	786298	16.7703	6.71
12 PENTANAL	11.847	11.834	0.013	769307	16.7035	6.68
16 HEXANAL	14.227	14.207	0.020	721314	17.5820	7.03

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/hplcf.i/25Aug2009a.b/f0825027.d

Date : 25-AUG-2009 15:52

Client ID: LCS

Sample Info: ;0908458C-LCS;

Purge Volume: 5.0

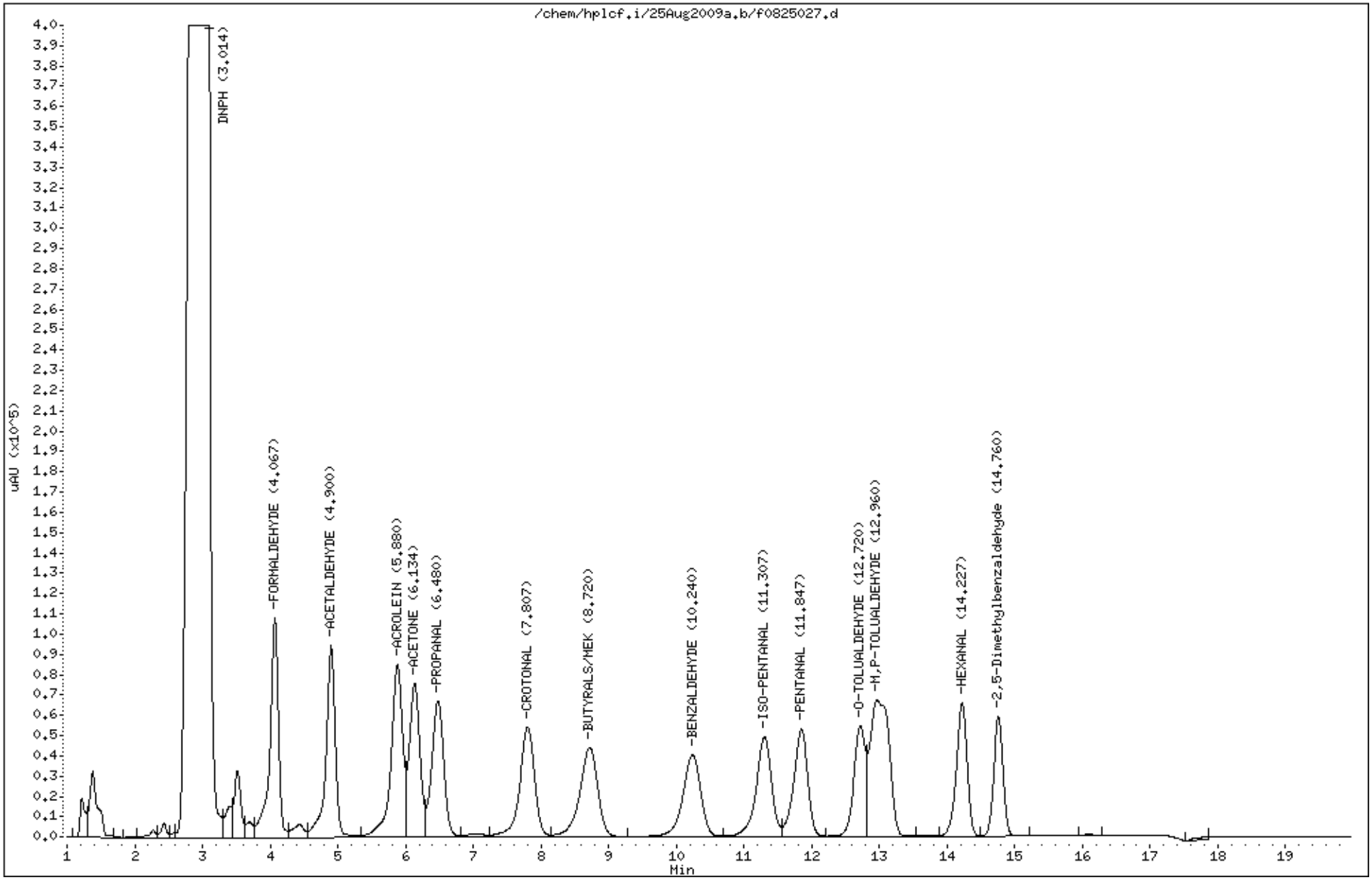
Column phase: C-18 REVERSE PHASE

Instrument: hplcf.i

Operator: CRL

Column diameter: 2.00

0220



TO-11 Extraction Logbook @Air Toxics Ltd. Log Book #: 1817

ATL Work Order # 0908458C **Final Solvent:** ACN **Solvent Lot #:** 092929
Date Extracted 8/25/09 **Spike I.D.:** 1331-132-var **Spiked By:** CRL
Spike Witness: MJS

ATL Fraction	Clients I.D. #	Cartridge type & size	Final Volume (ml)	Spike Amount (ul)	Comments
0908458C - Blk	N/A	RAD 1105 lot#09144	2.0	N/A	
-LCS				1,000	
-41A	100690	RAD 1105 lot# N/A		N/A	
-42A	100691				
-43A	100349				
-44A	100350				
-45A	CRL 8/25/09 ~~1105~~ 100351				
-46A	100352				
-47A	100353				
-48A	100354				
-49A	100192				green extract
-50A	100193				green extract
-51A	100195				
-52A	100196				
-53A	100249				green extract
-54A	100250				green extract
-55A	100251				
-56A	100252				green extract
-57A	100253				green extract
-58A	100254				
		CRL 8/25/09			

Comments:

CRL 8/25/09

Signed: [signature] Date: 8/25/09

HPLC-F Run Logbook **@Air Toxics Ltd.** **Logbook Book #: 1850**

Method (Circle all that apply): TO-5 (CARB 430) (TO-11A) Method 0011 Pressure: 92 bar

Use	File #	Sample Name/Client	DF	Loaded by Init.	Date	Time	Reviewed by Init.	Comments
✓	f0825014	CCB	1.00	CAL	8/25/09	1110	W	
✓	15	CCB				1131		
✓	16	CCV 1331-138-4				1151		
✓	17	CCB				1212		
✓	18	CARB 430 CERT 1				1233		
✓	19	2				1254		
✓	20	3				1315		
✓	21	4				1336		
✓	22	0908458A - BLK				1408		
✓	23	-LCS				1429		
✓	24	0908458B - BLK				1449		
✓	25	-LCS				1510		
✓	26	0908458C - BLK				1531		
✓	27	-LCS				1552		$\%R_{Foam}$ = 117.58% > 115%
O	28	0908458A - 01A				1613		O : Over range
C	29	0908458C - LCS				1634		C = Confirmed
O	30	0908458A - 01AA				1655		
O	31	-02A				1716		
O	32	-02AA				1737		
X	33	-03A				1757		
✓	34	1331-138-4 CCV				1818		
X	35	CCB				1839		
	36	0908458A - 04A				1900		
	37	-05A				1921		
	38	-06A				1942		
	39	-07A				2003		
	40	-08A				2024		
✓	41	-09A				2045	✓	

Calculation Check:

File ID: f0825084 Compound: Formaldehyde Initials: W

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × DF = $\frac{(466019)}{(113572)}$ × (1) = 4.10

Reported Result: 4.10

Signed: [signature] Date: 8/25/09

0222

Revised 07/08

HPLC-F Run Logbook **@Air Toxics Ltd.** **Logbook Book #: 1850**

Method (Circle all that apply): TO-5 CARB 430 (TO-11A) Radrello165 Method 0011 Pressure: 75 bar

Use	File #	Sample Name/Client	DF	Loaded by Init.	Date	Time	Reviewed by Init.	Comments
✓	f0827040	CCB	1.00	CRL	08/27/09	2235	CRL/	
C	41	0908458C-LCS				2256		
✓	42	0908458A-03A				2317		
✓	43	-06A				2337		
✓	44	-10A				2358		
✓	45	-14A			8/28/09	0019		
✓	46	-17A				0040		
✓	47	-20A				0101		
✓	48	0908458B -23A				0122		
✓	49	-26A				0143		
✓	50	CCB				0204	CRL	
✓	51	1331-138-4 CCV				0224		
✓	52	CCB				0245		
✓	53	0908458B-29A				0306		
✓	54	-32A				0327		
✓	55	-35A				0348		
✓	56	-36A				0409		
✓	57	-39A				0430		
✓	58	0908458C -42A				0451		
✓	59	0908458A -01A	4.00			0512		
✓	60	~~-02A~~				0532		
✓	61	~~CCB~~ 0908458-02A	4.00			0553		
✓	62	~~CCB~~ 0908458A-02A				0614		
✓	63	~~CCV 1331-138-4~~ CCB	1.00			0635	CRL/	
✓	64	CCB				0656		
✓	65	~~0908408/409-BLK~~ 1331-138-4				0717		
✓	66	CCB	1.00			0738		
X	67	0908408/409-BLK		CRL		0759		wrong injection, actually 0908458B-26A

Calculation Check:

File ID: f0827054 Compound: Acetaldehyde Initials: CRL

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × DF = $\frac{(449332)}{(85939)}$ × (1.00) = 5.23

Reported Result: 5.23

Signed 8/28/09 Date

HPLC-F Run Logbook **@Air Toxics Ltd.** **Logbook Book #: 1850**

Radrello 165

Method (Circle all that apply): TO-5 CARB 430 TO-11A Method 0011 Pressure: 101 bar

Use	File #	Sample Name/Client	DF	Loaded by Init.	Date	Time	Reviewed by Init.	Comments
X	f0828029	TO-5/CARB430 - BLK	1.00	W	8/28/09	2141	W	
✓	30	↓				2202		
✓	31	TO5 CARB430 MDL-1				2203		
✓	32	-2				2243		
✓	33	-3				2304		
✓	34	-4				3325 ~~2305~~ CAR 8/28/09		
✓	35	-5			↓	2346		
✓	36	-6			8/29/09	0007		
✓	37	-7				0028		
✓	38	↓ -8				0049		
✓	39	CCV 1331-138-4				0110		
✓	40	CCB	↓			0131		
✓	41	0908458C-43A	10.0			0151		
✓	42	-44A				0212		
✓	43	-45A				0233		
✓	44	-46A				0254		
✓	45	-49A				0315		
✓	46	-50A				0336		
✓	47	-51A				0357		
✓	48	-52A				0418		
✓	49	-53A				0439		
✓	50	↓ -54A	↓			0500		
X ✓	51	CCB	1.00			0520		
✓	52	CCB				0541		
✓	53	1331-138-4 CCV				0602		
✓	54	CCB	↓			0623		
✓	55	0908458C-58A	1.00			0644		
✓	56	↓ -48A	↓	↓	↓	0705	↓	

Calculation Check:

File ID: f0828029 Compound: Acetaldehyde Initials: W

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × DF = $\frac{(351870)}{(85939)}$ × (1) = 4.09

Reported Result: 4.09

Signed: [signature] Date: 8/31/09

0224

Revised 07/08

HPLC-F Run Logbook **@Air Toxics Ltd.** Radiello 165 **Logbook Book #: 1850**

Method (Circle all that apply): TO-5 CARB 430 TO-11A Method 0011 Pressure: 101 bar

Use	File #	Sample Name/Client	DF	Loaded by Init.	Date	Time	Reviewed by Init.	Comments
X	f0828057	0908458C-47A	3.00	Li	8/29/09	0726	Li	over diluted.
X	58	-47AA	3.00			0747		
X	59	-55A	3.00			0808		
✓	60	~~-55~~ 41A 8/31/09	4.00			0828		
✓	61	-41AA	4.00			0849		
✓	62	-56A	10.0			0910		
✓	63	-57A				0931		
✓	64	0908458A-04A	5.00			0952		
✓	65	-05A				1013		
✓	66	CCB	1.00			1034		
✓	67					1055		
✓	68	1331-138-4 CCV				1116		
✓	69	CCB				1136		
✓	70	0908458A-07A	5.00			1157		
✓	71	-08A				1218		
✓	72	-09A				1239		
✓	73	-11A				1300		
✓	74	-12A	4.00			1321		
✓	75	-13A				1342		
✓	76	-15A				1403		
✓	77	-16A				1424		
✓	78	-18A				1445		
✓	79	-19A				1505		
✓	80	CCB	1.00			1526		
✓	81	CCB				1547		
✓	82	1331-138-4 CCV				1608		
✓	83	CCB				1629		
✓	84	0908458B-21A	4.00			1650		

Calculation Check:

File ID: f0828082 Compound: Formaldehyde Initials: Li

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × DF = $\frac{(469101)}{(113572)}$ × (1) = **4.13**

Reported Result: **4.13**

Signed: [signature] Date: 8/31/09

HPLC-F Run Logbook **@Air Toxics Ltd.** **Logbook Book #: 1850**

Method (Circle all that apply): TO-5 CARB 430 TO-11A Method 0011 Pressure: 107 bar

Use	File #	Sample Name/Client	DF	Loaded by Init.	Date	Time	Reviewed by Init.	Comments
✓	f0831001	CCB	1.00	CRL	8/31/09	0917	CRL/ li	
✓	2	CCV 1331-138-4				0938		Acetone out
✓	3	CCB				0959		
X	4	DNPH 781-88				1020		
✓	5	09086388-BLK				11:56		
✓	6	↓ -LCS				12:17		
✓	7	09084580-47A				12:37		
✓	8	↓ -47AA				12:58		
✓	9	↓ -55A				13:19		
✓	10	↓ -55AA				13:40		
✓	11	CCB				14:01		
	12	09086388-14A				14:22		
	13	↓ -15A				14:43		
✓	14	↓ -16A				15:04		
✓	15	CCV 1331-138-4				1525		
✓	16	CCB				1545		
✓	17	09086388-16AA				1606		
✓	18	↓ -17A				1627		
✓	19	09086304-BLK				1648		
✓	20	↓ -LCS				1709		
	21	09086388-18A				1730		
	22	↓ -18AMS				1751		
✓	23	↓ -19A				1812		
✓	24	↓ -20A				1833		
✓	25	↓ -21A				1854		
✓	26	↓ -22A				1914		
✓	27	CCV 1331-138-4				1935		
✓	28	CCB				1956		

Calculation Check:

File ID: F0831006 Compound: Formaldehyde Initials: li

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × DF = $\frac{(174269)}{(113572)}$ × (1) = 15.3 µg

Reported Result: 15.3 µg

Signed 9/24/09 Date

Shipping/ Receiving Documents

Air Toxics LTD.
Laboratory Services Since 1989

180 Blue Ravine Road, Suite B
Folsom, CA 95630

Phone (916) 985-1000 FAX (916) 985-1020
Hours 8:00 A.M. to 6:00 P.M. Pacific

COMPANY: Environmental Health & Engineering, Inc.
ATTENTION: Mr. Taeko Minegishi
FAX #: 781-247-4305
FROM: Sample Receiving
Workorder #: 0908458C
# of pages (Including Cover): 1

9/11/2009

Thank you for selecting Air Toxics Ltd. We have received your samples and have found no discrepancies. In order to expedite analysis and reporting, please review the attached information for accuracy. Corrections can be faxed to **Ausha Scott at 916-985-1020.**
ATL will proceed with the analysis as specified on the Chain of Custody and Sample Login page.

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

0908458

DATE: 20 Aug 09

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

TO: Air Toxics

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.
100623	AIR PASSIVE	ALDEHYDE ANALYSIS	13D 18H 50M
100624			1
100625			ϕ
100626			ϕ
100686			12D 18H 52M
100687			
100688			
100689			
100690			
100691			ϕ
100349			12D 9 MIN
100350			
100351			
100352			
100353			
100354			ϕ

Special Instructions:

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

☐ Fax results 781-247-4305

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

☒ Additional report recipient mfrugola@ehenc.com

Tel ok 8/21 2332 8/21

CUSTODY SEAL INTACT? Y N NONE TEMP °C

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

Relinquished by: _____ of Environmental Health & Engineering, Inc. Date: 8/20/09

Received by: _____ 0850 of (company name) AIC Date: 8/21/09

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

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

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

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

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

Page 3 of 4

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

0908458

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 20 Aug 09

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

TO: Air Toxics

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.)
49A	100192	Air/Passive	Aldehyde Analysis	15D 3H 39min
50A	100193			
51A	100195			
52A	100196			
53A	100249			13D 16H 4min
54A	100250			
55A	100251			
56A	100252			
57A	100253			
58A	100254			ϕ

Special Instructions:

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

☐ Fax results 781-247-4305

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

☒ Additional report recipient mryan@ehinc.com

Fedex 8204 2332 2241
CUSTODY SEAL INTACT?
Y N NONE TEMP 2°C

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

Relinquished by: _____ of Environmental Health & Engineering, Inc. Date: 8/20/09

Received by: _____ 0850 of (company name) AHC Date: 8/21/09

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

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

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

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

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

Page 4 of 4

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

Air Toxics LTD.
Laboratory Services Since 1989

SAMPLE RECEIPT SUMMARY

WORKORDER 0908458C

Client

Mr. Taeko Minegishi
Environmental Health &
Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Sales Rep: TL

Phone

800-825-5343

Fax

781-247-4305

Date Promised: 09/04/09
Date Completed: 9/8/09
Date Received: 8/21/09
PO#: 16512
Project#: 16512

Total $: $ 1,440.00
Logged By: HD

Fraction	Sample #	Analysis	Collected	Amount$
41A	100690	ATL Application	8/19/2009	$75.00
41AA	100690 Lab Duplicate	ATL Application	8/19/2009	$0.00
42A	100691	ATL Application	8/19/2009	$75.00
43A	100349	ATL Application	8/19/2009	$75.00
44A	100350	ATL Application	8/19/2009	$75.00
45A	100351	ATL Application	8/19/2009	$75.00
46A	100352	ATL Application	8/19/2009	$75.00
47A	100353	ATL Application	8/19/2009	$75.00
47AA	100353 Lab Duplicate	ATL Application	8/19/2009	$0.00
48A	100354	ATL Application	8/19/2009	$75.00
49A	100192	ATL Application	8/19/2009	$75.00
50A	100193	ATL Application	8/19/2009	$75.00
51A	100195	ATL Application	8/19/2009	$75.00
52A	100196	ATL Application	8/19/2009	$75.00
53A	100249	ATL Application	8/20/2009	$75.00
54A	100250	ATL Application	8/20/2009	$75.00
55A	100251	ATL Application	8/20/2009	$75.00
55AA	100251 Lab Duplicate	ATL Application	8/20/2009	$0.00
56A	100252	ATL Application	8/20/2009	$75.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: CPSC Indoor Air Monitoring/13297

BILL TO: Accounts Payable
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Analysis Code: HPLC

TERMS:

Reporting Method: Modified TO-11A Passive-Radiello 165 (Full list) (ug)

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

Air Toxics LTD.
Laboratory Services Since 1989

SAMPLE RECEIPT SUMMARY Continued

Client

Mr. Taeko Minegishi
Environmental Health &
Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Sales Rep: TL

Phone

800-825-5343

Fax

781-247-4305

Date Promised: 09/04/09
Date Completed: 9/8/09
Date Received: 8/21/09
PO#: 16512
Project#: 16512

Total $: $ 1,440.00
Logged By: HD

Fraction	Sample #	Analysis	Collected	Amount$
57A	100253	ATL Application	8/20/2009	$75.00
58A	100254	ATL Application	8/20/2009	$75.00
59A	Lab Blank	ATL Application	NA	$0.00
60A	LCS	ATL Application	NA	$0.00

Misc. Charges eCVP (18) @ $5.00 each. $90.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: CPSC Indoor Air Monitoring/13297

BILL TO: Accounts Payable
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Analysis Code: HPLC

TERMS:

Reporting Method: Modified TO-11A Passive-Radiello 165 (Full list) (ug)

Sample Discrepancy Report

Identification

Initiated By: hd **Project ID:**13297 **PM:** bl **Date:** 8/21/2009 **Discrepancy Type:** ☒ **1.** ☒ **2.** ☒ **3.**

Workorder(s) affected:0908458 **Sample(s) affected:** 41a-58a, LCS

1. Sample Receipt Discrepancies

Narration Not Required:

1.1. ☐ Sample container (cartridge/tube/VOA vial) was received broken, however sample was intact.

1.2. ☐ No brass cap on canister.

1.3. ☐ Date of Collection noted on first sample, but no arrow down to indicate all samples.

Notify Lab for further determination:

1.4. ☐ Tedlar bag received with minimal volume.

Initials: _____ Date: _____

Narration Required in Lab Narrative and Sample Confirmation:

1.5. ☐ COC was not filled out in ink.

1.6. ☐ COC improperly relinquished / received.

1.7. ☐ Sample tags / can numbers do not match the COC.

1.8. ☒ Sample date ☒ error / ☐ missing on COC but noted on sample tag (check one).

1.9. ☐ Custody Seal on the outside of the container was ☐ broken / ☐ improperly placed (check one).

1.10. ☐ ID-none on the sample Tag/Blank

1.11. ☐ Other (describe below).

Describe the Discrepancy: 1.8 The collection date is not wriiten for any of the samples on COC.

2. Sample Receipt/Screening Discrepancies requiring PM notification

Document on Cover Page of Sample Receipt Confirmation and in Receiving Notes of Lab Narrative

If Section II. is filled out PM must be notified within 24 hrs of initiation

2.1. ☐ COC was not received with samples.

2.2. ☐ Analysis method(s) is ☐ not specified / ☐ incorrectly specified (check one) on the COC.

2.3. ☐ Incorrect sampling media / container for analysis requested.

2.4. ☐ Number of samples on the COC does not match the number of samples that were received.

2.5. ☐ Samples were received expired.

2.6. ☐ Sampling date (time for sulfur) is not documented for ☐ *some* / ☐ *any* samples (check one).

2.7. ☐ Sample received with amount of H_2O in the Tedlar Bag.

2.8. ☐ Sample cannot be analyzed. Container was ☐ received broken / ☐ leaking / ☐ flat / ☐ defective.

2.9. ☐ Tedlar bag / canister received emitting a strong odor; Sample ☐ can / ☐ cannot (check one) be analyzed.

2.10. ☐ Tedlar Bag for Sulfur analysis has metal fitting.

2.11. ☐ Environmental Supply Company valves

2.12. ☐ Sorbent samples-sampling volume was not provided

2.13. ☐ Flow controller used – canister samples received at ambient or under pressure.

2.14. ☐ Canister was at ambient pressure at time of pressurization and (check all that apply):

- ☐ Canister failed leak check on two manifolds,
- ☐ Canister valve was open,
- ☐ Brass nut was loose/not present.
- ☐ Sample can be analyzed
- ☐ Cannot be analyzed

2.15. ☐ Canister sample received with a vacuum difference >5.0"Hg between the receipt vac. And the final vac. reported on the COC, indicating loss of vacuum.

2.16. ☐ Canister sample received at >15"Hg (*not* identified as a Trip/Field Blank).

2.17. ☐ Canister Trip Blank received at low vacuum (< 25"Hg).

2.18. ☒ Sorbent Sample received outside method required temperature of 2°C to 6°C; ☐ ice / ☒ blue ice (check one) was present. A temp. Blank ☐ was / ☒ was not present (check one).

2.19. ☐ Other (describe below)

Initials: hd **Date:** 8/21/2009 **Notify Receiving:** ☐ **Notify PM:** ☐

Describe the Discrepancy: 2.18 Samples were received at 8*C.

3. Lab Discrepancies requiring Team Leader/PM notification

Document in Analytical Notes of Lab Narrative

If Section III. is filled out PM must be notified within 24 hrs of initiation

3.1. ☐ Tedlar Bag found to be leaking at the time of analysis; sample ☐ can / ☐ cannot (check one) be analyzed.

3.2. ☐ Tedlar Bag found to be flat/low volume; sample cannot be analyzed.

3.3. ☐ Sulfur samples received with insufficient time to analyze prior to expiration.

3.4. ☐ Canister found to be leaking at the time of analysis.

3.5. ☐ VOST tube saturated; bag dilution necessary.

3.6. ☐ Sample loss due to instrument malfunction / broken glassware.

3.7. ☐ Low/high surrogate recoveries noted in QC/sample(s) for extractable samples.

3.8. ☐ Reporting Limit was raised.

3.9. ☐ Post weight > Pre weight in field/lab Blank for PM10/TSP samples.

3.10. ☒ Other (describe below).

Initials: LIN **Date:** 9/1/2009 **Notify Receiving:** ☐ **Notify PM:** ☐

Team Lead Initials: _____ **Date:** _____

Describe the Discrepancy: 3.10: The recovery of Formaldehyde is 117.58% which is greater than the up control limit 115%. It is due to high background for Formaldehyde in the cartridge. We sipke at 2.86ug. However, the background is at 0.31ug.

How Does this Affect Client: The results of the samples containing low concentration of Formaldehyde, i.e. less than 3 ug, may be biase high.

Project Manager Use Only

Project Manager Notification ☒ **Section 2 Complete** ☒ **Section 3 Complete**

Action:

☐ It is not necessary to notify the client. Narrate the discrepancy in Receiving Notes/Analytical Notes of Lab Narrative.

PM Initials:_____ Date: _____

☒ Client notification required. See attached client contact / email, or comments below:

Client Notification:

PM Initials: BL Person notified: David Shore Date: 8-21-09

☐ Waiting for Client Reply

Comments: **Proceed and narrate temperature discrepancy.**

3.10 Narrate effects of backfround levels of formaldehyde on LCS recovery and sample results.

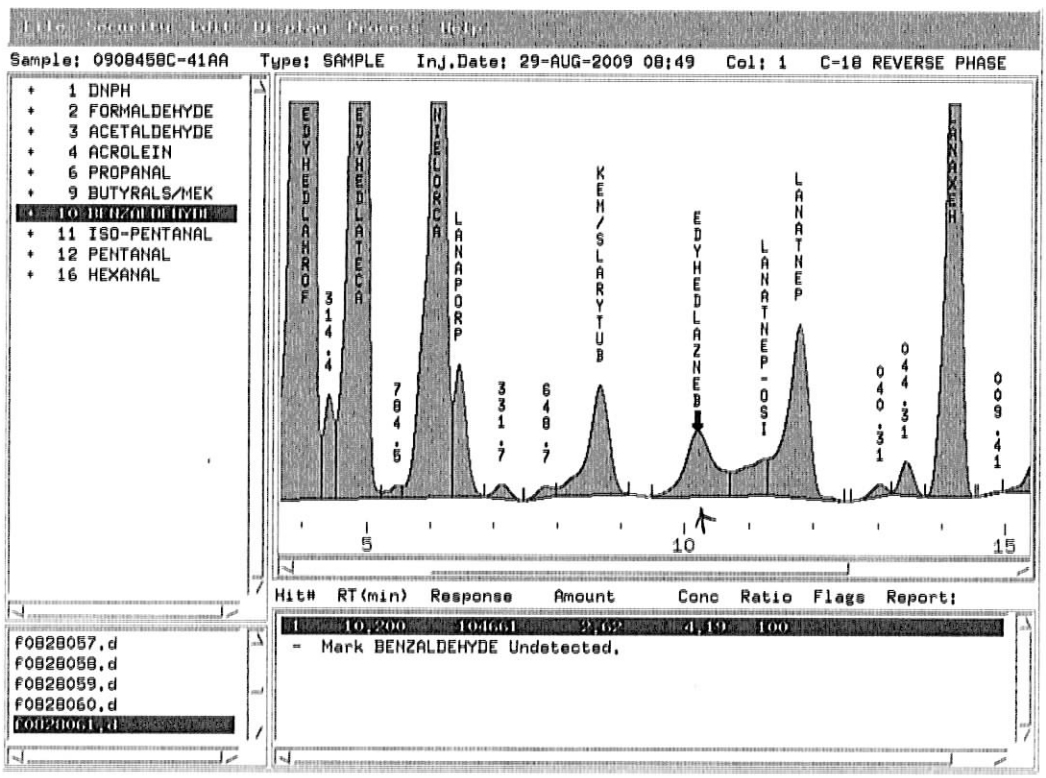
☒ Notify Lab Name: _____ Date: _____ **Notify Receiving:** ☐

☐ **Additional notifications attached.**

Additional Comments:

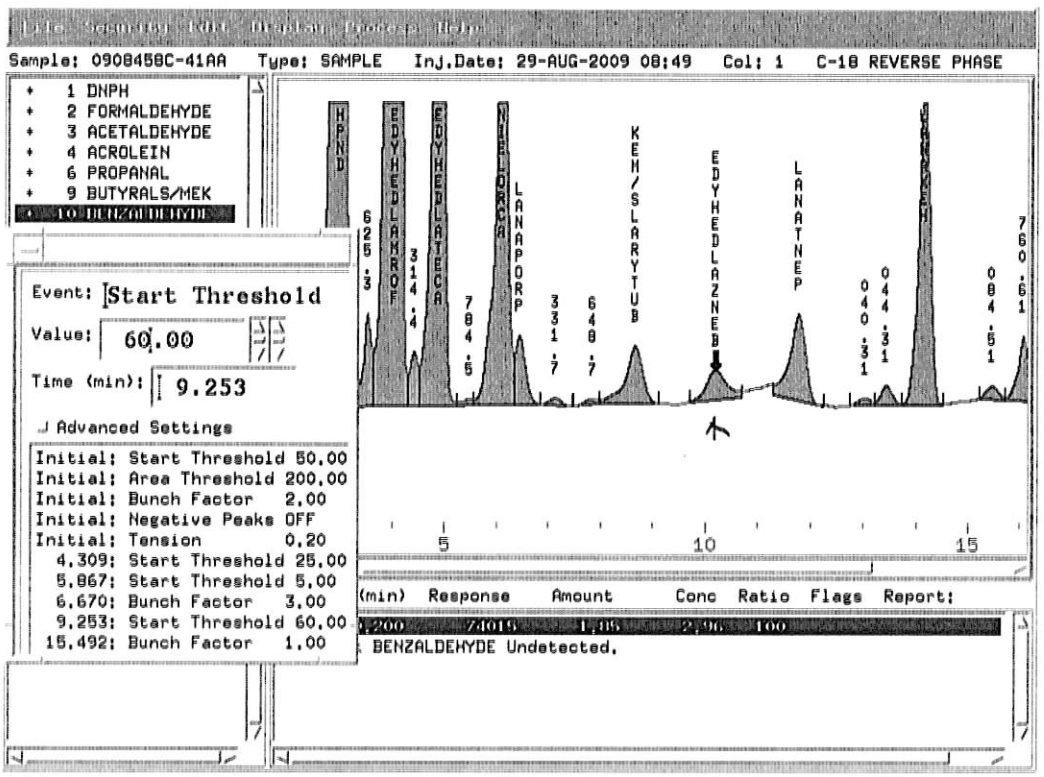
_____

Other Records



Before.

W 911109

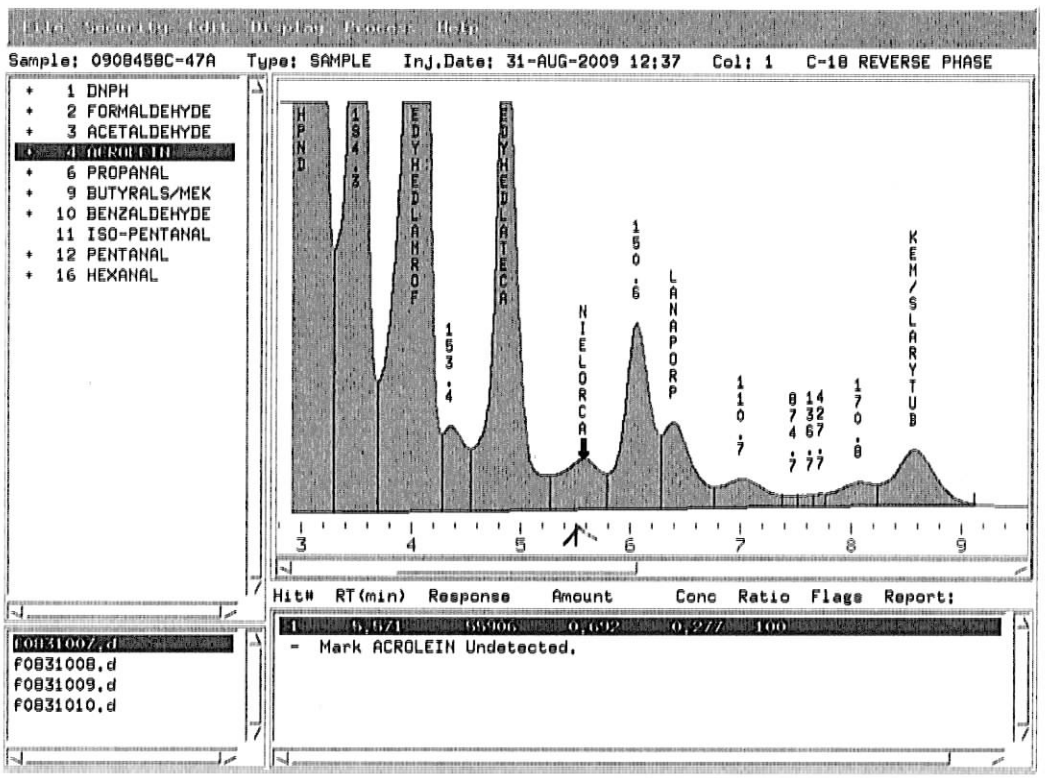


After

Correct Baseline	✓
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	↓

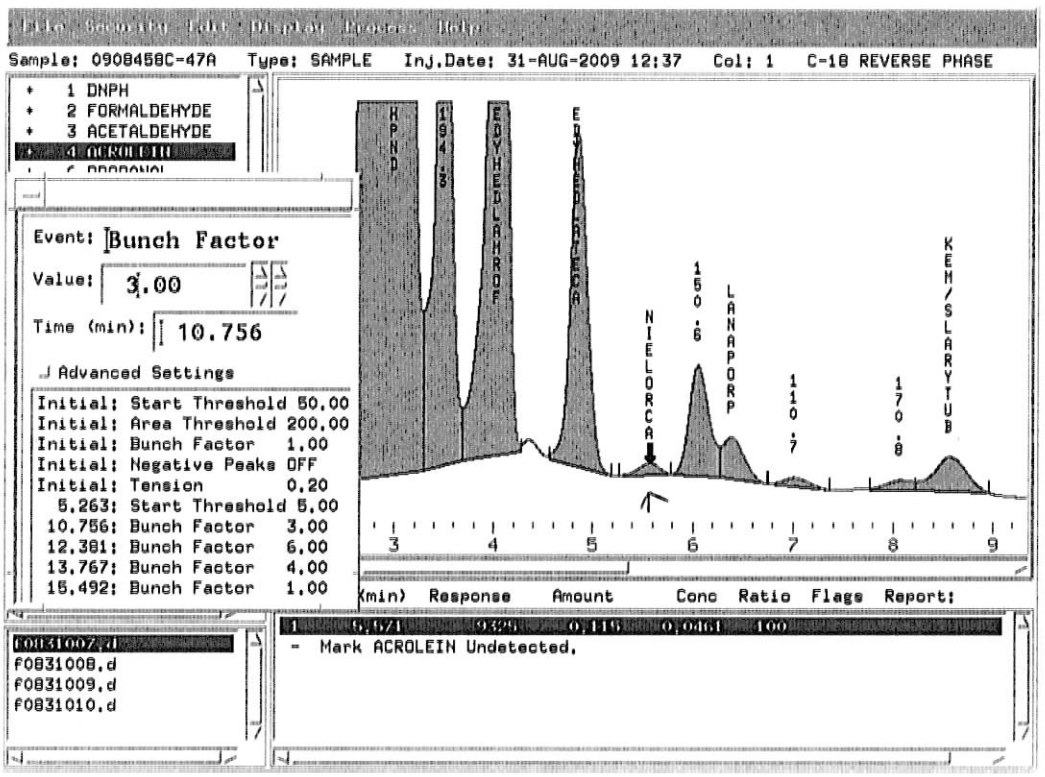
GS 9/8/09

9/12/09



Before.

W 9/2/09

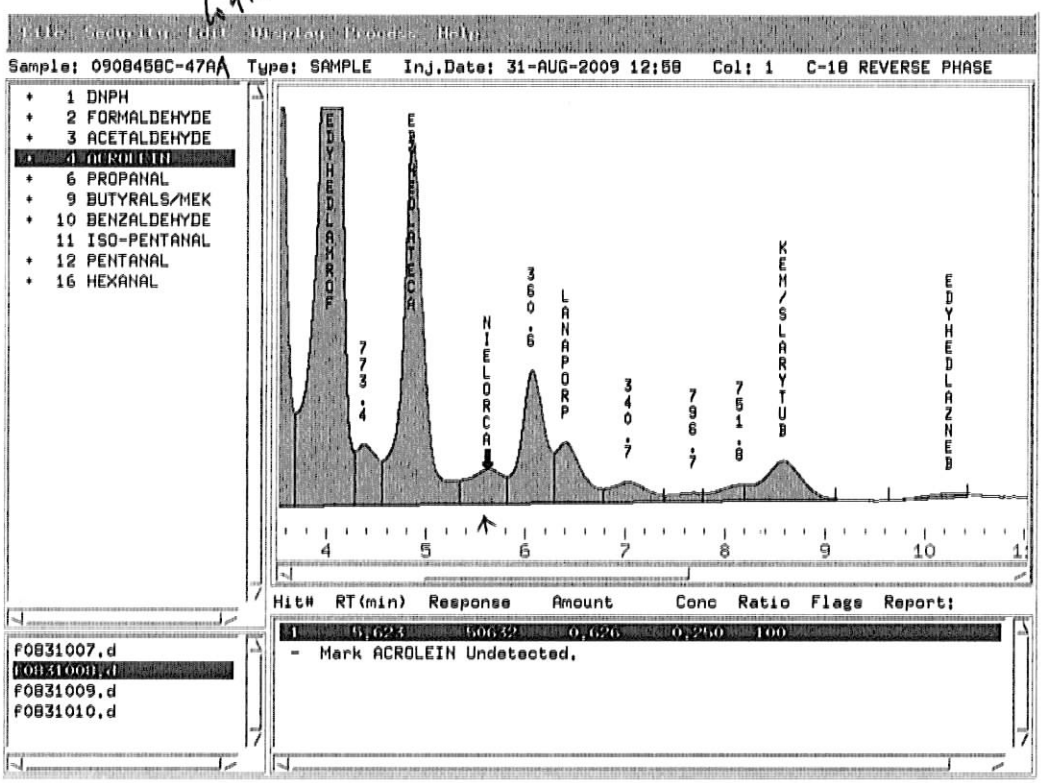


After

Correct Baseline	✓
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	✓

09/12/09 09/18/09

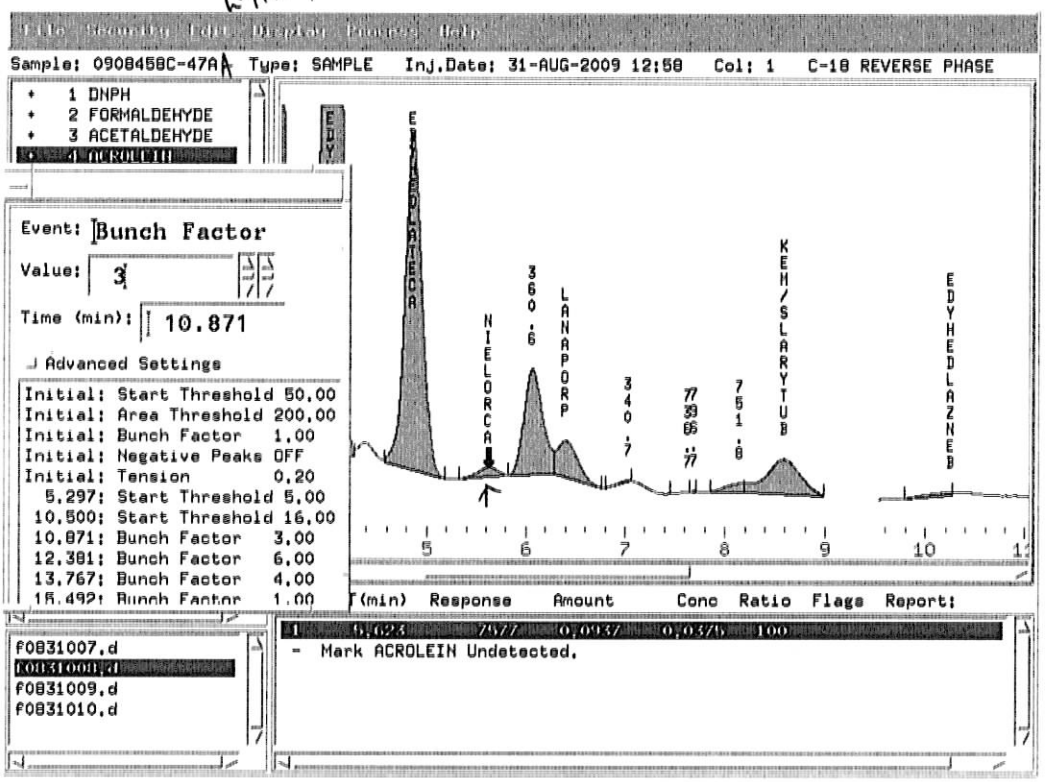
4/31/09



Before.

4/21/09

W 9/3/09

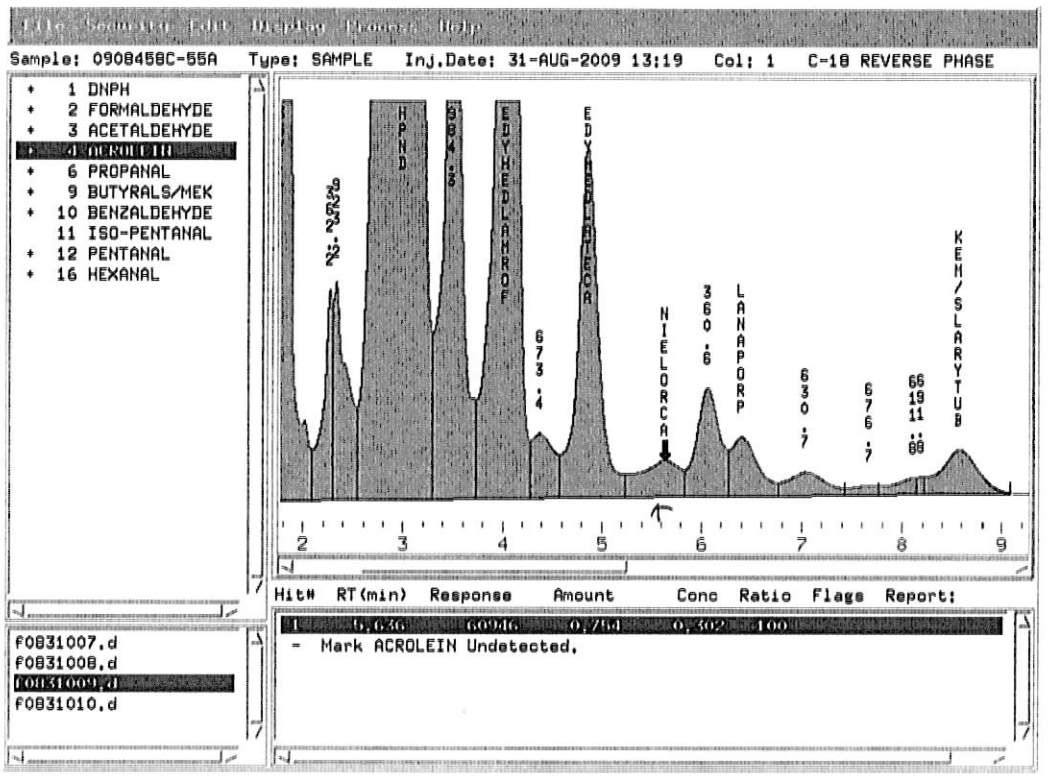


After

Correct Baseline	✓
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	✓

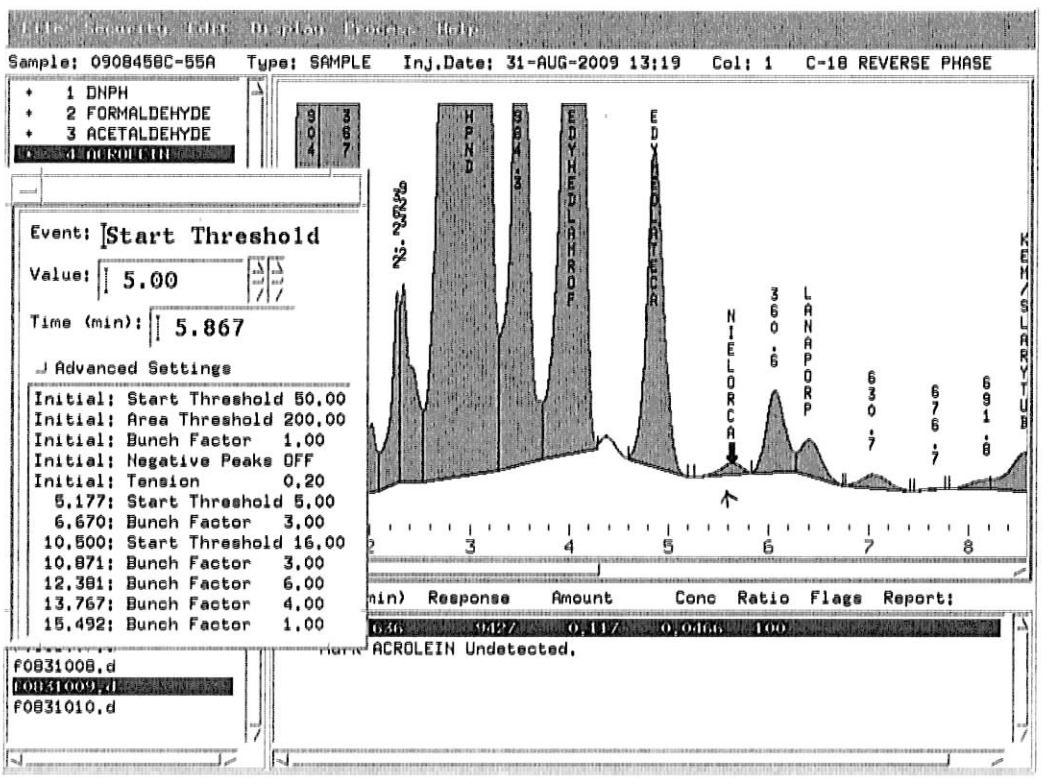
SS 9/8/09

W 9/2/09



Before.

W 9/2/09



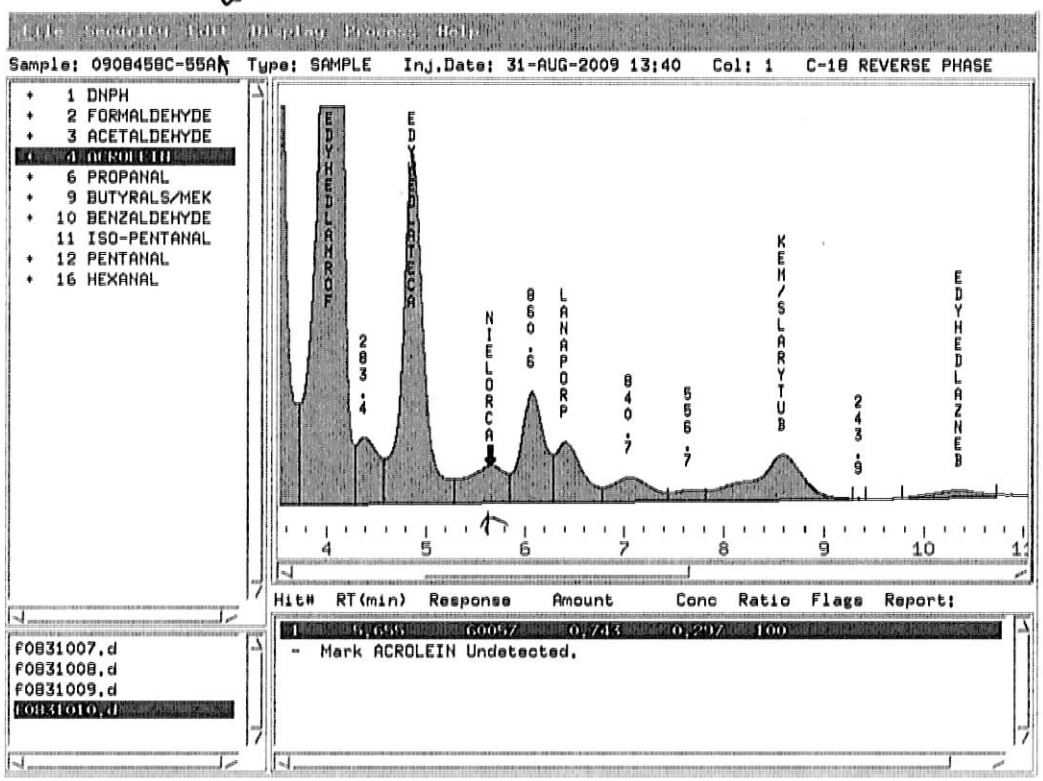
After

Correct Baseline	✓
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	✓

SS 9/8/09

9/2/09

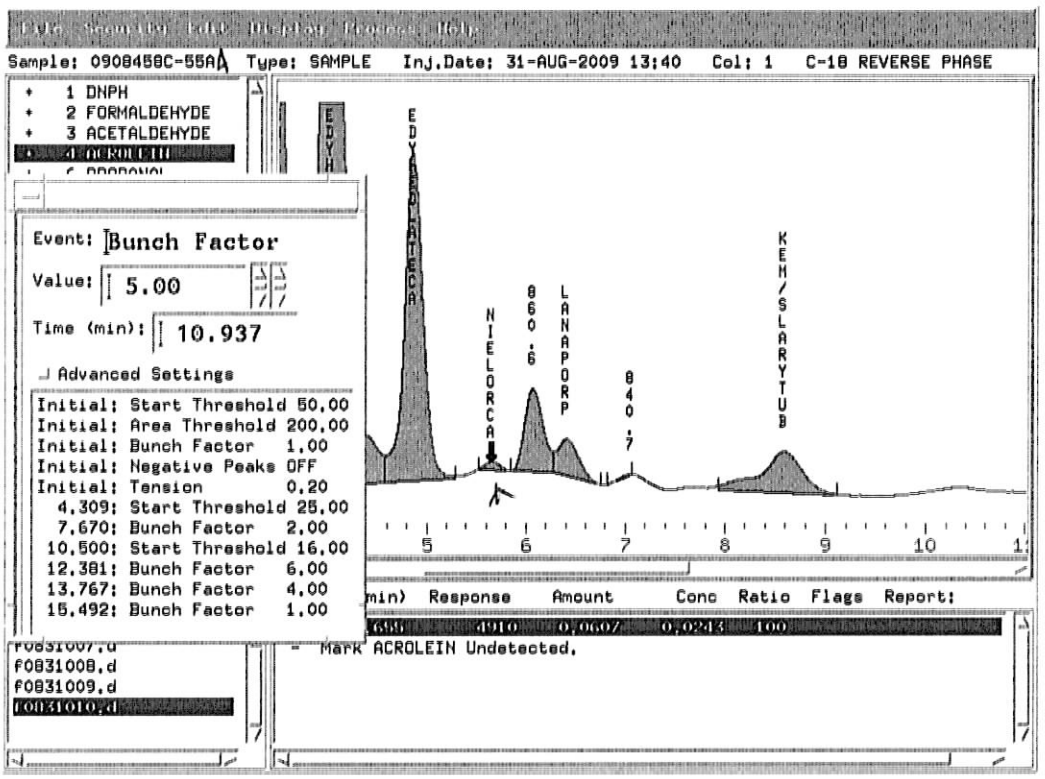
9/3/09



Before

9/2/09

W 9/3/09

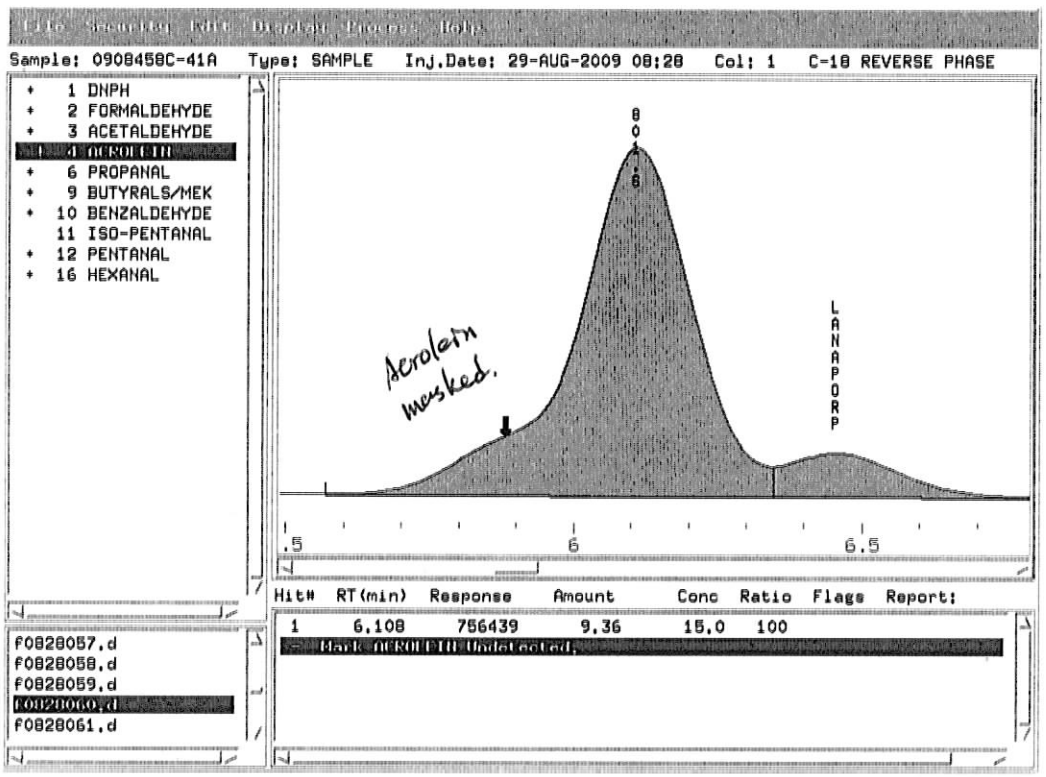


After

Correct Baseline	✓
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	
Corrected Peak Integration	

W 9/2/09

BS 9/8/09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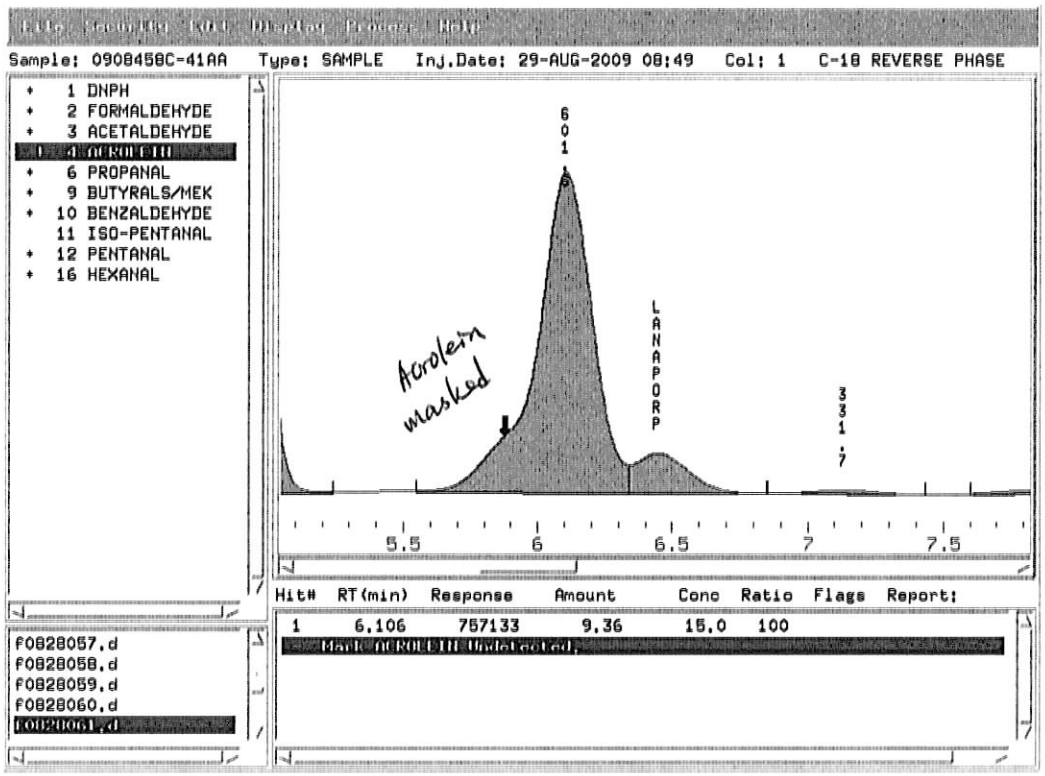
Sample: 0908458C-41A Type: SAMPLE Inj.Date: 29-AUG-2009 08:28 Col: 1 C-18 REVERSE PHASE
+ 1 DNPH
+ 2 FORMALDEHYDE
+ 3 ACETALDEHYDE
4 ACROLEIN
+ 6 PROPANAL
+ 9 BUTYRALS/MEK
+ 10 BENZALDEHYDE
11 ISO-PENTANAL
+ 12 PENTANAL
+ 16 HEXANAL
Acrolein masked.
LANAPORP
.5
6
6.5
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 6.108 756439 9.36 15.0 100
Mark ACROLEIN Undetected.
F0828057.d
F0828058.d
F0828059.d
F0828060.d
F0828061.d

W 9/11/09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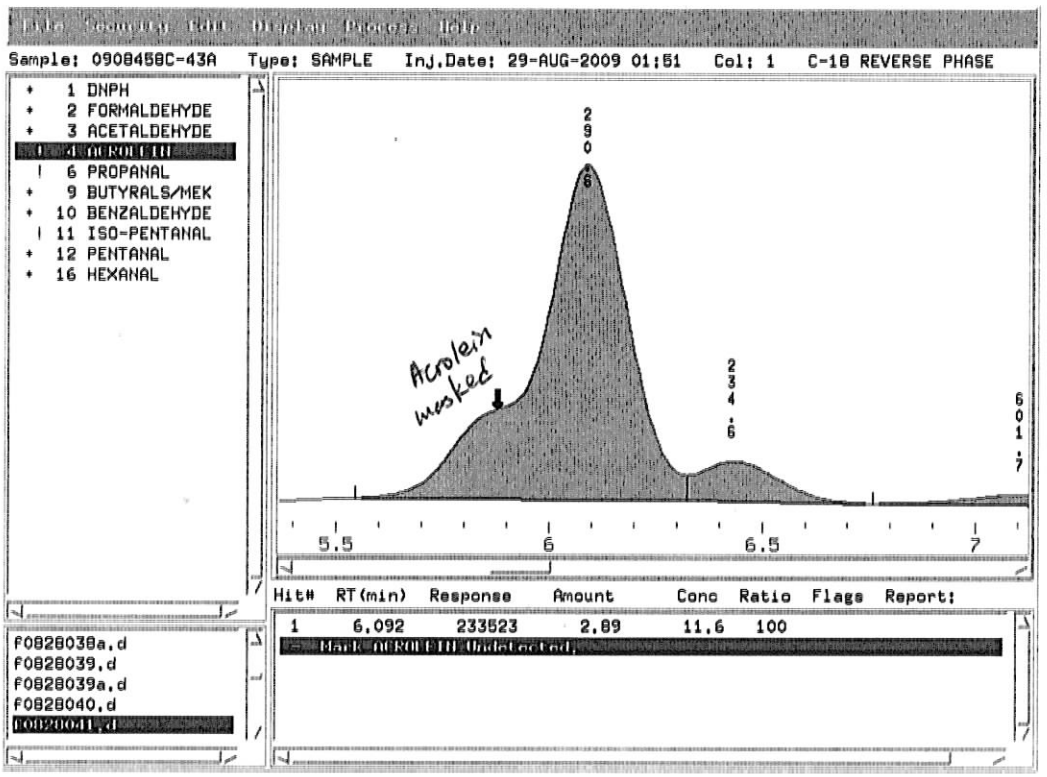
+ 1 DNPH
+ 2 FORMALDEHYDE
+ 3 ACETALDEHYDE
4 ACROLEIN
+ 6 PROPANAL
+ 9 BUTYRALS/MEK
+ 10 BENZALDEHYDE
11 ISO-PENTANAL
+ 12 PENTANAL
+ 16 HEXANAL
601
LANAPORP
331.7
Acrolein masked
5.5
6
6.5
7
7.5
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 6.106 757133 9.36 15.0 100
Mark ACROLEIN Undetected.
F0828057.d
F0828058.d
F0828059.d
F0828060.d
F0828061.d

9/11/09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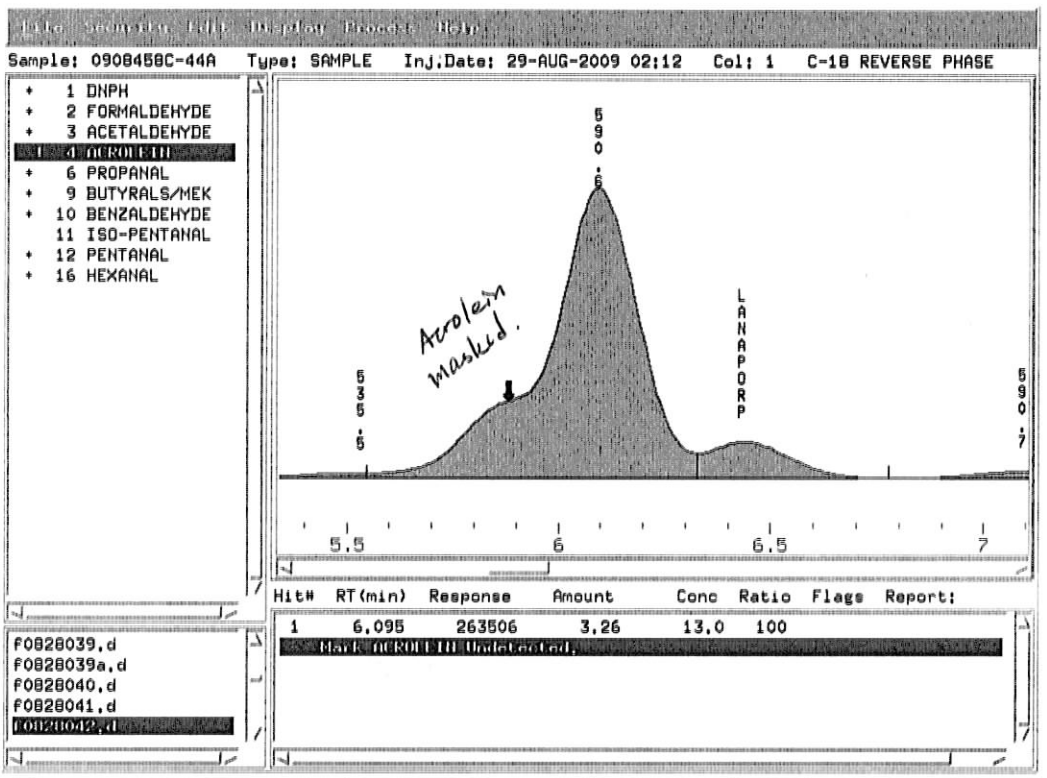
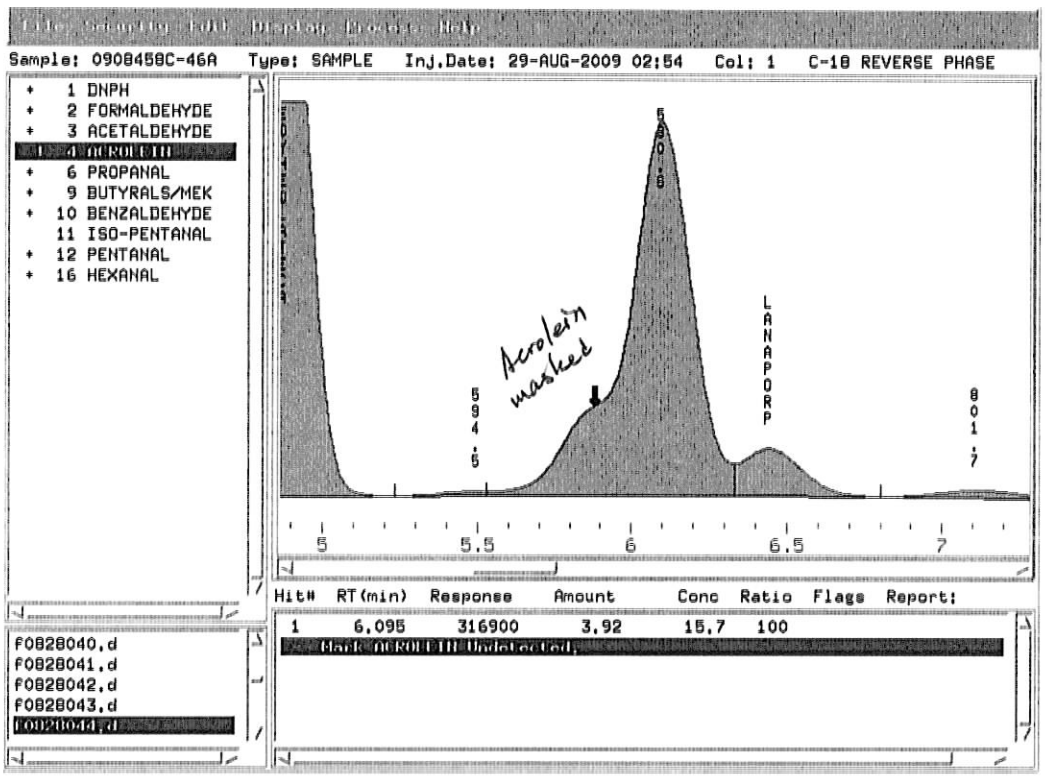
Sample: 0908458C-43A Type: SAMPLE Inj.Date: 29-AUG-2009 01:51 Col: 1 C-18 REVERSE PHASE
+ 1 DNPH
+ 2 FORMALDEHYDE
+ 3 ACETALDEHYDE
! 4 ACROLEIN
! 6 PROPANAL
+ 9 BUTYRALS/MEK
+ 10 BENZALDEHYDE
! 11 ISO-PENTANAL
+ 12 PENTANAL
+ 16 HEXANAL
Acrolein masked
5.5
6
6.5
7
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 6.092 233523 2.89 11.6 100
Mark ACROLEIN Undetected.
F0828038a.d
F0828039.d
F0828039a.d
F0828040.d
F0828041.d

9/2/09


Sample: 0908458C-44A Type: SAMPLE Inj.Date: 29-AUG-2009 02:12 Col: 1 C-18 REVERSE PHASE
+ 1 DNPH
+ 2 FORMALDEHYDE
+ 3 ACETALDEHYDE
4 ACROLEIN
+ 6 PROPANAL
+ 9 BUTYRALS/MEK
+ 10 BENZALDEHYDE
11 ISO-PENTANAL
+ 12 PENTANAL
+ 16 HEXANAL
Acrolein masked.
LANAPORP
5.5
6
6.5
7
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 6.095 263506 3.26 13.0 100
Mark ACROLEIN Undetected.
F0828039.d
F0828039a.d
F0828040.d
F0828041.d
F0828042.d

W 9/2/09


Sample: 0908458C-46A Type: SAMPLE Inj.Date: 29-AUG-2009 02:54 Col: 1 C-18 REVERSE PHASE
+ 1 DNPH
+ 2 FORMALDEHYDE
+ 3 ACETALDEHYDE
+ 6 PROPANAL
+ 9 BUTYRALS/MEK
+ 10 BENZALDEHYDE
11 ISO-PENTANAL
+ 12 PENTANAL
+ 16 HEXANAL
Acrolein masked
LANAPORP
5
5.5
6
6.5
7
Hit# RT(min) Response Amount Conc Ratio Flags Report:
1 6.095 316900 3.92 15.7 100
F0828040.d
F0828041.d
F0828042.d
F0828043.d

W 9/2/09

WO 0908458C

Sample ID ***0908458C-41A*** Duration(min)=18412 Dilution factor =4
File Name **f0828060.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	4.0	98	99	18412	0.55	2.19	54
75-07-0	Acetaldehyde	0.50	2.0	30	84	18412	0.32	1.29	19
123-38-6	Propanal	0.25	1.0	2.4	39	18412	0.35	1.39	3.3
123-72-8	Butanal*	0.25	1.0	3.9	11	18412	1.23	4.94	19
100-52-7	Benzaldehyde	0.25	1.0	2.6	92	18412	0.15	0.59	1.5
110-62-3	Pentanal	0.25	1.0	7.8	27	18412	0.50	2.01	16
590-86-3	Isopentanal	0.25	1.0	Not Detected	61	18412	0.22	0.89	Not Detected
66-25-1	Hexanal	0.25	1.0	18	18	18412	0.75	3.02	54
107-02-8	Acrolein [(M)]	0.25	1.0	Not Detected	33	18412	0.41	1.65	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.
[M] Reported value may be biased due to apparent matrix interferences.

Sample ID ***0908458C-41AA*** Duration(min)=18412 Dilution factor =4
File Name **f0828061.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	4.0	98	99	18412	0.55	2.19	54
75-07-0	Acetaldehyde	0.50	2.0	30	84	18412	0.32	1.29	19
123-38-6	Propanal	0.25	1.0	2.2	39	18412	0.35	1.39	3.1
123-72-8	Butanal*	0.25	1.0	3.8	11	18412	1.23	4.94	19
100-52-7	Benzaldehyde	0.25	1.0	3.0	92	18412	0.15	0.59	1.8
110-62-3	Pentanal	0.25	1.0	6.1	27	18412	0.50	2.01	12
590-86-3	Isopentanal	0.25	1.0	Not Detected	61	18412	0.22	0.89	Not Detected
66-25-1	Hexanal	0.25	1.0	18	18	18412	0.75	3.02	54
107-02-8	Acrolein [(M)]	0.25	1.0	Not Detected	33	18412	0.41	1.65	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.
[M] Reported value may be biased due to apparent matrix interferences.

Sample ID ***0908458C-42A*** Duration(min)=21819 Dilution factor =1
File Name **f0827058.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	1.0	Not Detected	99	21819	0.46	0.46	Not Detected
75-07-0	Acetaldehyde	0.50	0.5	Not Detected	84	21819	0.27	0.27	Not Detected
123-38-6	Propanal	0.25	0.3	Not Detected	39	21819	0.29	0.29	Not Detected
123-72-8	Butanal*	0.25	0.3	Not Detected	11	21819	1.04	1.04	Not Detected
100-52-7	Benzaldehyde	0.25	0.3	Not Detected	92	21819	0.12	0.12	Not Detected
110-62-3	Pentanal	0.25	0.3	Not Detected	27	21819	0.42	0.42	Not Detected
590-86-3	Isopentanal	0.25	0.3	Not Detected	61	21819	0.19	0.19	Not Detected
66-25-1	Hexanal	0.25	0.3	Not Detected	18	21819	0.64	0.64	Not Detected
107-02-8	Acrolein	0.25	0.3	Not Detected	33	18412	0.41	0.41	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-43A*** Duration(min)=17289 Dilution factor =10
File Name **f0828041.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	120	99	17289	0.58	5.8	70
75-07-0	Acetaldehyde	0.50	5.0	12	84	17289	0.34	3.4	8.3
123-38-6	Propanal	0.25	2.5	Not Detected	39	17289	0.37	3.7	Not Detected
123-72-8	Butanal*	0.25	2.5	7.5	11	17289	1.31	13	39
100-52-7	Benzaldehyde	0.25	2.5	4.0	92	17289	0.16	1.6	2.5
110-62-3	Pentanal	0.25	2.5	12	27	17289	0.54	5.4	26
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	17289	0.24	2.4	Not Detected
66-25-1	Hexanal	0.25	2.5	44	18	17289	0.80	8.0	141
107-02-8	Acrolein [M]	0.25	2.5	Not Detected	33	17289	0.44	4.4	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

[M] Reported value may be biased due to apparent matrix interferences.

Sample ID ***0908458C-44A*** Duration(min)=17289 Dilution factor =10
File Name **f0828042.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	120	99	17289	0.58	5.8	70
75-07-0	Acetaldehyde	0.50	5.0	13	84	17289	0.34	3.4	9.0
123-38-6	Propanal	0.25	2.5	Not Detected	39	17289	0.37	3.7	Not Detected
123-72-8	Butanal*	0.25	2.5	7.9	11	17289	1.31	13	42
100-52-7	Benzaldehyde	0.25	2.5	4.8	92	17289	0.16	1.6	3.0
110-62-3	Pentanal	0.25	2.5	11	27	17289	0.54	5.4	24
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	17289	0.24	2.4	Not Detected
66-25-1	Hexanal	0.25	2.5	43	18	17289	0.80	8.0	138
107-02-8	Acrolein [(M)]	0.25	2.5	Not Detected	33	17289	0.44	4.4	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.
[M] Reported value may be biased due to apparent matrix interferences.

Sample ID ***0908458C-45A*** Duration(min)=17289 Dilution factor =10
File Name **f0828043.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	120	99	17289	0.58	5.8	70
75-07-0	Acetaldehyde	0.50	5.0	17	84	17289	0.34	3.4	12
123-38-6	Propanal	0.25	2.5	Not Detected	39	17289	0.37	3.7	Not Detected
123-72-8	Butanal*	0.25	2.5	8.5	11	17289	1.31	13	45
100-52-7	Benzaldehyde	0.25	2.5	5.6	92	17289	0.16	1.6	3.5
110-62-3	Pentanal	0.25	2.5	13	27	17289	0.54	5.4	28
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	17289	0.24	2.4	Not Detected
66-25-1	Hexanal	0.25	2.5	43	18	17289	0.80	8.0	138
107-02-8	Acrolein [(M)]	0.25	2.5	Not Detected	33	17289	0.44	4.4	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.
[M] Reported value may be biased due to apparent matrix interferences.

Sample ID ***0908458C-46A*** Duration(min)=17289 Dilution factor =10
File Name **f0828044.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	110	99	17289	0.58	5.8	64
75-07-0	Acetaldehyde	0.50	5.0	19	84	17289	0.34	3.4	13
123-38-6	Propanal	0.25	2.5	Not Detected	39	17289	0.37	3.7	Not Detected
123-72-8	Butanal*	0.25	2.5	9.2	11	17289	1.31	13	48
100-52-7	Benzaldehyde	0.25	2.5	5.6	92	17289	0.16	1.6	3.5
110-62-3	Pentanal	0.25	2.5	14	27	17289	0.54	5.4	30
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	17289	0.24	2.4	Not Detected
66-25-1	Hexanal	0.25	2.5	43	18	17289	0.80	8.0	138
107-02-8	Acrolein [(M)]	0.25	2.5	Not Detected	33	17289	0.44	4.4	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.
[M] Reported value may be biased due to apparent matrix interferences.

Sample ID ***0908458C-47A*** Duration(min)=17289 Dilution factor =1
File Name **f083107.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	1.0	3.2	99	17289	0.58	0.58	1.9
75-07-0	Acetaldehyde	0.50	0.50	1.1	84	17289	0.34	0.34	0.8
123-38-6	Propanal	0.25	0.25	Not Detected	39	17289	0.37	0.37	Not Detected
123-72-8	Butanal*	0.25	0.25	0.34	11	17289	1.31	1.3	1.8
100-52-7	Benzaldehyde	0.25	0.25	Not Detected	92	17289	0.16	0.16	Not Detected
110-62-3	Pentanal	0.25	0.25	0.34	27	17289	0.54	0.54	0.7
590-86-3	Isopentanal	0.25	0.25	Not Detected	61	17289	0.24	0.24	Not Detected
66-25-1	Hexanal	0.25	0.25	0.34	18	17289	0.80	0.80	1.1
107-02-8	Acrolein	0.25	0.25	Not Detected	33	17289	0.44	0.44	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-47AA*** Duration(min)=17289 Dilution factor =1
File Name **f083108.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	1.0	3.3	99	17289	0.58	0.58	1.9
75-07-0	Acetaldehyde	0.50	0.50	1.1	84	17289	0.34	0.34	0.8
123-38-6	Propanal	0.25	0.25	Not Detected	39	17289	0.37	0.37	Not Detected
123-72-8	Butanal*	0.25	0.25	0.37	11	17289	1.31	1.3	1.9
100-52-7	Benzaldehyde	0.25	0.25	Not Detected	92	17289	0.16	0.16	Not Detected
110-62-3	Pentanal	0.25	0.25	0.32	27	17289	0.54	0.54	0.7
590-86-3	Isopentanal	0.25	0.25	Not Detected	61	17289	0.24	0.24	Not Detected
66-25-1	Hexanal	0.25	0.25	0.35	18	17289	0.80	0.80	1.1
107-02-8	Acrolein	0.25	0.25	Not Detected	33	17289	0.44	0.44	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-48A*** Duration(min)=21819 Dilution factor =1
File Name **f0828056.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	1.0	Not Detected	99	21819	0.46	0.46	Not Detected
75-07-0	Acetaldehyde	0.50	0.5	Not Detected	84	21819	0.27	0.27	Not Detected
123-38-6	Propanal	0.25	0.3	Not Detected	39	21819	0.29	0.29	Not Detected
123-72-8	Butanal*	0.25	0.3	Not Detected	11	21819	1.04	1.04	Not Detected
100-52-7	Benzaldehyde	0.25	0.3	Not Detected	92	21819	0.12	0.12	Not Detected
110-62-3	Pentanal	0.25	0.3	Not Detected	27	21819	0.42	0.42	Not Detected
590-86-3	Isopentanal	0.25	0.3	Not Detected	61	21819	0.19	0.19	Not Detected
66-25-1	Hexanal	0.25	0.3	Not Detected	18	21819	0.64	0.64	Not Detected
107-02-8	Acrolein	0.25	0.3	Not Detected	33	18412	0.41	0.41	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-49A*** Duration(min)=21819 Dilution factor =10
File Name **f0828045.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	120	99	21819	0.46	4.6	56
75-07-0	Acetaldehyde	0.50	5.0	4.8	84	21819	0.27	2.7	3
123-38-6	Propanal	0.25	2.5	Not Detected	39	21819	0.29	2.9	Not Detected
123-72-8	Butanal*	0.25	2.5	2.6	11	21819	1.04	10	11
100-52-7	Benzaldehyde	0.25	2.5	6.3	92	21819	0.12	1.2	3.1
110-62-3	Pentanal	0.25	2.5	9.4	27	21819	0.42	4.2	16
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	21819	0.19	1.9	Not Detected
66-25-1	Hexanal	0.25	2.5	55	18	21819	0.64	6.4	140
107-02-8	Acrolein	0.25	2.5	2.8	33	21819	0.35	3.5	3.9

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-50A*** Duration(min)=21819 Dilution factor =10
File Name **f0828046.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	120	99	21819	0.46	4.6	56
75-07-0	Acetaldehyde	0.50	5.0	4.8	84	21819	0.27	2.7	2.6
123-38-6	Propanal	0.25	2.5	Not Detected	39	21819	0.29	2.9	Not Detected
123-72-8	Butanal*	0.25	2.5	2.6	11	21819	1.04	10	11
100-52-7	Benzaldehyde	0.25	2.5	7.9	92	21819	0.12	1.2	3.9
110-62-3	Pentanal	0.25	2.5	10	27	21819	0.42	4.2	17
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	21819	0.19	1.9	Not Detected
66-25-1	Hexanal	0.25	2.5	57	18	21819	0.64	6.4	145
107-02-8	Acrolein	0.25	2.5	2.9	33	21819	0.35	3.5	4.0

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-51A*** Duration(min)=21819 Dilution factor =10
File Name **f0828047.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	140	99	21819	0.46	4.6	65
75-07-0	Acetaldehyde	0.50	5.0	3.7	84	21819	0.27	2.7	2.0
123-38-6	Propanal	0.25	2.5	Not Detected	39	21819	0.29	2.9	Not Detected
123-72-8	Butanal*	0.25	2.5	2.2	11	21819	1.04	10	9
100-52-7	Benzaldehyde	0.25	2.5	6.0	92	21819	0.12	1.2	3.0
110-62-3	Pentanal	0.25	2.5	10	27	21819	0.42	4.2	17
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	21819	0.19	1.9	Not Detected
66-25-1	Hexanal	0.25	2.5	63	18	21819	0.64	6.4	160
107-02-8	Acrolein	0.25	2.5	3.1	33	21819	0.35	3.5	4.3

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-52A*** Duration(min)=21819 Dilution factor =10
File Name **f0828048.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	140	99	21819	0.46	4.6	65
75-07-0	Acetaldehyde	0.50	5.0	6.5	84	21819	0.27	2.7	3.5
123-38-6	Propanal	0.25	2.5	Not Detected	39	21819	0.29	2.9	Not Detected
123-72-8	Butanal*	0.25	2.5	3.8	11	21819	1.04	10	16
100-52-7	Benzaldehyde	0.25	2.5	9.2	92	21819	0.12	1.2	4.6
110-62-3	Pentanal	0.25	2.5	14	27	21819	0.42	4.2	24
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	21819	0.19	1.9	Not Detected
66-25-1	Hexanal	0.25	2.5	75	18	21819	0.64	6.4	191
107-02-8	Acrolein	0.25	2.5	5.6	33	21819	0.35	3.5	7.8

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-53A*** Duration(min)=19684 Dilution factor =10
File Name **f0828049.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	140	99	19684	0.51	5.1	72
75-07-0	Acetaldehyde	0.50	5.0	6.2	84	19684	0.30	3.0	3.7
123-38-6	Propanal	0.25	2.5	Not Detected	39	19684	0.33	3.3	Not Detected
123-72-8	Butanal*	0.25	2.5	Not Detected	11	19684	1.15	12	Not Detected
100-52-7	Benzaldehyde	0.25	2.5	4.0	92	19684	0.14	1.4	2.2
110-62-3	Pentanal	0.25	2.5	5.4	27	19684	0.47	4.7	10
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	19684	0.21	2.1	Not Detected
66-25-1	Hexanal	0.25	2.5	27	18	19684	0.71	7.1	76
107-02-8	Acrolein	0.25	2.5	Not Detected	33	19684	0.38	3.8	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-54A*** Duration(min)=19684 Dilution factor =10
File Name **f0828050.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	140	99	19684	0.51	5.1	72
75-07-0	Acetaldehyde	0.50	5.0	5.9	84	19684	0.30	3.0	3.6
123-38-6	Propanal	0.25	2.5	Not Detected	39	19684	0.33	3.3	Not Detected
123-72-8	Butanal*	0.25	2.5	Not Detected	11	19684	1.15	12	Not Detected
100-52-7	Benzaldehyde	0.25	2.5	3.8	92	19684	0.14	1.4	2.1
110-62-3	Pentanal	0.25	2.5	5.1	27	19684	0.47	4.7	10
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	19684	0.21	2.1	Not Detected
66-25-1	Hexanal	0.25	2.5	26	18	19684	0.71	7.1	73
107-02-8	Acrolein	0.25	2.5	Not Detected	33	19684	0.38	3.8	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-55A*** Duration(min)=19684 Dilution factor =1
File Name **f0831009.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	1.0	4.3	99	19684	0.51	0.51	2.2
75-07-0	Acetaldehyde	0.50	0.50	1.1	84	19684	0.30	0.30	0.67
123-38-6	Propanal	0.25	0.25	Not Detected	39	19684	0.33	0.33	Not Detected
123-72-8	Butanal*	0.25	0.25	0.40	11	19684	1.2	1.2	1.8
100-52-7	Benzaldehyde	0.25	0.25	Not Detected	92	19684	0.14	0.14	Not Detected
110-62-3	Pentanal	0.25	0.25	0.28	27	19684	0.47	0.47	0.53
590-86-3	Isopentanal	0.25	0.25	Not Detected	61	19684	0.21	0.21	Not Detected
66-25-1	Hexanal	0.25	0.25	0.37	18	19684	0.71	0.71	1.0
107-02-8	Acrolein	0.25	0.25	Not Detected	33	19684	0.38	0.38	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-55AA*** Duration(min)=19684 Dilution factor =1
File Name **f0831010.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	1.0	4.5	99	19684	0.51	0.51	2.3
75-07-0	Acetaldehyde	0.50	0.50	1.2	84	19684	0.30	0.30	0.73
123-38-6	Propanal	0.25	0.25	Not Detected	39	19684	0.33	0.33	Not Detected
123-72-8	Butanal*	0.25	0.25	0.52	11	19684	1.2	1.2	2.4
100-52-7	Benzaldehyde	0.25	0.25	Not Detected	92	19684	0.14	0.14	Not Detected
110-62-3	Pentanal	0.25	0.25	Not Detected	27	19684	0.47	0.47	Not Detected
590-86-3	Isopentanal	0.25	0.25	Not Detected	61	19684	0.21	0.21	Not Detected
66-25-1	Hexanal	0.25	0.25	0.37	18	19684	0.71	0.71	1.0
107-02-8	Acrolein	0.25	0.25	Not Detected	33	19684	0.38	0.38	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-56A*** Duration(min)=19684 Dilution factor =10
File Name **f0828062.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	180	99	19684	0.51	5.1	92
75-07-0	Acetaldehyde	0.50	5.0	8.0	84	19684	0.30	3.0	4.8
123-38-6	Propanal	0.25	2.5	Not Detected	39	19684	0.33	3.3	Not Detected
123-72-8	Butanal*	0.25	2.5	Not Detected	11	19684	1.15	12	Not Detected
100-52-7	Benzaldehyde	0.25	2.5	5.2	92	19684	0.14	1.4	2.9
110-62-3	Pentanal	0.25	2.5	6.8	27	19684	0.47	4.7	13
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	19684	0.21	2.1	Not Detected
66-25-1	Hexanal	0.25	2.5	33	18	19684	0.71	7.1	93
107-02-8	Acrolein	0.25	2.5	Not Detected	33	19684	0.38	3.8	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID ***0908458C-57A*** Duration(min)=19684 Dilution factor =10
File Name **f0828063.d**

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	10	180	99	19684	0.51	5.1	92
75-07-0	Acetaldehyde	0.50	5.0	7.6	84	19684	0.30	3.0	4.6
123-38-6	Propanal	0.25	2.5	Not Detected	39	19684	0.33	3.3	Not Detected
123-72-8	Butanal*	0.25	2.5	Not Detected	11	19684	1.15	12	Not Detected
100-52-7	Benzaldehyde	0.25	2.5	5.2	92	19684	0.14	1.4	2.9
110-62-3	Pentanal	0.25	2.5	6.8	27	19684	0.47	4.7	13
590-86-3	Isopentanal	0.25	2.5	Not Detected	61	19684	0.21	2.1	Not Detected
66-25-1	Hexanal	0.25	2.5	35	18	19684	0.71	7.1	99
107-02-8	Acrolein	0.25	2.5	Not Detected	33	19684	0.38	3.8	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID *0908458C-58A* Duration(min)=21819 Dilution factor =1
File Name f0828055.d

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	1.0	Not Detected	99	21819	0.46	0.46	Not Detected
75-07-0	Acetaldehyde	0.50	0.5	Not Detected	84	21819	0.27	0.27	Not Detected
123-38-6	Propanal	0.25	0.3	Not Detected	39	21819	0.29	0.29	Not Detected
123-72-8	Butanal*	0.25	0.3	Not Detected	11	21819	1.04	1.04	Not Detected
100-52-7	Benzaldehyde	0.25	0.3	Not Detected	92	21819	0.12	0.12	Not Detected
110-62-3	Pentanal	0.25	0.3	Not Detected	27	21819	0.42	0.42	Not Detected
590-86-3	Isopentanal	0.25	0.3	Not Detected	61	21819	0.19	0.19	Not Detected
66-25-1	Hexanal	0.25	0.3	Not Detected	18	21819	0.64	0.64	Not Detected
107-02-8	Acrolein	0.25	0.3	Not Detected	33	21819	0.35	0.35	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Sample ID *0908458C-Lab Blank* Duration(min)=21819 Dilution factor =1
File Name f0825026.d

CAS #	Analyte	Detection Limit (uG)	Reporting Limit (uG)	Amount (uG)	Sampling Rate (mL/min)	Exposure Time (min)	Detection Limit (uG/M^3)	Reporting Limit (uG/M^3)	Amount (uG/M^3)
50-00-0	Formaldehyde	1.0	1.0	Not Detected	99	21819	0.46	0.46	Not Detected
75-07-0	Acetaldehyde	0.50	0.5	Not Detected	84	21819	0.27	0.27	Not Detected
123-38-6	Propanal	0.25	0.3	Not Detected	39	21819	0.29	0.29	Not Detected
123-72-8	Butanal*	0.25	0.3	Not Detected	11	21819	1.04	1.04	Not Detected
100-52-7	Benzaldehyde	0.25	0.3	Not Detected	92	21819	0.12	0.12	Not Detected
110-62-3	Pentanal	0.25	0.3	Not Detected	27	21819	0.42	0.42	Not Detected
590-86-3	Isopentanal	0.25	0.3	Not Detected	61	21819	0.19	0.19	Not Detected
66-25-1	Hexanal	0.25	0.3	Not Detected	18	21819	0.64	0.64	Not Detected
107-02-8	Acrolein	0.25	0.3	Not Detected	33	21819	0.35	0.35	Not Detected

* Butanal coelutes with Isobutanal and Methyl Ethyl Ketone. The corresponding peak is reported as Butanal.

Compound Listing

Modified TO-11A Passive-Radiello 165 (Full list) (ug)

CAS Number	Compound	Detection Limit ug	Type
50-00-0	Formaldehyde	1.0	
75-07-0	Acetaldehyde	0.50	
123-38-6	Propanal	0.25	
9999-9999-007	Methyl Ethyl Ketone/Butyraldehydes	0.25	
100-52-7	Benzaldehyde	0.25	
110-62-3	Pentanal	0.25	
590-86-3	Isopentanal	0.25	
66-25-1	Hexanal	0.25	
107-02-8	Acrolein	0.25	

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DATA REVIEW CHECKLIST

Work Order #: 0908458C

A_1	A_2	R	T	M	Q	
☐	☐	☑	☐	☑	☐	Analysis/Reporting vs. Project Profile/SOP requirements checked (i.e. 100% Dups, J-Flag to MDL, etc)
		☑	☐	☑	☐	The final report has the correct reporting list, special units, and header info.
		☑	☐	☑	☐	Lab Narrative is correct (proper method & description/Receiving & Analytical notes correct)
		☑	☐	☑	☐	Sample Discrepancy Report (SDR) is completed
☐	☐	☑	☐	☑	☐	Corrective Action issued - #
☐	☐	☑	☐	☑	☐	Unusual circumstances have been documented in the notes section below

LUMEN *validation report present and initialed* ***CIRCLE (YES / NO)***

☐	☐	☑	☐	☑	☐	Lab Blank, CCV, LCS and DUP met QC criteria
☐	☐	☑	☐	☑	☐	Hold time is met for all samples
		☑	☐	☑	☐	Appropriate data qualifier flags are applied
		☑	☐	☑	☐	Manual integrations for samples and QC are properly documented
☐	☐	☑	☐		☐	Samples analyzed within the project or method specific clock
		☑	☐			Retention times have been verified
☐	☐	☑	☐		☐	Appropriate ICAL(s) included
		☑	☐	☑	☐	At least one result per sample is verified against the target quant sheets/raw data
☐	☐	☑	☐		☐	Dilution factor correctly calculated (sample load volume, syringe and bag dilutions, can pressurization(s))
☐	☐	☑	☐			Correct amount of sample analyzed (i.e. sample not over-diluted)
		☑	☐			Spectra verified - documentation of spectral defense included (Section 5A of eCVP pkg)
		☐	☐			TICs resemble reference spectra
		☐	☐			TICs between duplicate samples are consistent
☐	☐	☑	☐	☑	☐	Checked samples for trends (i.e. Influent vs. Effluent, Field Dups, Field/Trip Blank, etc.)
☐	☐	☑	☐			Data for multiple analyses of sample(s) has been evaluated for comparability of results
		☑		☑		Special units for all samples in the final report are correctly calculated
		☑	☐	☑		Manually entered results checked (i.e. TPH/NMOC)
☐	☐	☑				Chain of Custody verified for any special comments (i.e. different compounds/RLs, action levels)
		☑				Chain of Custody scanned correctly
					☐	Verify sample id's vs. chain of custody
		☑				Date MDL(s) performed per instrument(s) 8/21/09
☐	☐	☐				Samples pressurized w/ appropriate gas (N_2 or He) ☐ Other (i.e. Tedlar bag, cartridge, sorbent)
☐	☐	☐				Final pressure consistent with canister size (6L vs. 1L)
☐	☐	☐				Verify receipt pressures
☐	☐	☐				Verify canister ID #'s
		☑		☑		Final invoice amount correct (adjusted for TAT, Penalties, Re-issue Charges etc.)
				☑		MDL date(s) present for all instruments utilized
		☑	☐	☑	☐	Client LUMEN report reviewed for accuracy and completeness

Notes: *(to include: noting samples with QA/QC problems, Blanks with positive hits, narratives, etc.)*

A/R: Dup 41A, 47A, 55A (Analytical)
Report in ug and ug/m³
Pass 7 days exposure time for all Samples. Exposure time for QCs is 218.19 min.
Acrolein detection was washed for all Samples except 41A, 43A, 44A, 45A and 46A. ~~47A, 48A, 55A and 58A. 49A, 50A, 51A, 52A, 53A, 54A, 56A, 57A~~
3R of Formaldehyde is 117% >115% due to cartridge background.
M/Q: ~~Butal~~ Butanals co-eluted with MEK

A_1/A_2 (Analytical Review/Date)	R/T (Reporting Review/Date)	M (Management Review/Date)	Q (QA Review/Date)
A_1:	R: 9/3/09	9/8/09	
A_2:	T:		

Note (1): Please check all the appropriate boxes. Indicate "NA" for any statement that does not apply. Rev. 02/20/09
Note (2): Management reviewer and reporting reviewer must be separate individuals.

Not Applicable