

## Atmospheric Analysis & Consulting, Inc.

Client : SWAPE  
Client Project Name : Bridgeton Sanitary Landfill Air Quality Assessment  
Client Project No. : NA  
AAC Project No. : 130753  
Reporting Date : 06/25/2013

On June 20, 2013, Atmospheric Analysis & Consulting, Inc. received four (4) DNPH impregnated silica gel cartridges for Carbonyls analysis by EPA Method TO-11A. Upon receipt the samples were assigned unique Laboratory ID numbers as follows:

Client Sample ID	AAC Sample ID
U-1 W1 DNPH	130753-63741
U-2 V DNPH	130753-63742
D-1 W5 DNPH	130753-63743
D-2 IN DNPH	130753-63744

TO-11A - HPLC/UV analysis - A 10 $\mu$ L aliquot of the extract was analyzed by HPLC/UV following the analytical protocols of EPA Method TO-11A as specified in the SOW. Holding times for preparation and analysis were complied with.

No problems were encountered during the receipt, preparation, and/or analysis of these samples. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP# TO.11.09.

I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy data package.

If you have any questions or require further explanation of data results, please contact the undersigned.

  
Marcus Hueppe  
Laboratory Director

This report consists of 49 pages.



MACT/30753

**CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM**

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011 Date: 18-Jun 2013 Page 1 of 1

Project Manager: PAUL ROSENFELD, PH.D. Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401

Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT

Sampled By: John Blank Sampler Signature: *[Signature]*

LAB ID	SAMPLE ID NUMBER	Type	Date	Time	VOCS - EPA TO-15	Reduced Sulfur Compounds - ASTM D5504	Carbonyls - EPA TO-11A	Carboxylic Acids - Tube GC-MS	HCL - NIOSH 7903	Ammonia - OSHA ID-188	SO2 - OSHA ID-200	HCN - NIOSH 6010	Amines - NIOSH 2010M	Fixed Gases - EPA 3C	PAHs / Dioxins EPA TO-13A / 9A	Mercury - NIOSH 6009	Odor Evaluation	Tube #	Volume	
63741	U-1 W1	Tube	18-Jun	4 HR			X											Tube #	4440601448	247.44 L
63742	U-2 V	Tube	18-Jun	4 HR			X											Tube #	4440601457	236.88 L
63743	D-1 W5	Tube	18-Jun	4 HR			X											Tube #	4440601454	244.56 L
63744	D-2 IN	Tube	18-Jun	4 HR			X											Tube #	4440601451	252.48 L

Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks. QC Requirements: Provide Level IV QC Package for all Analyses.

Relinquished By: John Blank Date: June 18th 12 Noon Received By: *[Signature]* Date: 6/20/2013 Time: 1000

Relinquished By: *[Signature]* Date: Time: Received By: Date: Time:

Relinquished By: Date: Time: Received By: Date: Time:

17.7°C

# AIR SAMPLING PUMP CALIBRATION LOG

## Bridgeton Sanitary Landfill Air Quality Assessment

COMPLETED BY: John Blank

PERSONNEL: John Blank

DATE: June 18th, 2013

PAGE: 1 of 1

Submitter by: *John Blank*

CALIBRATION

INSTRUMENT : Biose Defender510 Serial #131756

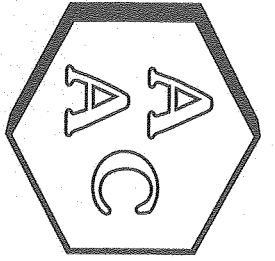
**INITIAL PUMP SETUP (PRE-SAMPLING FLOW CHECK)**

Sample ID	Analyte	SKC Tube ID	Air Pump Serial No.	START		END		Total	Tube
				Flow Rate (L/min)	Start Time (24 Hour)	Flow Rate (L/min)	Stop Time (24 Hour)	Volume Liters	Number
U-1 W1	Aldehydes	226-120	59912	1.024	14:05	1.038	18:05	247.44	4440601448
U-2 V	Aldehydes	226-120	67992	1.051	14:40	0.923	18:40	236.88	4440601457
D-1 W5	Aldehydes	226-120	71526	1.03	14:55	1.008	18:55	244.56	4440601454
D-2 IN	Aldehydes	226-120	67835	1.059	15:05	1.045	19:05	252.48	4440601451
								0	
								0	
								0	
								0	

**NOTES / LOCATION REFERENCES**

TUBES:	ANALYTE	SKC TUBE ID	ANALYTE	SKC TUBE ID
	Aldehydes	226-120	Hydrogen Chloride	226-10-03
	Amines	226-10	Hydrogen Cyanide	226-28
	Ammonia	226-29	Mercury (elemental)	226-17-1A
	Carboxylic Acids	226-55	Sulfur Dioxide	226-80

# Results



# Atmospheric Analysis & Consulting, Inc.

## LABORATORY ANALYSIS REPORT Analysis of Carbonyls by EPA Method TO-11A

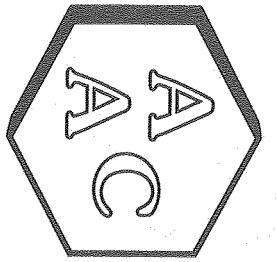
Client : SWAPE  
 Client Project Name : Bridgetown Sanitary Landfill Air Quality Assessment  
 AAC Project No. : 130753  
 Analyst : HP/EG  
 Units : ppbv

Sampling Date (s) : 06/18/2013  
 Receiving Date : 06/20/2013  
 Analysis Date : 06/24/2013  
 Reporting Date : 06/25/2013

Client ID	AAC Sample ID	Formaldehyde	Acetaldehyde	Acrolein	Acetone	Propionaldehyde	Crotonaldehyde	Methacrolein	MEK & Butyraldehyde	Benzaldehyde	Valeraldehyde	m-Tolualdehyde	Hexaldehyde
U-1 W1 DNPH SRL	130753-63741	0.354 0.247	0.182 0.168	<SRL 0.132	1.17 0.128	<SRL 0.128	<SRL 0.106	<SRL 0.106	0.215 0.103	<SRL 0.070	<SRL 0.086	<SRL 0.062	<SRL 0.074
U-2 V DNPH SRL	130753-63742	1.58 0.258	0.488 0.176	<SRL 0.138	1.79 0.133	<SRL 0.133	0.571 0.110	<SRL 0.110	0.313 0.107	<SRL 0.073	0.201 0.090	0.113 0.064	0.08 0.077
D-1 W5 DNPH SRL	130753-63743	0.586 0.250	0.356 0.170	<SRL 0.134	2.01 0.129	<SRL 0.129	0.294 0.107	0.172 0.107	0.479 0.104	<SRL 0.071	<SRL 0.087	<SRL 0.062	<SRL 0.075
D-2 IN DNPH SRL	130753-63744	1.57 0.242	0.577 0.165	<SRL 0.130	1.04 0.125	<SRL 0.125	1.07 0.104	0.182 0.104	0.296 0.101	<SRL 0.068	0.171 0.084	0.135 0.060	<SRL 0.073

<SRL-compound was analyzed for but not detected at or above the SRL (Sample Reporting Limit)

  
 Marcus Hueppe  
 Laboratory Director



# Atmospheric Analysis & Consulting, Inc.

## LABORATORY ANALYSIS REPORT Analysis of Carbonyls by EPA Method TO-11A

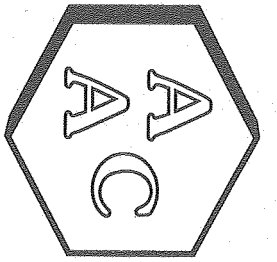
Client : SWAPE  
 Client Project Name : Bridgetown Sanitary Landfill Air Quality Assessment  
 AAC Project No. : 130753  
 Analyst : HP/EG  
 Units : ug/m<sup>3</sup>

Sampling Date (s) : 06/18/2013  
 Receiving Date : 06/20/2013  
 Analysis Date : 06/24/2013  
 Reporting Date : 06/25/2013

Client ID	AAC Sample ID	Formaldehyde	Acetaldehyde	Acrolein	Acetone	Propionaldehyde	Crotonaldehyde	Methacrolein	MEK & Butyraldehyde	Benzaldehyde	Valeraldehyde	m-Tolualdehyde	Hexaldehyde
U-1 W1 DNPH SRL	130753-63741	0.435	0.327	<SRL	2.79	<SRL	<SRL	<SRL	0.633	<SRL	<SRL	<SRL	<SRL
		0.303	0.303	0.303	0.303	0.303	0.303	0.303	0.303	0.303	0.303	0.303	0.303
		1.94	0.879	<SRL	4.25	<SRL	1.64	<SRL	0.922	<SRL	0.708	0.555	0.332
D-1 W5 DNPH SRL	130753-63742	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317
		0.720	0.642	<SRL	4.77	<SRL	0.844	0.492	1.41	<SRL	<SRL	<SRL	<SRL
		0.307	0.307	0.307	0.307	0.307	0.307	0.307	0.307	0.307	0.307	0.307	0.307
D-2 IN DNPH SRL	130753-63744	1.93	1.04	<SRL	2.48	<SRL	3.06	0.523	0.872	<SRL	0.601	0.664	<SRL
		0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297

<SRL-compound was analyzed for but not detected at or above the SRL (Sample Reporting Limit)

  
 Marcus Hueppe  
 Laboratory Director



# Atmospheric Analysis & Consulting, Inc.


## LABORATORY ANALYSIS REPORT Analysis of Carbonyls by EPA Method TO-11A

Client : SWAPE  
 Client Project Name : Bridgetown Sanitary Landfill Air Quality Assessment  
 AAC Project No. : 130753  
 Analyst : HP/EG  
 Units : ug/sample

Sampling Date (s) : 06/18/2013  
 Receiving Date : 06/20/2013  
 Analysis Date : 06/24/2013  
 Reporting Date : 06/25/2013

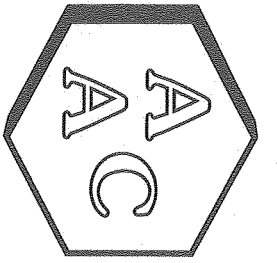
Client ID	AAC Sample ID	Formaldehyde	Acetaldehyde	Acrolein	Acetone	Propionaldehyde	Crotonaldehyde	Methacrolein	MEK & Butyraldehyde	Benzaldehyde	Valeraldehyde	m-Tolaldehyde	Hexaldehyde
U-1 W1 DNPH SRL	130753-63741	0.108 0.075	0.081 0.075	<SRL 0.075	0.690 0.075	<SRL 0.075	<SRL 0.075	<SRL 0.075	0.157 0.075	<SRL 0.075	<SRL 0.075	<SRL 0.075	<SRL 0.075
U-2 V DNPH SRL	130753-63742	0.459 0.075	0.208 0.075	<SRL 0.075	1.01 0.075	<SRL 0.075	0.388 0.075	<SRL 0.075	0.218 0.075	<SRL 0.075	0.168 0.075	0.131 0.075	0.079 0.075
D-1 W5 DNPH SRL	130753-63743	0.176 0.075	0.157 0.075	<SRL 0.075	1.17 0.075	<SRL 0.075	0.206 0.075	0.120 0.075	0.346 0.075	<SRL 0.075	<SRL 0.075	<SRL 0.075	<SRL 0.075
D-2 IN DNPH SRL	130753-63744	0.488 0.075	0.263 0.075	<SRL 0.075	0.625 0.075	<SRL 0.075	0.773 0.075	0.132 0.075	0.220 0.075	<SRL 0.075	0.152 0.075	0.168 0.075	<SRL 0.075

<SRL-compound was analyzed for but not detected at or above the SRL (Sample Reporting Limit)

  
 Marcus Hueppe  
 Laboratory Director

# QA/QC Summary





# Atmospheric Analysis & Consulting, Inc.

## Quality Control/Quality Assurance Report

TO-11A

HPLC Calibration Verification of the 06/11/2013 Calibration

Analysis Date : 06/24/2013  
Analyst : HP/EG

Instrument ID : HPLC 01

Opening CCV

Standard Concentration (ug/mL)	Formaldehyde (ug/mL)	Acetaldehyde (ug/mL)	Acrolein (ug/mL)	Acetone (ug/mL)	Propionaldehyde (ug/mL)	Coronandehyde (ug/mL)	Methacrolein (ug/mL)	MEK & Butyraldehyde (ug/mL)	Benzaldehyde (ug/mL)	Valeraldehyde (ug/mL)	m-Toluandehyde (ug/mL)	Hexaldehyde (ug/mL)
2.50	2.63	2.67	2.69	2.65	2.66	2.68	2.66	5.37	2.66	2.67	2.66	2.67
Accuracy (%)*	105	107	108	106	106	107	106	107	106	107	106	107

Closing CCV

Standard Concentration (ug/mL)	Formaldehyde (ug/mL)	Acetaldehyde (ug/mL)	Acrolein (ug/mL)	Acetone (ug/mL)	Propionaldehyde (ug/mL)	Coronandehyde (ug/mL)	Methacrolein (ug/mL)	MEK & Butyraldehyde (ug/mL)	Benzaldehyde (ug/mL)	Valeraldehyde (ug/mL)	m-Toluandehyde (ug/mL)	Hexaldehyde (ug/mL)
2.50	2.56	2.58	2.57	2.57	2.58	2.56	2.56	5.15	2.55	2.57	2.51	2.57
Accuracy (%)*	102	103	103	103	103	102	102	103	102	103	100	103

Second Source

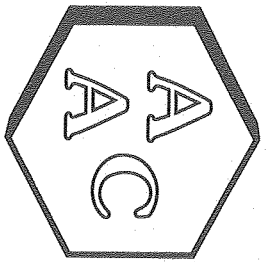
Standard Concentration (ug/mL)	Formaldehyde (ug/mL)	Acetaldehyde (ug/mL)	Acrolein (ug/mL)	Acetone (ug/mL)	Propionaldehyde (ug/mL)	Coronandehyde (ug/mL)	Methacrolein (ug/mL)	MEK & Butyraldehyde (ug/mL)	Benzaldehyde (ug/mL)	Valeraldehyde (ug/mL)	m-Toluandehyde (ug/mL)	Hexaldehyde (ug/mL)
2.50	2.61	2.62	2.61	2.61	2.66	2.67	2.63	5.29	2.61	2.63	2.58	2.64
Accuracy (%)*	104	105	104	104	106	107	105	106	104	105	103	106

Second Source

Standard Concentration (ug/mL)	Formaldehyde (ug/mL)	Acetaldehyde (ug/mL)	Acrolein (ug/mL)	Acetone (ug/mL)	Propionaldehyde (ug/mL)	Coronandehyde (ug/mL)	Methacrolein (ug/mL)	MEK & Butyraldehyde (ug/mL)	Benzaldehyde (ug/mL)	Valeraldehyde (ug/mL)	m-Toluandehyde (ug/mL)	Hexaldehyde (ug/mL)
2.50	2.63	2.65	2.66	2.67	2.66	2.65	2.66	5.33	2.65	2.66	2.64	2.64
Accuracy (%)*	105	106	106	107	106	106	106	107	106	106	106	106

\*Must be 100 ± 10%

  
Marcus Hueppel  
Laboratory Director



# Atmospheric Analysis & Consulting, Inc.

## Quality Control/Quality Assurance Report TO-11A Laboratory Control Spike Analysis


Analysis Date : 06/24/2013

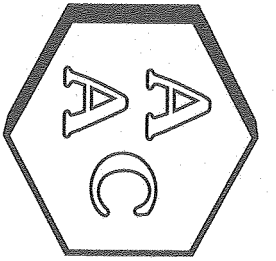
Analyst : HP/EG

Instrument ID : HPLC 01

Analytes	Formaldehyde (ug/ml)	Acetaldehyde (ug/ml)	Acrolein (ug/ml)	Acetone (ug/ml)	Propionaldehyde (ug/ml)	Crotonaldehyde (ug/ml)	Methacrolein (ug/ml)	MEK & Butyraldehyde (ug/ml)	Benzaldehyde (ug/ml)	Valeraldehyde (ug/ml)	n-Tolualdehyde (ug/ml)	Hexaldehyde (ug/ml)
Laboratory Control Spike 1												
Sample Concentration (ug/ml)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Spike Concentration (ug/ml)	0.379	0.379	0.379	0.379	0.379	0.379	0.379	0.758	0.379	0.379	0.379	0.379
Spiked Sample Concentration (ug/ml)	0.379	0.377	0.385	0.367	0.390	0.343	0.424	0.721	0.377	0.388	0.399	0.376
Spike Recovery (%)*	100	99.4	102	96.8	103	90.7	112	95.2	99.4	102	105	99.1

\*Must be 100 ± 15%

  
Marcus Huepfe  
Laboratory Director



# Atmospheric Analysis & Consulting, Inc.

## Qualitiv Control/Qualitiv Assurance Report

TO-11A

Matrix Spike Analysis


Analysis Date : 06/24/2013

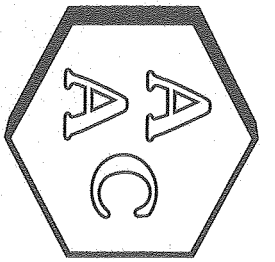
Analyst : HP/EG

Instrument ID : HPLC 01

Sample ID	130750-63736	Formaldehyde (ug/ml)	Acetaldehyde (ug/ml)	Acrolein (ug/ml)	Acetone (ug/ml)	Propionaldehyde (ug/ml)	Crotonaldehyde (ug/ml)	Methacrolein (ug/ml)	MEK & Butyraldehyde (ug/ml)	Benzaldehyde (ug/ml)	Valeraldehyde (ug/ml)	m-Tolualdehyde (ug/ml)	Hexaldehyde (ug/ml)
Sample Concentration (ug/ml)	0.799	0.373	0.011	0.623	0.077	0.006	0.024	0.142	0.032	0.043	0.000	0.038	
Spike Concentration (ug/ml)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	2.50	1.25	1.25	1.25	1.25	
Spiked Sample Concentration (ug/ml)	2.08	1.63	1.28	1.93	1.34	1.29	1.43	2.49	1.29	1.34	1.27	1.30	
Duplicate Spiked Sample Concentration (ug/ml)	2.08	1.66	1.32	1.93	1.36	1.32	1.47	2.53	1.31	1.37	1.30	1.32	
Spike Recovery (%)*	102	101	102	105	101	103	112	93.9	101	104	102	101	
Duplicate Spike Recovery (%)*	102	103	105	105	103	105	116	95.5	102	106	104	103	
RPD**	0.0	1.8	3.1	0.0	1.5	2.3	2.8	1.6	1.5	2.2	2.3	1.5	

\*Must be 100± 25%  
 \*\* Must be ≤ 25%

  
 Marcus Huepfe  
 Laboratory Director



# Atmospheric Analysis & Consulting, Inc.

## Quality Control/Quality Assurance Report

TO-11A  
Duplicate Analysis

Analysis Date : 06/24/2013  
Analyst : HP/EG

Instrument ID : HPLC 01

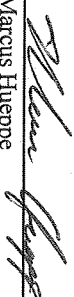
Analyte	Formaldehyde (ug/ml)	Acetaldehyde (ug/ml)	Acrolein (ug/ml)	Acetone (ug/ml)	Propionaldehyde (ug/ml)	Crotonaldehyde (ug/ml)	Methacrolein (ug/ml)	MEK & Butyraldehyde (ug/ml)	Benzaldehyde (ug/ml)	Valeraldehyde (ug/ml)	m-Tolualdehyde (ug/ml)	Hexaldehyde (ug/ml)
Sample ID	130750-63736											
Sample Concentration (ug/ml)	1.60	0.746	<RL	1.25	0.155	<RL	0.048	0.283	0.063	0.085	ND	0.075
Duplicate Sample Concentration (ug/ml)	1.62	0.766	<RL	1.28	0.158	<RL	0.048	0.287	0.063	0.086	ND	0.072
RPD**	1.5	2.6	NA	2.6	1.9	NA	0.2	1.4	0.5	0.4	NA	4.2
Sample ID	130751-63738											
Sample Concentration (ug/ml)	2.63	0.428	<RL	0.045	<RL	0.026	ND	0.038	<RL	0.035	ND	<RL
Duplicate Sample Concentration (ug/ml)	2.59	0.422	<RL	0.046	<RL	0.025	ND	0.038	<RL	0.034	ND	<RL
RPD**	1.6	1.4	NA	3.5	NA	1.6	NA	1.0	NA	1.7	NA	NA

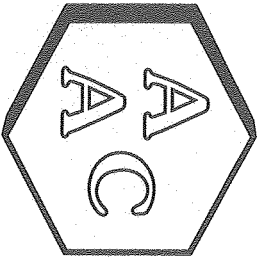
\*\* Must be ≤ 20%

<RL=less than the Reporting Limit

ND = Not Detected

NA=Not Applicable

  
 Marcus Hueppe  
 Laboratory Director



# Atmospheric Analysis & Consulting, Inc.


## Quality Control/Quality Assurance Report TO-11A System and Method Blank Analysis

Analysis Date : 06/24/2013  
 Analyst : HP/EG

Instrument ID : HPLC 01

Analyte	Formaldehyde (ug/ml)	Acetaldehyde (ug/ml)	Acrolein (ug/ml)	Acetone (ug/ml)	Propionaldehyde (ug/ml)	Crumaldehyde (ug/ml)	Methacrolein (ug/ml)	MFK & Butyraldehyde (ug/ml)	Benzaldehyde (ug/ml)	Valeraldehyde (ug/ml)	m-Tolualdehyde (ug/ml)	Hexaldehyde (ug/ml)
Opening Acetonitrile Blank	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Method Blank	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Continuing Acetonitrile Blank	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Closing Acetonitrile Blank	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Reporting Limit	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025

RL= Reporting Limit  
 <RL=less than the Reporting Limit

  
 Marcus Hueppe  
 Laboratory Director

# Calibration Summary

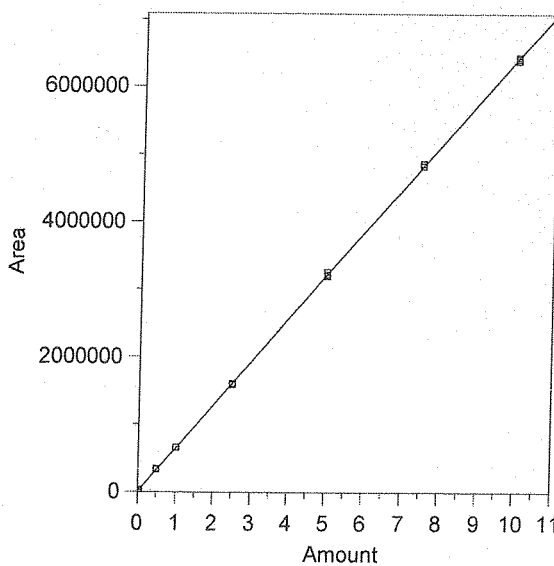
File Name: C:\Chromperfect 2\Methods and Sequences#1 HPLC #1\2013\061113 TO-11A.CAL  
Version: 6  
Creator: EG/HP  
Description: EPA TO-11

External standard calibration  
No injection volume correction  
No sample weight correction  
Area reject threshold: 1000  
Reference peak area reject threshold: 1000  
Amount units: ug/ml  
No default component

Method of calculating data point averages: Equal weight for all updates  
No calibration update report

All levels are normal data points.

1 Formaldehyde

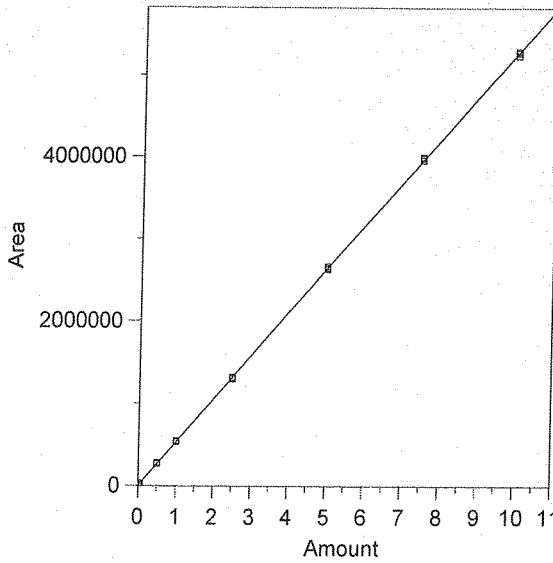


Expected retention time: 2.691 minutes  
 Search window: 0.1 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 Y = 643471.9 X + 0  
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999344  
 Average error: 1.932%  
 Average CF: 653816.2  
 RSD: 2.187%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	3408.358	681671.6	5.937	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	3325.732	665146.4	3.368	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	3366.37	673274.1	4.631	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	16194.19	647767.6	0.668	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	16179.21	647168.4	0.574	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	16232.13	649285.2	0.903	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	33956.52	679130.4	5.542	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	33691.46	673829.2	4.718	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	33082.47	661649.4	2.825	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	342894.1	685788.2	6.576	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011.BND	6/13/2013 9:25:13 AM
11	0.5	326442.5	652885	1.463	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	328901	657802	2.227	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	659323.3	659323.3	2.463	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	652994.7	652994.7	1.480	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	653589.6	653589.6	1.572	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	1593441	637376.4	-0.947	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	1584858	633943.2	-1.481	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	1606654	642661.6	-0.126	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	3196329	639265.8	-0.654	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	3251038	650207.6	1.047	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	3213737	642747.4	-0.113	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	4829078	643877.1	0.063	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	4862793	648372.4	0.762	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	4865866	648782.1	0.825	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	6411879	641187.9	-0.355	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	6443770	644377	0.141	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	6389328	638932.8	-0.705	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM



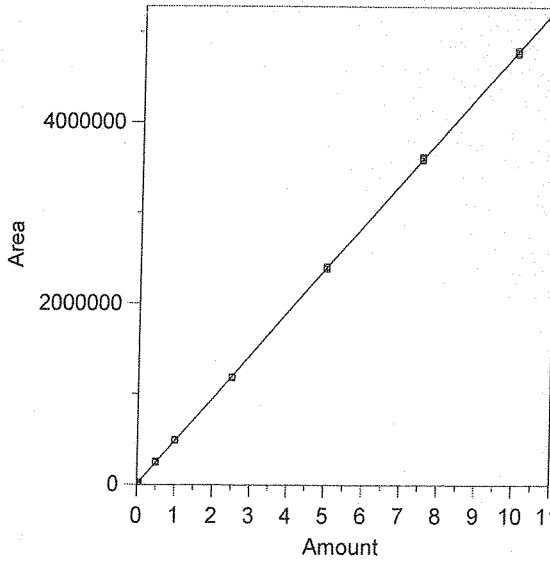
2 Acetaldehyde



Expected retention time: 3.293 minutes  
 Search window: 0.3 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 Y = 528411.2 X + 0  
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999362  
 Average error: 1.513%  
 Average CF: 534461.4  
 RSD: 1.856%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	2781.029	556205.8	5.260	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	2639.74	527948	-0.088	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	2713.861	542772.3	2.718	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	13324.46	532978.4	0.864	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	13196.94	527877.6	-0.101	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	13319.8	532792	0.829	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	27360.74	547214.8	3.559	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	27153.9	543078	2.776	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	26813.58	536271.6	1.488	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	281357.4	562714.8	6.492	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011.BND	6/13/2013 9:25:13 AM
11	0.5	269068.5	538137	1.841	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	269886.8	539773.6	2.150	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	541849.3	541849.3	2.543	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	535548.3	535548.3	1.351	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	536037.3	536037.3	1.443	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	1304421	521768.4	-1.257	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	1298271	519308.4	-1.723	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	1316882	526752.8	-0.314	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	2629002	525800.4	-0.494	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2663350	532670	0.806	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2644688	528937.6	0.100	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	3962025	528270	-0.027	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	3985977	531463.6	0.578	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	4000077	533343.6	0.933	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	5275343	527534.3	-0.166	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	5292054	529205.4	0.150	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	5242042	524204.2	-0.796	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

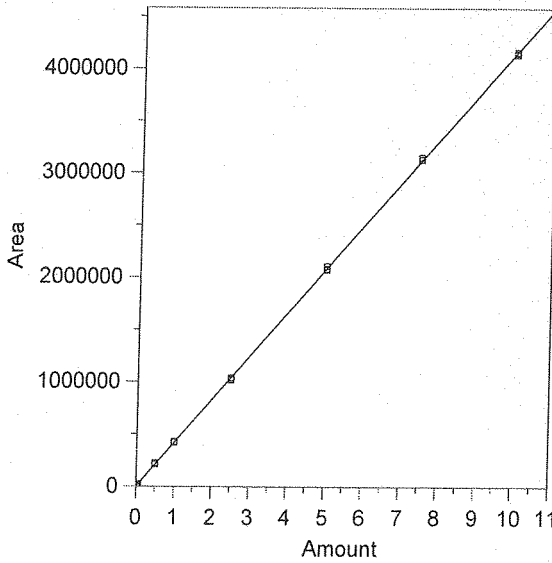
3 Acrolein



Expected retention time: 3.986 minutes  
 Search window: 0.2 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 Y = 479129.3 X + 0  
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999534  
 Average error: 1.520%  
 Average CF: 483677.6  
 RSD: 1.887%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	2333.751	466750.2	-2.584	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	2468.499	493699.8	3.041	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	2507.324	501464.8	4.662	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	11981.09	479243.6	0.024	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	12224.04	488961.6	2.052	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	11986.11	479444.4	0.066	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	24721.62	494432.4	3.194	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	24405.32	488106.4	1.874	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	24448.33	488966.6	2.053	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	254413	508826	6.198	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	242138.8	484277.6	1.075	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	244413.3	488826.6	2.024	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	490244.2	490244.2	2.320	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	484969.3	484969.3	1.219	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	484927.5	484927.5	1.210	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	1183948	473579.2	-1.158	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	1176976	470790.4	-1.740	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	1188060	475224	-0.815	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	2384550	476910	-0.463	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2408812	481762.4	0.550	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2403943	480788.6	0.346	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	3586781	478237.5	-0.186	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	3607897	481052.9	0.401	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	3621213	482828.4	0.772	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	4781989	478198.9	-0.194	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	4803733	480373.3	0.260	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	4764090	476409	-0.568	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

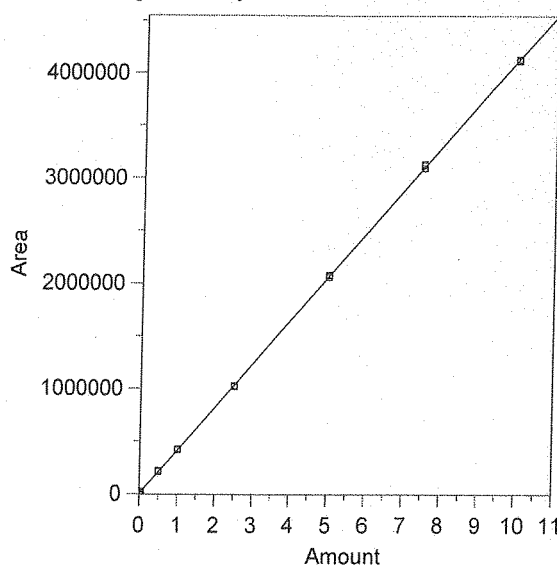
4 Acetone



Expected retention time: 4.179 minutes  
 Search window: 0.4 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 $Y = 416415.2 X + 0$   
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999405  
 Average error: 1.960%  
 Average CF: 422955.5  
 RSD: 2.274%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	2238.368	447673.6	7.507	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	2171.32	434264	4.286	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	2130.784	426156.8	2.339	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	10615.52	424620.8	1.971	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	10418.99	416759.6	0.083	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	10743.64	429745.6	3.201	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	21509.85	430197	3.310	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	21494.17	429883.4	3.234	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	21202.1	424042	1.832	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	223642.5	447285	7.413	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011.BND	6/13/2013 9:25:13 AM
11	0.5	212278.1	424556.2	1.955	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	214246.7	428493.4	2.901	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	426914.8	426914.8	2.521	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	422587.8	422587.8	1.482	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	420868.8	420868.8	1.070	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	1025289	410115.6	-1.513	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	1019650	407860	-2.054	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	1038209	415283.6	-0.272	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	2070625	414125	-0.550	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2103557	420711.4	1.032	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2080934	416186.8	-0.055	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	3130817	417442.3	0.247	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	3151942	420258.9	0.923	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	3133901	417853.5	0.345	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	4164627	416462.7	0.011	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	4152960	415296	-0.269	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	4141528	414152.8	-0.543	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

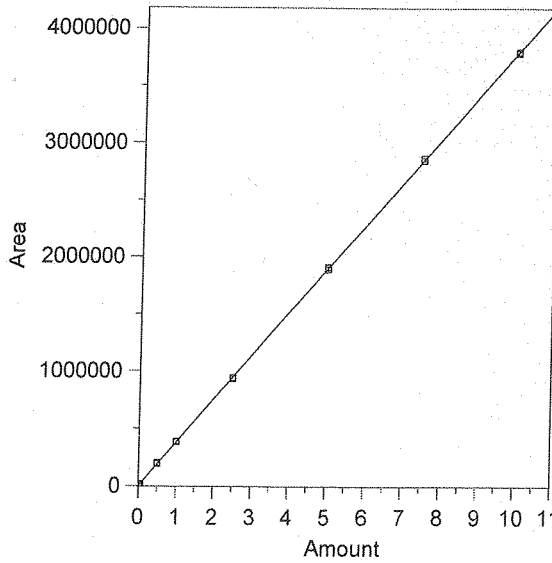
5 Propionaldehyde



Expected retention time: 4.45 minutes  
 Search window: 0.5 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 Y = 413491.1 X + 0  
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999471  
 Average error: 1.596%  
 Average CF: 416900.7  
 RSD: 1.885%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	2017.78	403556	-2.403	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	2120.531	424106.2	2.567	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	2110.294	422058.8	2.072	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	10270.25	410810	-0.648	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	10463.54	418541.6	1.221	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	10129.01	405160.4	-2.015	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	21474.82	429496.4	3.871	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	21155.03	423100.6	2.324	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	21206.9	424138	2.575	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	218583.6	437167.2	5.726	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	211193.6	422387.2	2.151	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	211752.1	423504.2	2.422	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	425236.3	425236.3	2.841	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	416753.3	416753.3	0.789	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	420042.3	420042.3	1.584	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	1017464	406985.6	-1.573	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	1016426	406570.4	-1.674	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	1025583	410233.2	-0.788	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	2060419	412083.8	-0.340	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2076059	415211.8	0.416	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2079987	415997.4	0.606	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	3092180	412290.7	-0.290	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	3130391	417385.5	0.942	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	3118990	415865.3	0.574	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	4134994	413499.4	0.002	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	4125538	412553.8	-0.227	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	4115842	411584.2	-0.461	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

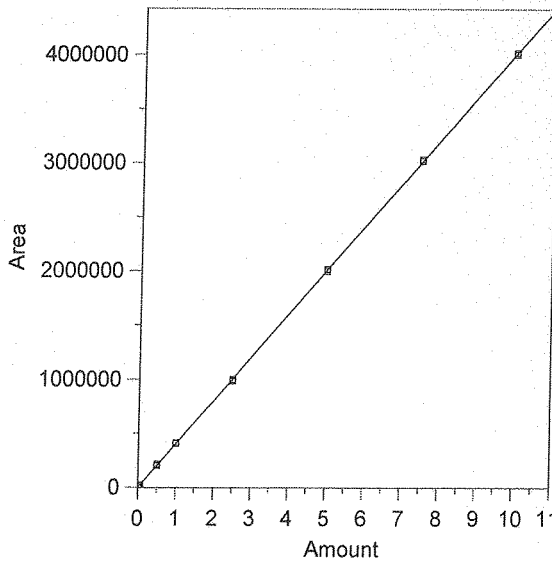
6 Crotonaldehyde



Expected retention time: 5.222 minutes  
 Search window: 0.5 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 $Y = 380159.3 X + 0$   
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999585  
 Average error: 1.483%  
 Average CF: 383492.5  
 RSD: 2.008%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	1954.227	390845.4	2.811	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	1853.591	370718.2	-2.483	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	2006.267	401253.4	5.549	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	9500.876	380035	-0.033	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	9677.464	387098.6	1.825	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	9491.502	379660.1	-0.131	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	19612.18	392243.6	3.179	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	19377.38	387547.6	1.943	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	19062.43	381248.6	0.287	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	202454.9	404909.8	6.511	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	192705	385410	1.381	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	193772.2	387544.4	1.943	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	389857.3	389857.3	2.551	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	384117.9	384117.9	1.041	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	383544.6	383544.6	0.890	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	931914.6	372765.8	-1.945	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	933845.9	373538.3	-1.742	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	943212	377284.8	-0.756	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1892096	378419.2	-0.458	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	1909513	381902.6	0.459	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	1905140	381028	0.229	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	2846489	379531.9	-0.165	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	2869201	382560.1	0.632	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	2868674	382489.9	0.613	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	3796762	379676.2	-0.127	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	3802364	380236.4	0.020	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	3788300	378830	-0.350	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

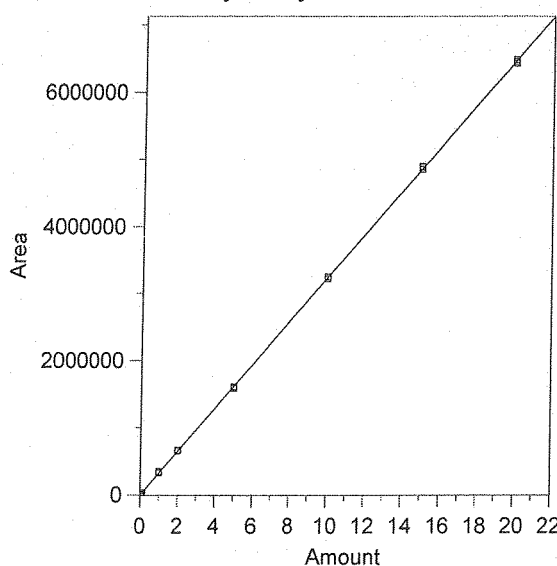
7 Methacrolein



Expected retention time: 5.582 minutes  
 Search window: 0.5 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 $Y = 402103.5 X + 0$   
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999555  
 Average error: 1.593%  
 Average CF: 405803.3  
 RSD: 2.245%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	2046.606	409321.2	1.795	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	1941.76	388352	-3.420	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	2152.434	430486.8	7.059	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	10133.4	405336	0.804	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	10129.37	405174.8	0.764	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	10215.62	408624.8	1.622	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	20786.57	415731.4	3.389	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	20543.71	410874.2	2.181	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	20057.09	401141.8	-0.239	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	215228.8	430457.6	7.051	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011.BND	6/13/2013 9:25:13 AM
11	0.5	202696.3	405392.6	0.818	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	205546.4	411092.8	2.236	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	411542.4	411542.4	2.347	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	406241.6	406241.6	1.029	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	405954.8	405954.8	0.958	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	988074.2	395229.7	-1.709	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	985936.9	394374.8	-1.922	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	1000575	400230	-0.466	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1996175	399235	-0.713	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2017778	403555.6	0.361	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2011258	402251.6	0.037	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	3018119	402415.9	0.078	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	3035201	404693.5	0.644	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	3035088	404678.4	0.640	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	4025485	402548.5	0.111	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	4010411	401041.1	-0.264	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	4007106	400710.6	-0.346	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

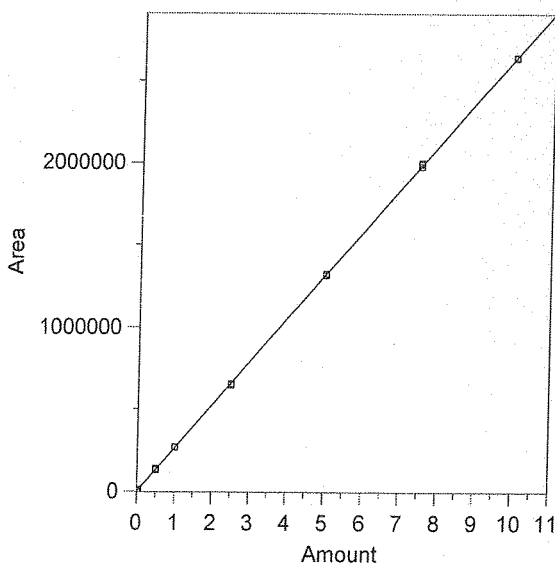
8 MEK & Butyraldehyde



Expected retention time: 5.966 minutes  
 Search window: 0.5 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 Y = 323725.3 X + 0  
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999455  
 Average error: 1.583%  
 Average CF: 327616.8  
 RSD: 1.902%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.01	3295.589	329558.9	1.802	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.01	3245.783	324578.3	-0.264	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.01	3411.926	341192.6	5.396	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.05	16421.55	328431	1.454	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.05	16468.17	329363.4	1.742	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.05	16425.41	328508.2	1.477	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.1	33572.15	335721.5	3.706	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.1	33048.58	330485.8	2.088	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.1	32802.24	328022.4	1.327	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	1	346679.9	346679.9	7.091	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011.BND	6/13/2013 9:25:13 AM
11	1	328309.7	328309.7	1.416	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	1	331244	331244	2.323	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	2	664752.6	332376.3	2.672	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	2	656210.7	328105.3	1.353	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	2	654874.3	327437.2	1.147	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	5	1594650	318930	-1.481	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	5	1588729	317745.8	-1.847	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	5	1611625	322325	-0.433	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	10	3222726	322272.6	-0.449	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	10	3250978	325097.8	0.424	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	10	3247845	324784.5	0.327	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	15	4851557	323437.1	-0.089	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	15	4886541	325769.4	0.631	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	15	4893723	326248.2	0.779	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	20	6462091	323104.6	-0.192	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	20	6486439	324321.9	0.184	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	20	6432050	321602.5	-0.656	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

9 Benzaldehyde

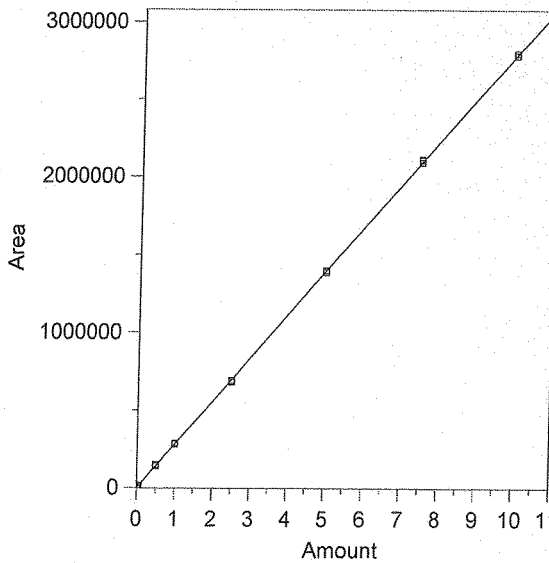


Expected retention time: 6.375 minutes  
 Search window: 0.5 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 $Y = 264532.8 X + 0$   
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999563  
 Average error: 1.328%  
 Average CF: 264682.8  
 RSD: 1.937%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	1271.628	254325.6	-3.859	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	1273.601	254720.2	-3.709	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	1382.946	276589.2	4.558	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	6506.057	260242.3	-1.622	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	6640.884	265635.3	0.417	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	6582.594	263303.8	-0.465	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	13464.09	269281.8	1.795	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	13243.82	264876.4	0.130	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	13138.29	262765.8	-0.668	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	138265.6	276531.2	4.536	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	131281	262562	-0.745	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	134626.8	269253.6	1.785	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	270957.1	270957.1	2.429	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	266032	266032	0.567	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	266541.5	266541.5	0.759	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	647530.3	259012.1	-2.087	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	648400.6	259360.3	-1.955	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	655172.9	262069.2	-0.931	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1315721	263144.2	-0.525	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	1324105	264821	0.109	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	1325810	265162	0.238	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	1978244	263765.9	-0.290	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	2001675	266890	0.891	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	1993485	265798	0.478	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	2645002	264500.2	-0.012	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	2641466	264146.6	-0.146	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	2641496	264149.6	-0.145	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM



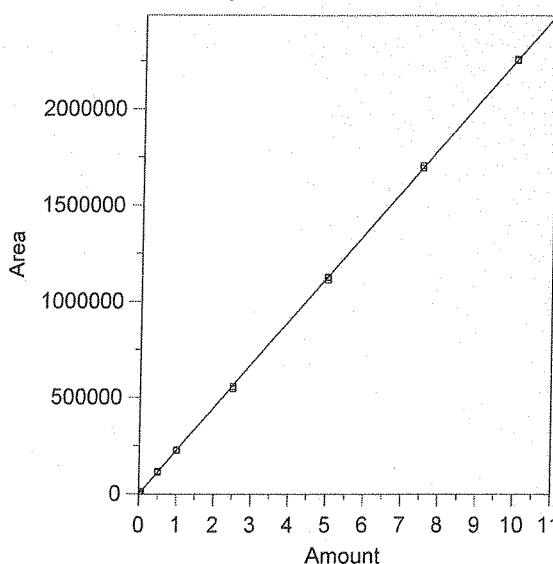
10 Valeraldehyde



Expected retention time: 8.329 minutes  
 Search window: 0.5 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 Y = 279178.6 X + 0  
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999412  
 Average error: 1.679%  
 Average CF: 282346.4  
 RSD: 2.394%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	1484.718	296943.6	6.363	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	1440.975	288195	3.230	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	1478.778	295755.6	5.938	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	6975.488	279019.5	-0.057	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	6979.106	279164.2	-0.005	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	7027.2	281088	0.684	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	14633.92	292678.4	4.836	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	13928.58	278571.6	-0.217	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	14125.8	282516	1.195	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	149315.6	298631.2	6.968	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	140804	281608	0.870	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	142885.6	285771.2	2.361	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	286175.2	286175.2	2.506	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	280760.4	280760.4	0.567	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	280828.8	280828.8	0.591	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	681125.6	272450.3	-2.410	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	681786.7	272714.7	-2.315	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	691632.1	276652.8	-0.905	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1386088	277217.6	-0.702	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	1398275	279655	0.171	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	1395245	279049	-0.046	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	2091460	278861.3	-0.114	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	2112053	281607.1	0.870	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	2105825	280776.7	0.572	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	2799263	279926.3	0.268	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	2783838	278383.8	-0.285	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	2783513	278351.3	-0.296	C:\Chromepfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

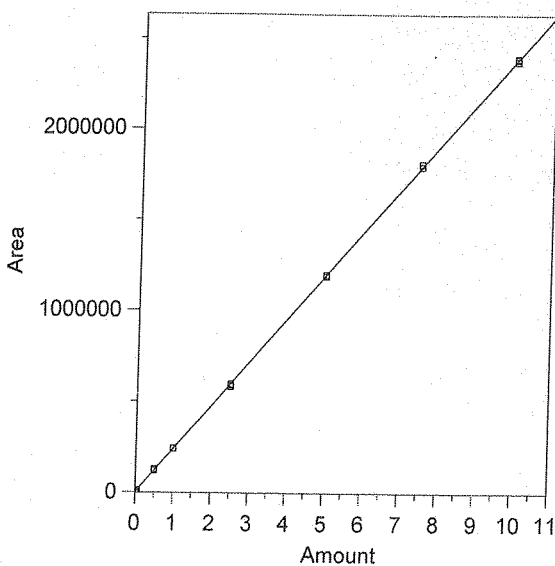
11 m-Tolualdehyde



Expected retention time: 8.864 minutes  
 Search window: 0.5 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 Y = 225671.2 X + 0  
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.9999189  
 Average error: 1.845%  
 Average CF: 225055.9  
 RSD: 2.753%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	1205.651	241130.2	6.850	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	1133.419	226683.8	0.449	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	1115.328	223065.6	-1.155	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	5301.758	212070.3	-6.027	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	5574.778	222991.1	-1.188	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	5291.765	211670.6	-6.204	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	11500.01	230000.2	1.918	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	10974.64	219492.8	-2.738	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	11585.74	231714.8	2.678	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	118273.4	236546.8	4.819	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011.BND	6/13/2013 9:25:13 AM
11	0.5	112401.6	224803.2	-0.385	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	114850.5	229701	1.786	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	228083.9	228083.9	1.069	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	224659.6	224659.6	-0.448	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	224437.7	224437.7	-0.547	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	545930.8	218372.3	-3.234	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	545333.1	218133.3	-3.340	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	555975.6	222390.3	-1.454	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1112742	222548.4	-1.384	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	1127437	225487.4	-0.081	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	1124909	224981.8	-0.305	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	1693020	225736	0.029	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	1703770	227169.3	0.664	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	1705210	227361.3	0.749	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	2261498	226149.8	0.212	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	2256941	225694.1	0.010	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	2254343	225434.3	-0.105	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

12 Hexaldehyde

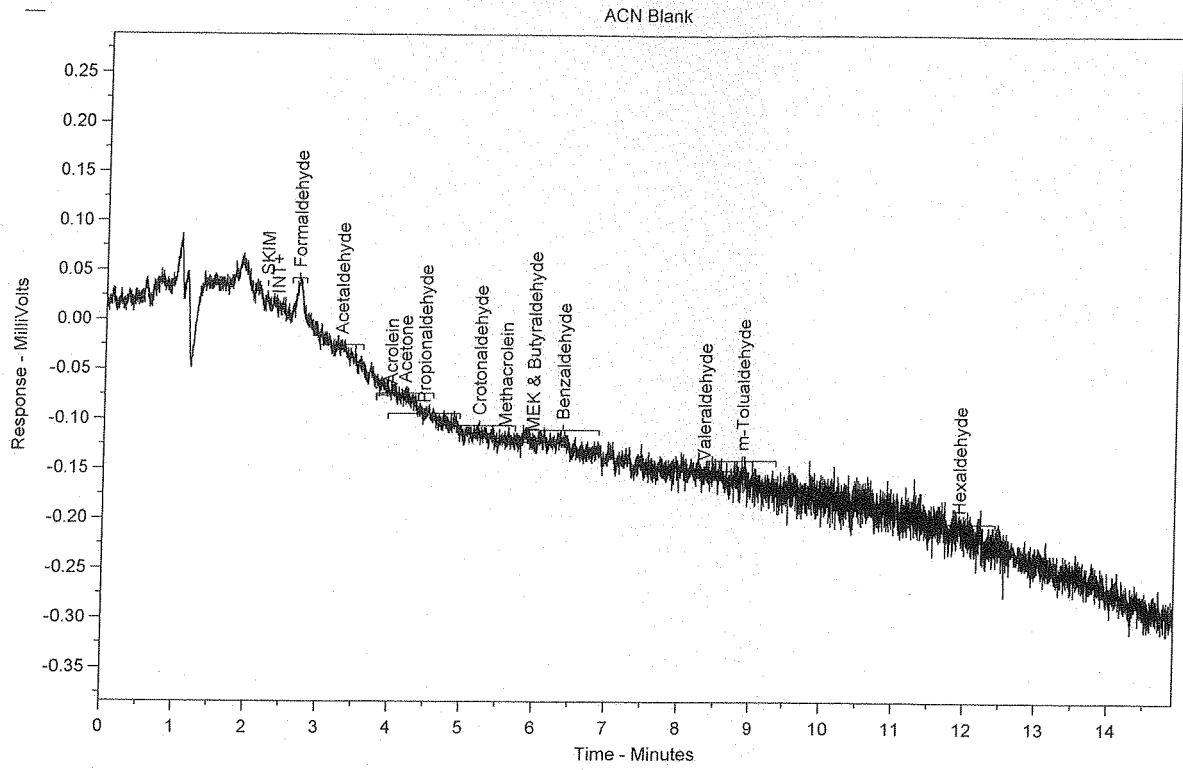


Expected retention time: 11.919 minutes  
 Search window: 0.5 minutes  
 No retention time reference component  
 Group number: 0  
 High alarm limit: 0  
 Low alarm limit: 0  
 Component constant: 0  
 Single peak quantification by area  
 Y = 238926 X + 0  
 Linear fit with equal weighting, forced to origin  
 Coefficient of determination: 0.999934  
 Average error: 1.592%  
 Average CF: 241305.9  
 RSD: 2.114%

Level	Amount	Response	Cal Factor	Error, %	Source	Date and time
1	0.005	1202.478	240495.6	0.657	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002	6/13/2013 9:05:08 AM
2	0.005	1239.538	247907.6	3.759	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003	6/13/2013 9:05:23 AM
3	0.005	1271.401	254280.2	6.426	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004	6/13/2013 7:21:34 AM
4	0.025	5947.313	237892.5	-0.433	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033	6/13/2013 7:22:04 AM
5	0.025	6068.35	242734	1.594	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006	6/13/2013 7:22:28 AM
6	0.025	5933.474	237339	-0.664	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007	6/13/2013 7:22:52 AM
7	0.05	12531.54	250630.8	4.899	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008	6/13/2013 7:23:11 AM
8	0.05	12251.32	245026.4	2.553	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009	6/13/2013 7:23:32 AM
9	0.05	12152.7	243054	1.728	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	126196	252392	5.636	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	120634.2	241268.4	0.980	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	121148.8	242297.6	1.411	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013	6/13/2013 7:25:12 AM
13	1	242571.7	242571.7	1.526	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	240813.4	240813.4	0.790	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015	6/13/2013 7:25:42 AM
15	1	241116.1	241116.1	0.917	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	2.5	587005.4	234802.2	-1.726	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	579802.9	231921.2	-2.932	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	594270.9	237708.3	-0.510	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1188236	237647.2	-0.535	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	1187571	237514.2	-0.591	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	1196602	239320.4	0.165	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	1792229	238963.9	0.016	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	1807473	240996.4	0.867	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	1806138	240818.4	0.792	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	2394549	239454.9	0.221	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	2387175	238717.5	-0.087	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	2375749	237574.9	-0.565	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

# Raw Data

Chrom Perfect Chromatogram Report



Sample Name = ACN Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0001.RAW

Date Taken (end) = 6/24/2013 7:01:51 AM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 1

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
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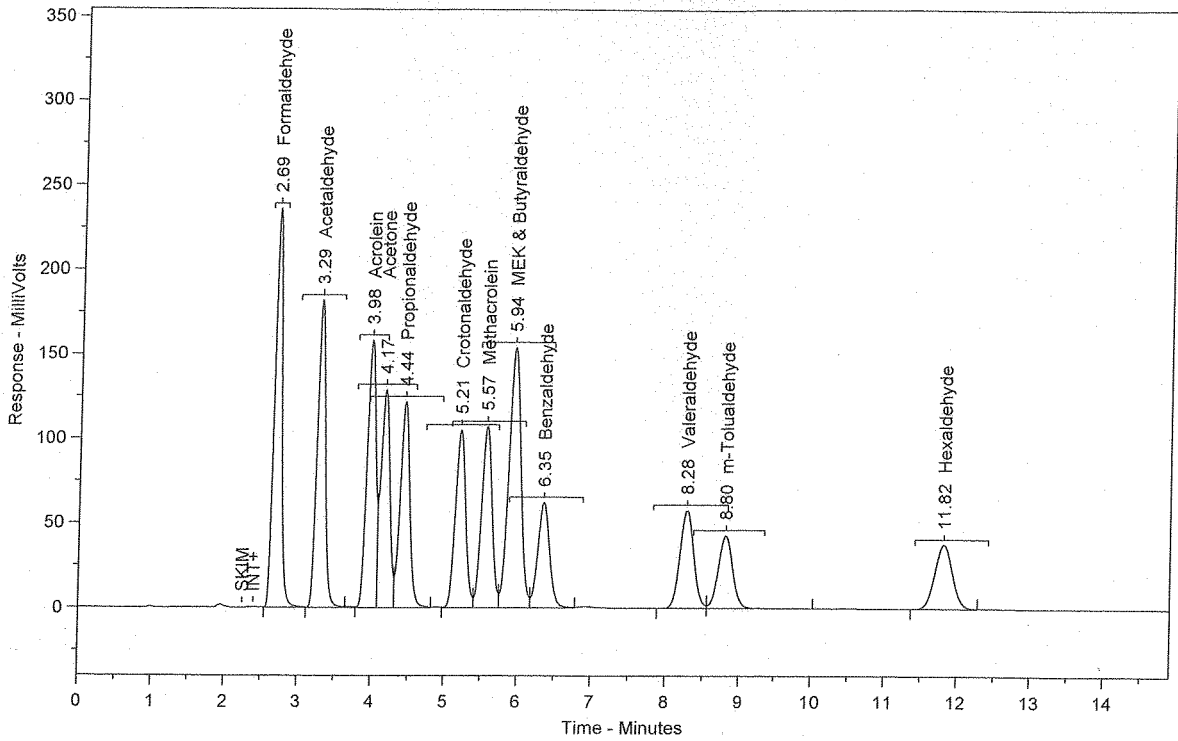
Total Area = 0

Total Height = 0

Total Amount = 0

Chrom Perfect Chromatogram Report

CCV 2.5 ug/mL (PS061113-01)



Sample Name = CCV 2.5 ug/mL (PS061113-01)

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0002.RAW

Date Taken (end) = 6/24/2013 7:18:27 AM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 2

Injection Volume = 10

Dilution Factor = 1

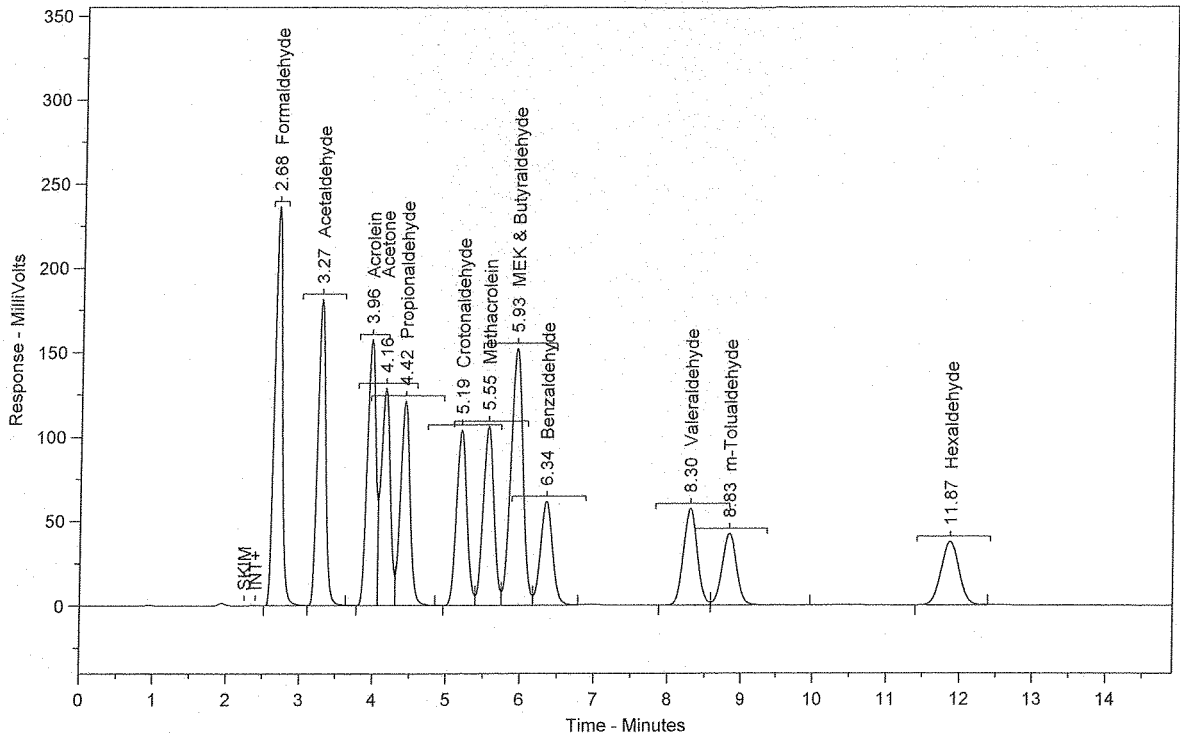
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	2.6323	7.590	1693780	12.914	SBB	0.11
2	3.29	Acetaldehyde	2.6743	7.712	1413129	10.774	TBV	0.12
3	3.98	Acrolein	2.6949	7.771	1291198	9.845	TVV	0.14
4	4.17	Acetone	2.6544	7.654	1105346	8.428	TVV	0.13
5	4.44	Propionaldehyde	2.6615	7.675	1100503	8.391	TVB	0.14
6	5.21	Crotonaldehyde	2.6793	7.726	1018543	7.766	BV	0.15
7	5.57	Methacrolein	2.6627	7.678	1070665	8.163	VV	0.15
8	5.94	MEK & Butyraldehyde	5.3661	15.474	1737158	13.245	VV	0.17
9	6.35	Benzaldehyde	2.6601	7.671	703673	5.365	VB	0.17
10	8.28	Valeraldehyde	2.6666	7.689	744456	5.676	BV	0.20
11	8.80	m-Tolualdehyde	2.6566	7.661	599526	4.571	VB	0.21
12	11.82	Hexaldehyde	2.6697	7.698	637863	4.863	BB	0.26

Total Area = 1.311584E+07

Total Height = 1395390

Total Amount = 34.67841

SS 1.25 ppm (PS011613-01)



Sample Name = SS 1.25 ppm (PS011613-01)

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0003.RAW

Date Taken (end) = 6/24/2013 7:35:02 AM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 3

Injection Volume = 10

Dilution Factor = 1

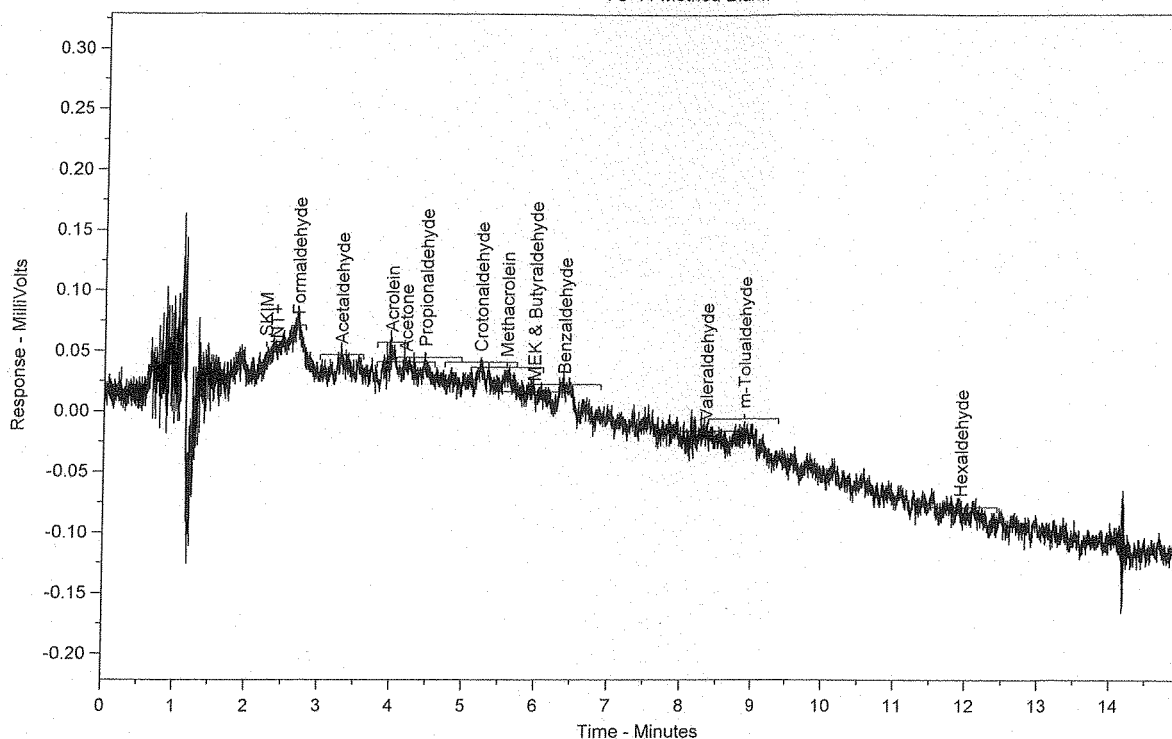
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	2.6258	7.609	1689628	12.945	SBB	0.11
2	3.27	Acetaldehyde	2.6511	7.682	1400879	10.733	TBV	0.12
3	3.96	Acrolein	2.6560	7.697	1272584	9.750	TVV	0.13
4	4.16	Acetone	2.6688	7.734	1111325	8.514	TWV	0.13
5	4.42	Propionaldehyde	2.6601	7.708	1099916	8.427	TVV	0.14
6	5.19	Crotonaldehyde	2.6509	7.682	1007772	7.721	TWV	0.15
7	5.55	Methacrolein	2.6641	7.720	1071231	8.207	TVV	0.15
8	5.93	MEK & Butyraldehyde	5.3340	15.457	1726751	13.229	TVV	0.17
9	6.34	Benzaldehyde	2.6499	7.679	700982	5.371	TVB	0.17
10	8.30	Valeraldehyde	2.6627	7.716	743377	5.695	BV	0.20
11	8.83	m-Tolualdehyde	2.6436	7.661	596590	4.571	VB	0.21
12	11.87	Hexaldehyde	2.6422	7.657	631300	4.837	BB	0.26

Total Area = 1.305233E+07

Total Height = 1386774

Total Amount = 34.50928

TO-11 Method Blank



Sample Name = TO-11 Method Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413\TO-11\062413.0004.RAW

Date Taken (end) = 6/24/2013 7:51:37 AM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

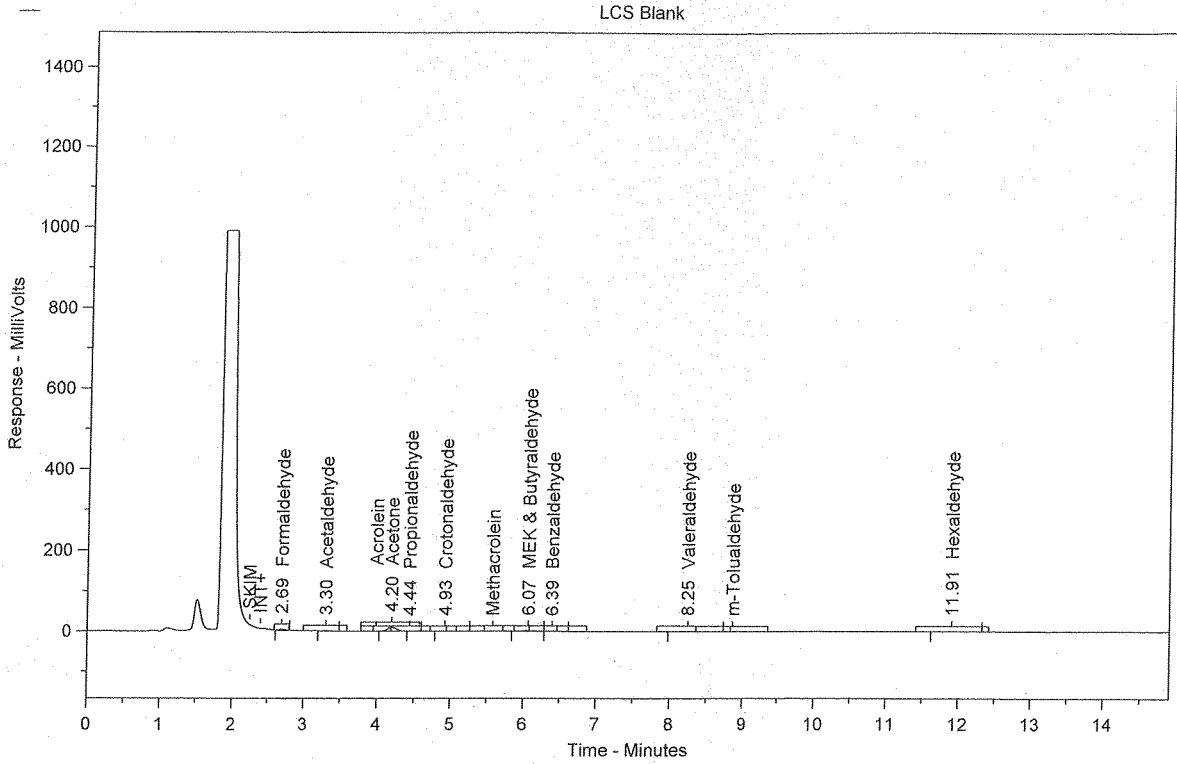
Vial Number = 4

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
Total Area = 0			Total Height = 0		Total Amount = 0			





Sample Name = LCS Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0005.RAW

Date Taken (end) = 6/24/2013 8:08:13 AM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 5

Injection Volume = 10

Dilution Factor = 1

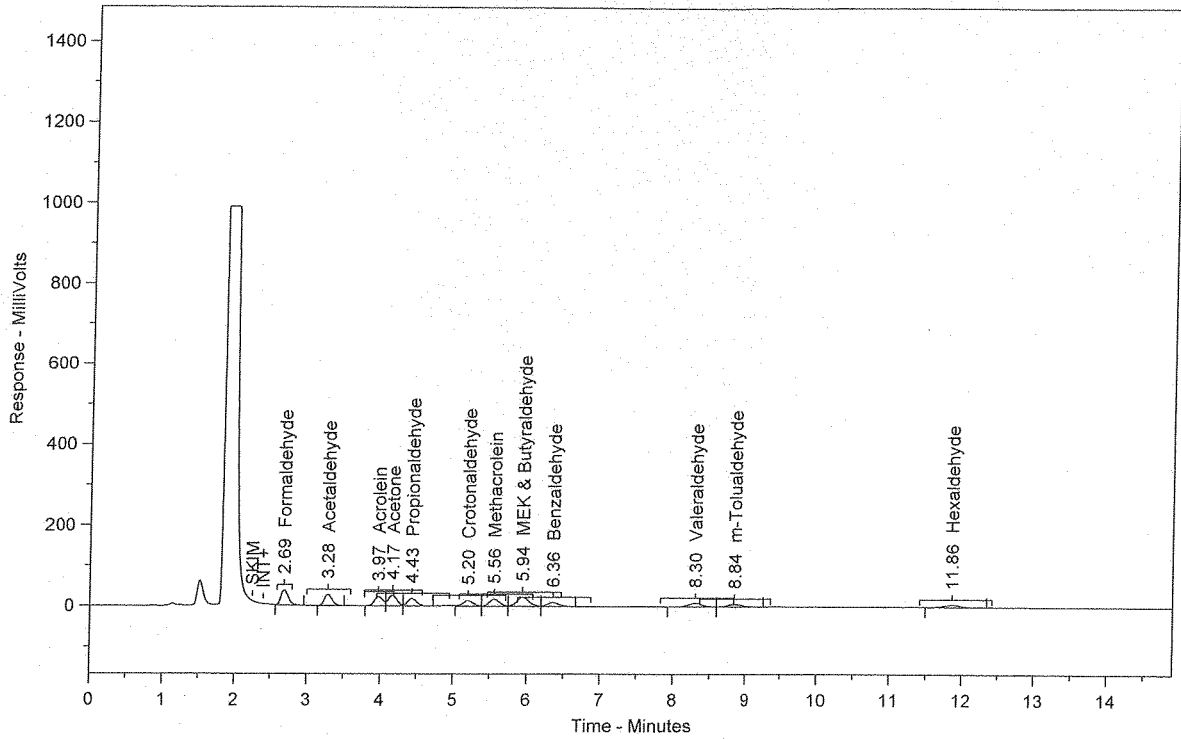
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	0.0251	6.270	16126	10.484	BB	0.10
2	3.30	Acetaldehyde	0.0160	4.005	8459	5.500	BB	0.13
3	4.20	Acetone	0.1874	46.892	78043	50.740	SBB	0.13
4	4.44	Propionaldehyde	0.0057	1.418	2344	1.524	TBB	0.12
5	4.93	Crotonaldehyde	0.0076	1.896	2880	1.872	BB	0.31
6	6.07	MEK & Butyraldehyde	0.0746	18.664	24148	15.700	BV	0.20
7	6.39	Benzaldehyde	0.0197	4.936	5219	3.393	VB	0.20
8	8.25	Valeraldehyde	0.0345	8.638	9638	6.266	BB	0.29
9	11.91	Hexaldehyde	0.0291	7.280	6952	4.520	BB	0.29

Total Area = 153809.4

Total Height = 16479.85

Total Amount = 0.3996744

LCS 1.25ug/mL (PS011013-01)



Sample Name = LCS 1.25ug/mL (PS011013-01)

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0006.RAW

Date Taken (end) = 6/24/2013 8:24:48 AM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonsyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 6

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	0.4039	7.587	259885	12.886	BB	0.11
2	3.28	Acetaldehyde	0.3927	7.377	207486	10.288	BB	0.12
3	3.97	Acrolein	0.3852	7.237	184570	9.152	BV	0.14
4	4.17	Acetone	0.5540	10.408	230705	11.439	VV	0.13
5	4.43	Propionaldehyde	0.3952	7.424	163400	8.102	VB	0.14
6	5.20	Crotonaldehyde	0.3510	6.594	133431	6.616	BV	0.15
7	5.56	Methacrolein	0.4239	7.964	170466	8.452	VV	0.15
8	5.94	MEK & Butyraldehyde	0.7956	14.947	257569	12.771	VV	0.17
9	6.36	Benzaldehyde	0.3963	7.446	104846	5.199	VB	0.17
10	8.30	Valeraldehyde	0.4222	7.931	117856	5.844	BV	0.20
11	8.84	m-Tolualdehyde	0.3985	7.486	89922	4.459	VB	0.21
12	11.86	Hexaldehyde	0.4046	7.601	96673	4.793	BB	0.27

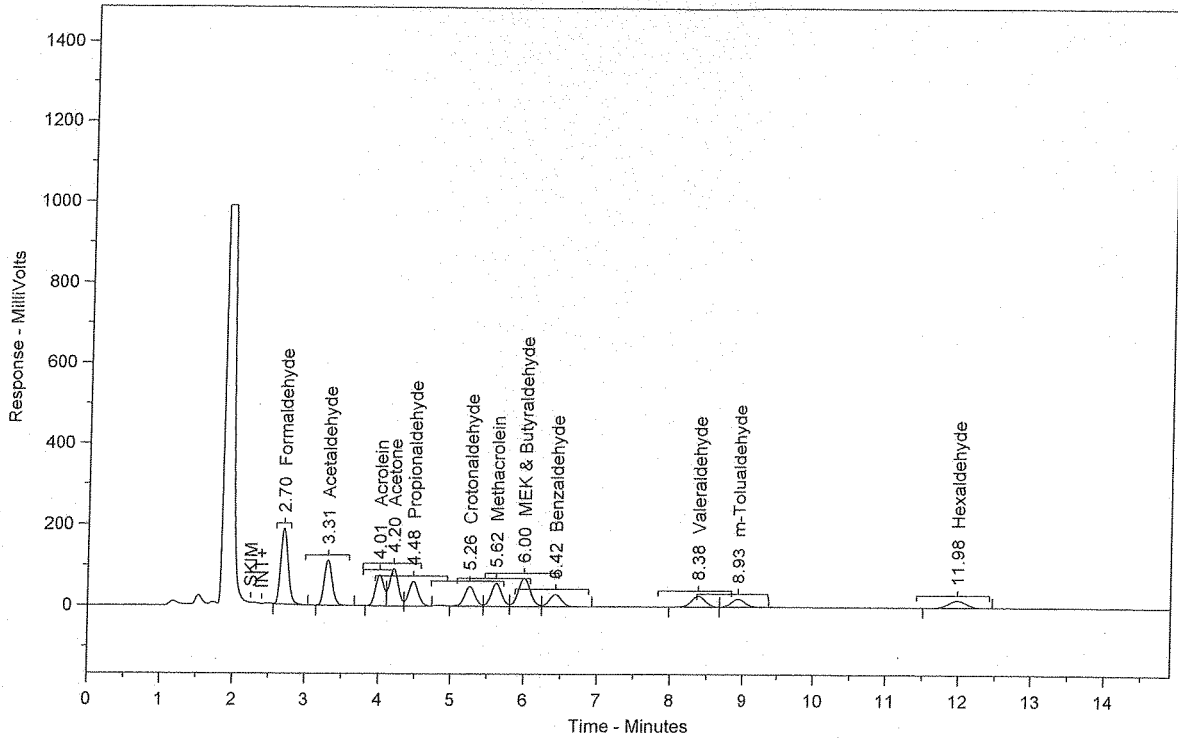
Total Area = 2016810

Total Height = 215230.7

Total Amount = 5.323099

Chrom Perfect Chromatogram Report

MS 130750-63736 1.25 ppm [(PS061113-01x2)]



Sample Name = MS 130750-63736 1.25 ppm [(PS061113-01x2)]

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0007.RAW

Date Taken (end) = 6/24/2013 8:41:24 AM

Method File Name = C:\Chromperfect 2-Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2-Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 7

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.70	Formaldehyde	2.0802	11.139	1338579	18.192	BB	0.11
2	3.31	Acetaldehyde	1.6318	8.738	862259	11.718	BB	0.12
3	4.01	Acrolein	1.2826	6.868	614544	8.352	BV	0.14
4	4.20	Acetone	1.9307	10.339	803990	10.927	VV	0.13
5	4.48	Propionaldehyde	1.3386	7.168	553480	7.522	VB	0.14
6	5.26	Crotonaldehyde	1.2949	6.934	492251	6.690	BV	0.15
7	5.62	Methacrolein	1.4331	7.674	576262	7.832	VV	0.15
8	6.00	MEK & Butyraldehyde	2.4893	13.330	805836	10.952	VV	0.18
9	6.42	Benzaldehyde	1.2869	6.891	340429	4.627	VB	0.18
10	8.38	Valeraldehyde	1.3410	7.181	374391	5.088	BV	0.21
11	8.93	m-Tolualdehyde	1.2674	6.787	286027	3.887	VB	0.22
12	11.98	Hexaldehyde	1.2980	6.951	310123	4.215	BB	0.27

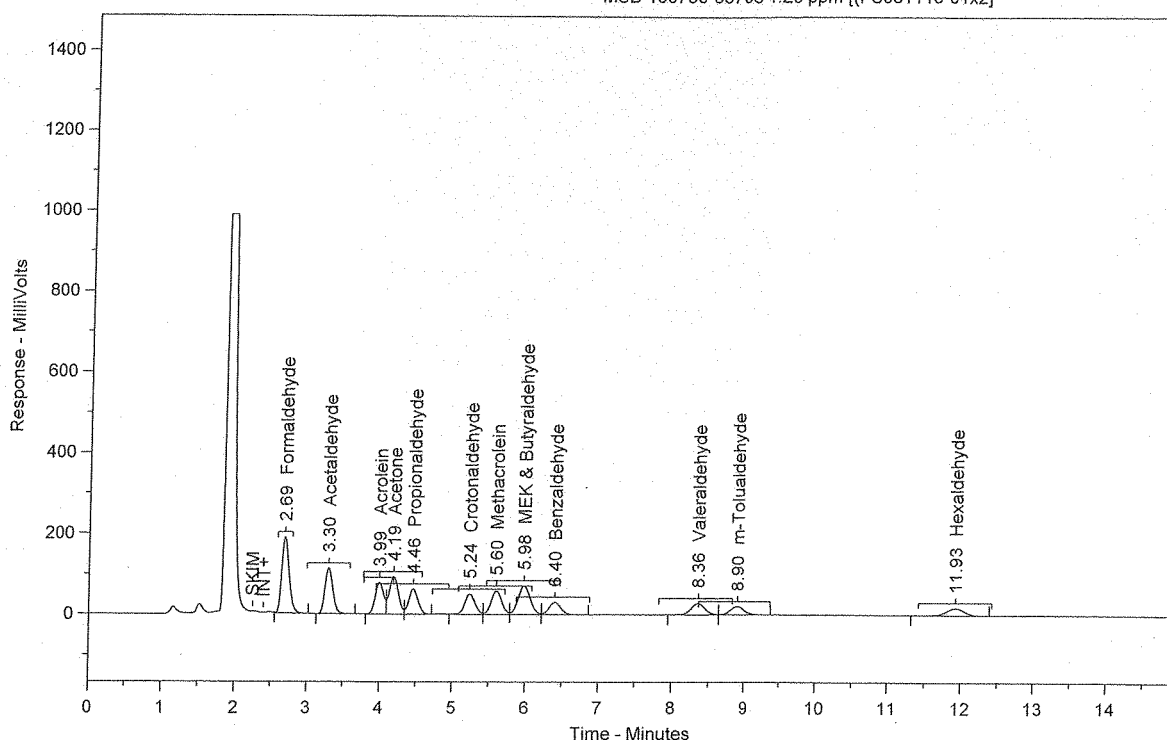
Total Area = 7358169

Total Height = 797090.7

Total Amount = 18.67458

Chrom Perfect Chromatogram Report

MSD 130750-63736 1.25 ppm [(PS061113-01x2)]



Sample Name = MSD 130750-63736 1.25 ppm [(PS061113-01x2)]

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0008.RAW

Date Taken (end) = 6/24/2013 8:57:59 AM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 8

Injection Volume = 10

Dilution Factor = 1

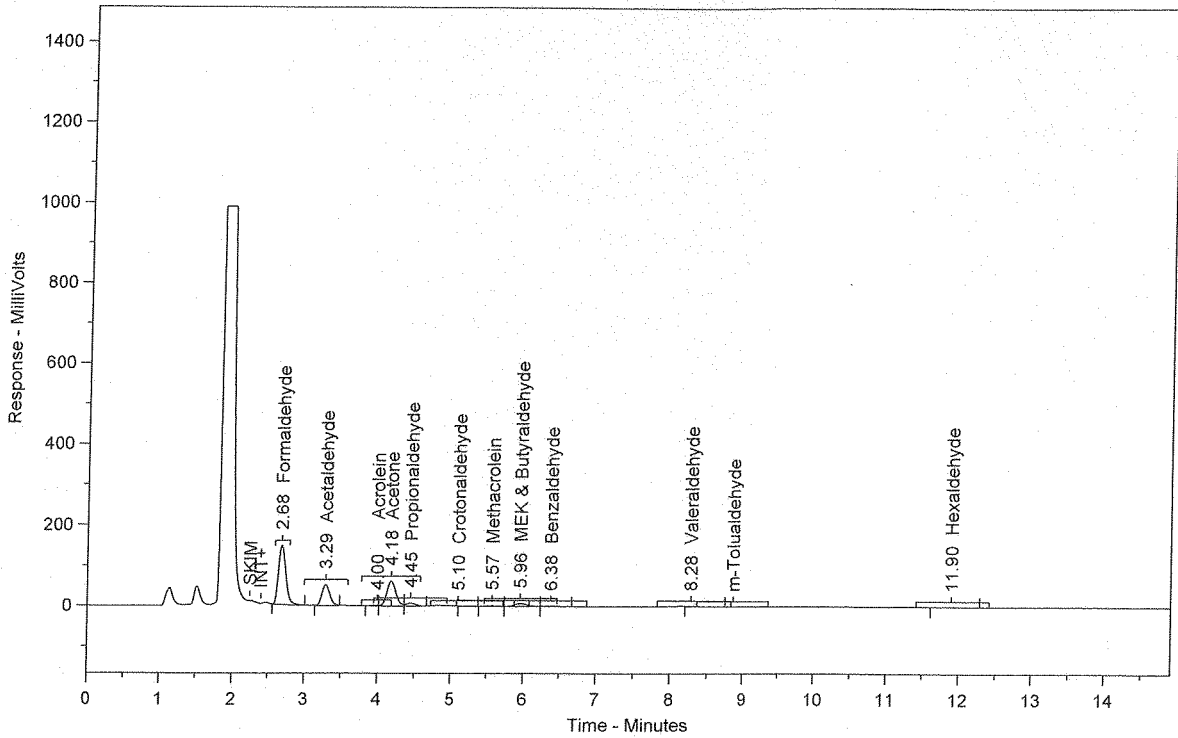
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	2.0817	10.984	1339490	17.964	BB	0.11
2	3.30	Acetaldehyde	1.6557	8.737	874914	11.734	BB	0.12
3	3.99	Acrolein	1.3159	6.943	630495	8.456	BV	0.14
4	4.19	Acetone	1.9272	10.169	802526	10.763	VV	0.13
5	4.46	Propionaldehyde	1.3567	7.159	560993	7.524	VB	0.14
6	5.24	Crotonaldehyde	1.3188	6.959	501361	6.724	BV	0.15
7	5.60	Methacrolein	1.4689	7.751	590648	7.921	VV	0.15
8	5.98	MEK & Butyraldehyde	2.5309	13.354	819320	10.988	VV	0.17
9	6.40	Benzaldehyde	1.3107	6.916	346721	4.650	VB	0.17
10	8.36	Valeraldehyde	1.3656	7.205	381237	5.113	BV	0.20
11	8.90	m-Tolualdehyde	1.2987	6.852	293069	3.930	VB	0.22
12	11.93	Hexaldehyde	1.3211	6.971	315642	4.233	BB	0.27

Total Area = 7456417

Total Height = 811758.5

Total Amount = 18.9519

130750-63736



Sample Name = 130750-63736

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0009.RAW

Date Taken (end) = 6/24/2013 9:14:37 AM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 9

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	1.5984	36.881	1028508	46.964	BB	0.11
2	3.29	Acetaldehyde	0.7462	17.217	394287	18.004	BB	0.12
3	4.00	Acrolein	0.0212	0.489	10161	0.464	BV	0.09
4	4.18	Acetone	1.2456	28.741	518685	23.685	VV	0.13
5	4.45	Propionaldehyde	0.1549	3.574	64055	2.925	VB	0.15
6	5.10	Crotonaldehyde	0.0128	0.296	4882	0.223	BB	0.15
7	5.57	Methacrolein	0.0477	1.100	19164	0.875	BV	0.16
8	5.96	MEK & Butyraldehyde	0.2833	6.537	91716	4.188	VV	0.18
9	6.38	Benzaldehyde	0.0634	1.464	16779	0.766	VB	0.18
10	8.28	Valeraldehyde	0.0853	1.968	23811	1.087	BB	0.23
11	11.90	Hexaldehyde	0.0750	1.731	17924	0.818	BB	0.27

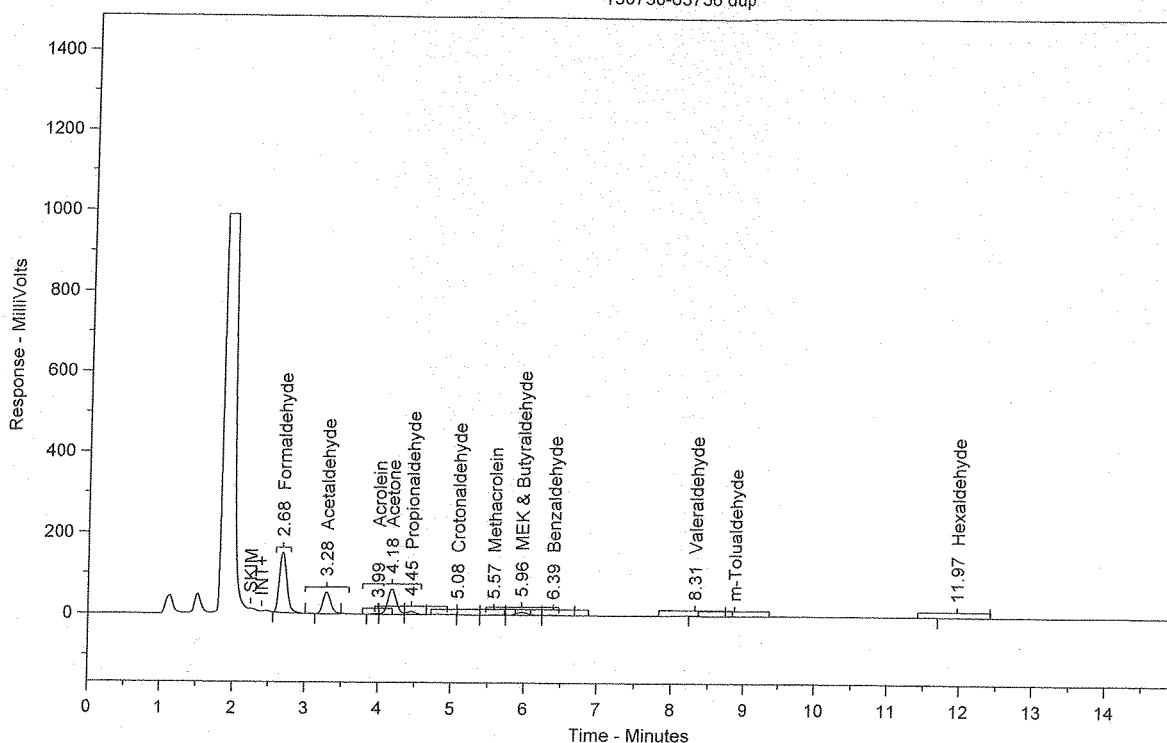
Total Area = 2189972

Total Height = 280936

Total Amount = 4.333815

Chrom Perfect Chromatogram Report

130750-63736 dup



Sample Name = 130750-63736 dup

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0010.RAW

Date Taken (end) = 6/24/2013 10:10:04 AM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 10

Injection Volume = 10

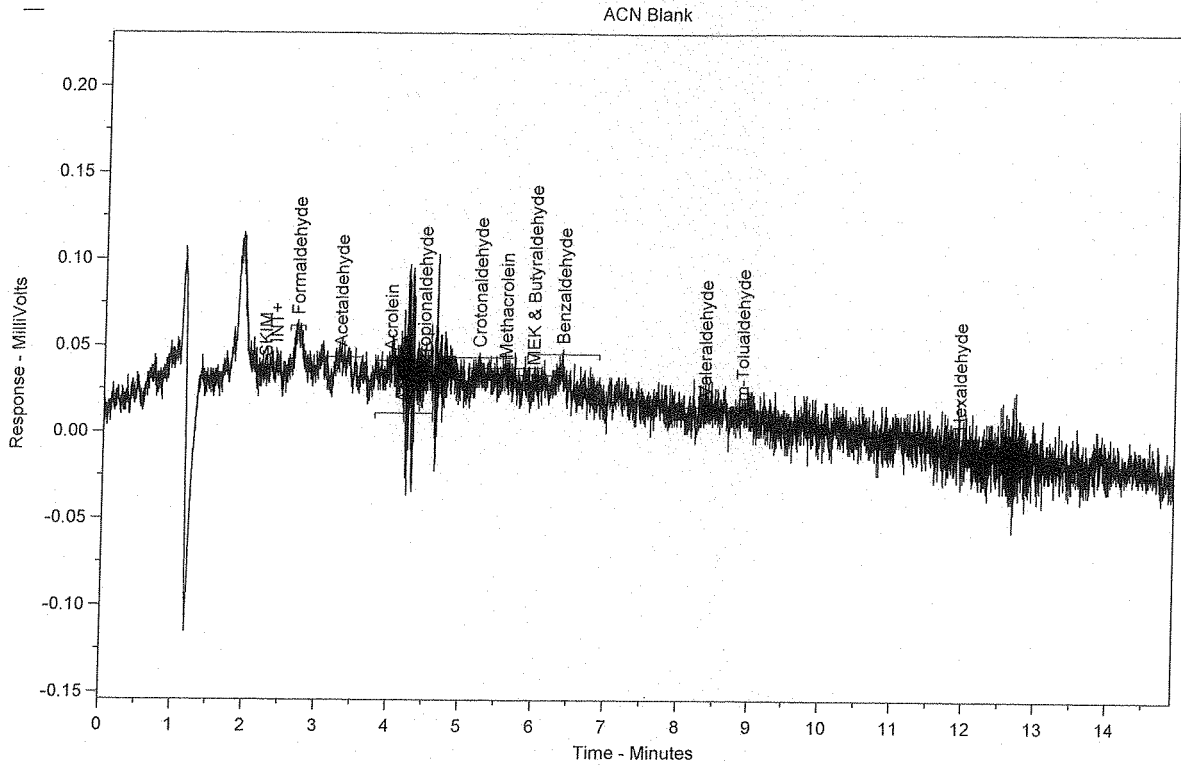
Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	1.6227	36.776	1044136	46.816	BB	0.11
2	3.28	Acetaldehyde	0.7655	17.348	404477	18.136	BB	0.12
3	3.99	Acrolein	0.0185	0.419	8848	0.397	BV	0.08
4	4.18	Acetone	1.2788	28.982	532495	23.875	VV	0.13
5	4.45	Propionaldehyde	0.1578	3.576	65242	2.925	VB	0.15
6	5.08	Crotonaldehyde	0.0134	0.304	5104	0.229	BB	0.17
7	5.57	Methacrolein	0.0478	1.084	19236	0.862	BV	0.16
8	5.96	MEK & Butyraldehyde	0.2873	6.511	92995	4.170	VV	0.18
9	6.39	Benzaldehyde	0.0631	1.431	16703	0.749	VB	0.18
10	8.31	Valeraldehyde	0.0856	1.939	23887	1.071	BB	0.22
11	11.97	Hexaldehyde	0.0719	1.630	17179	0.770	BB	0.27

Total Area = 2230303

Total Height = 286203.4

Total Amount = 4.412265



Sample Name = ACN Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0012.RAW

Date Taken (end) = 6/24/2013 1:23:57 PM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET  
Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL  
Concentration Units = ug/ml

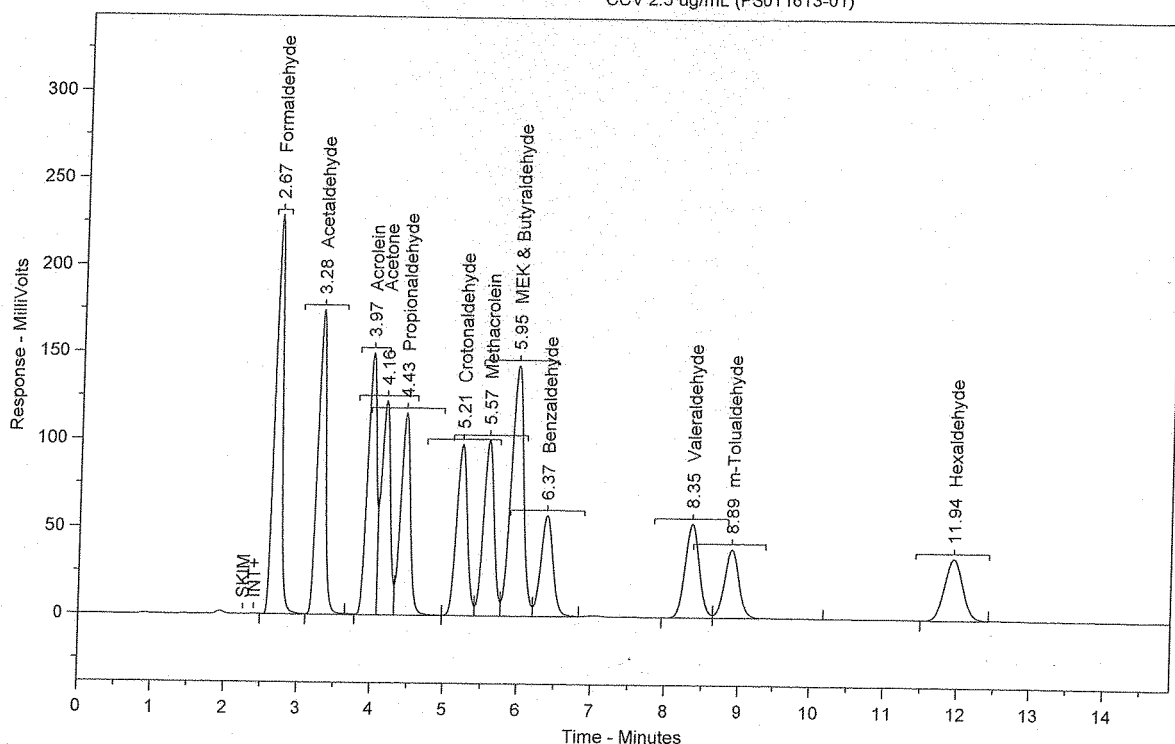
Run Time = 14.89889  
Injection Volume = 10

Vial Number = 12  
Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
Total Area = 0								
Total Height = 0								
Total Amount = 0								

TC  
06/24/13

CCV 2.5 ug/mL (PS011613-01)



Sample Name = CCV 2.5 ug/mL (PS011613-01)

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0013.RAW

Date Taken (end) = 6/24/2013 1:40:32 PM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 13

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.67	Formaldehyde	2.5585	7.679	1646321	13.050	SBB	0.11
2	3.28	Acetaldehyde	2.5797	7.743	1363132	10.805	TBV	0.12
3	3.97	Acrolein	2.5681	7.708	1230474	9.754	TVV	0.14
4	4.16	Acetone	2.5668	7.704	1068857	8.473	TVV	0.13
5	4.43	Propionaldehyde	2.5830	7.753	1068056	8.466	TVV	0.14
6	5.21	Crotonaldehyde	2.5559	7.671	971633	7.702	TVV	0.15
7	5.57	Methacrolein	2.5556	7.670	1027621	8.146	TVV	0.15
8	5.95	MEK & Butyraldehyde	5.1460	15.445	1665886	13.205	TVV	0.18
9	6.37	Benzaldehyde	2.5543	7.666	675707	5.356	TVB	0.18
10	8.35	Valeraldehyde	2.5666	7.703	716547	5.680	BV	0.21
11	8.89	m-Tolualdehyde	2.5120	7.539	566880	4.493	VB	0.22
12	11.94	Hexaldehyde	2.5718	7.719	614458	4.871	BB	0.27

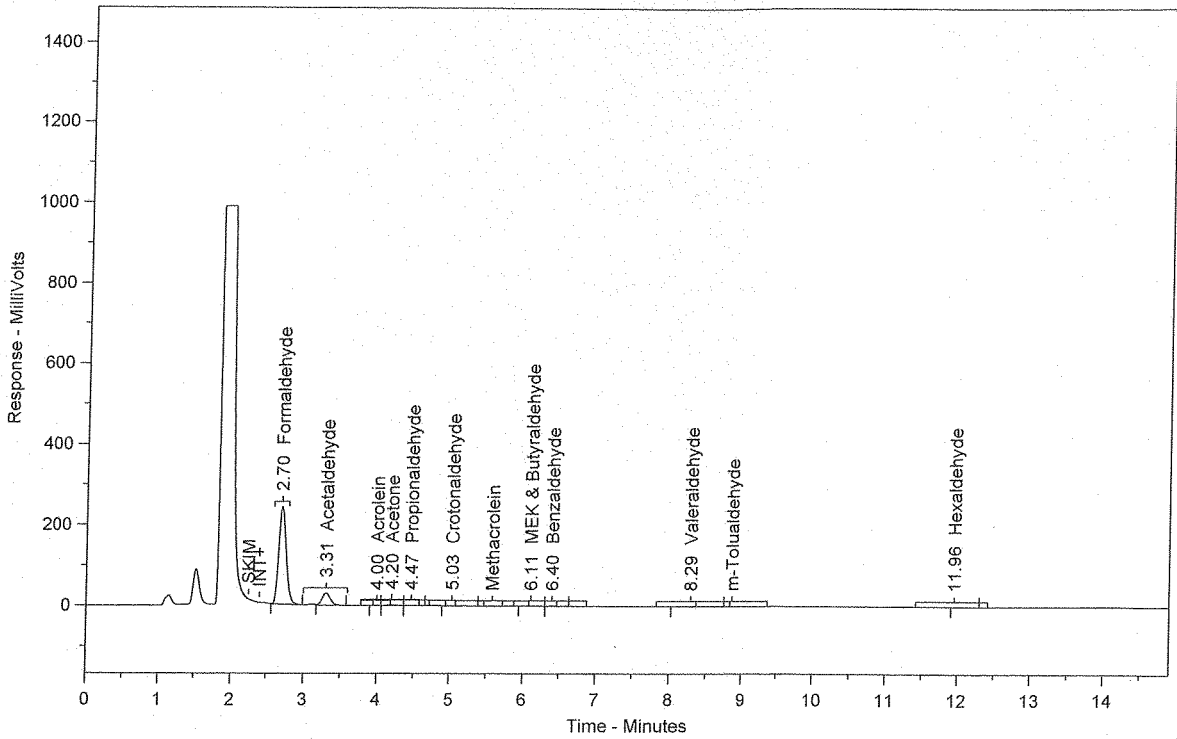
Total Area = 1.261557E+07

Total Height = 1320209

Total Amount = 33.3183



130751-63738



Sample Name = 130751-63738

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0014.RAW

Date Taken (end) = 6/24/2013 1:57:07 PM

Method File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0014.BND

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0014.BND

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 14

Injection Volume = 10

Dilution Factor = 1

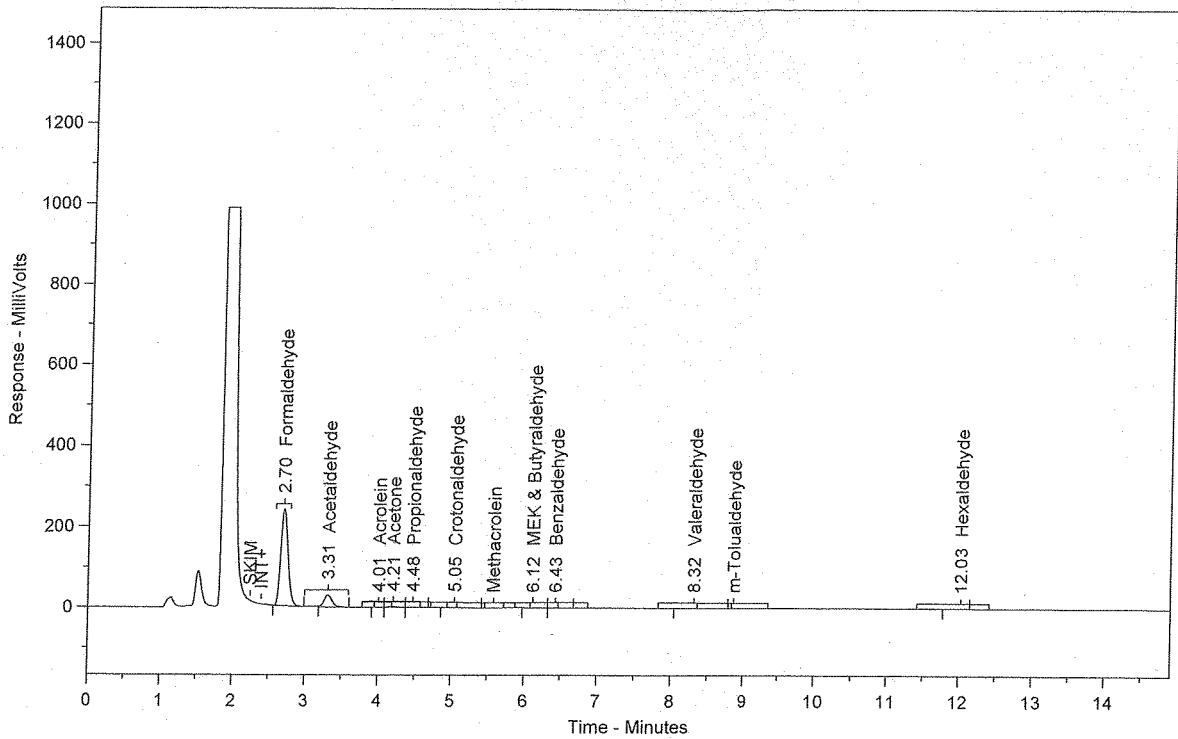
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.70	Formaldehyde	2.6346	81.024	1695299	85.326	BB	0.11
2	3.31	Acetaldehyde	0.4275	13.148	225914	11.370	BB	0.12
3	4.00	Acrolein	0.0044	0.136	2118	0.107	BV	0.11
4	4.20	Acetone	0.0448	1.379	18675	0.940	VV	0.13
5	4.47	Propionaldehyde	0.0153	0.470	6320	0.318	VB	0.15
6	5.03	Crotonaldehyde	0.0255	0.786	9712	0.489	BB	0.26
7	6.11	MEK & Butyraldehyde	0.0380	1.168	12291	0.619	BV	0.24
8	6.40	Benzaldehyde	0.0175	0.537	4619	0.232	VB	0.19
9	8.29	Valeraldehyde	0.0347	1.068	9699	0.488	BB	0.27
10	11.96	Hexaldehyde	0.0092	0.284	2203	0.111	BB	0.20

Total Area = 1986852

Total Height = 275700

Total Amount = 3.251639

130751-63738 dup



Sample Name = 130751-63738 dup

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0015.RAW

Date Taken (end) = 6/24/2013 2:13:42 PM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 15

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.70	Formaldehyde	2.5934	80.920	1668809	85.258	BB	0.11
2	3.31	Acetaldehyde	0.4215	13.152	222735	11.379	BB	0.12
3	4.01	Acrolein	0.0041	0.129	1986	0.101	BV	0.09
4	4.21	Acetone	0.0464	1.446	19303	0.986	VV	0.13
5	4.48	Propionaldehyde	0.0147	0.459	6082	0.311	VB	0.15
6	5.05	Crotonaldehyde	0.0251	0.784	9554	0.488	BB	0.31
7	6.12	MEK & Butyraldehyde	0.0384	1.199	12441	0.636	BV	0.25
8	6.43	Benzaldehyde	0.0175	0.548	4642	0.237	VB	0.20
9	8.32	Valeraldehyde	0.0341	1.064	9520	0.486	BB	0.29
10	12.03	Hexaldehyde	0.0096	0.299	2289	0.117	BB	0.25

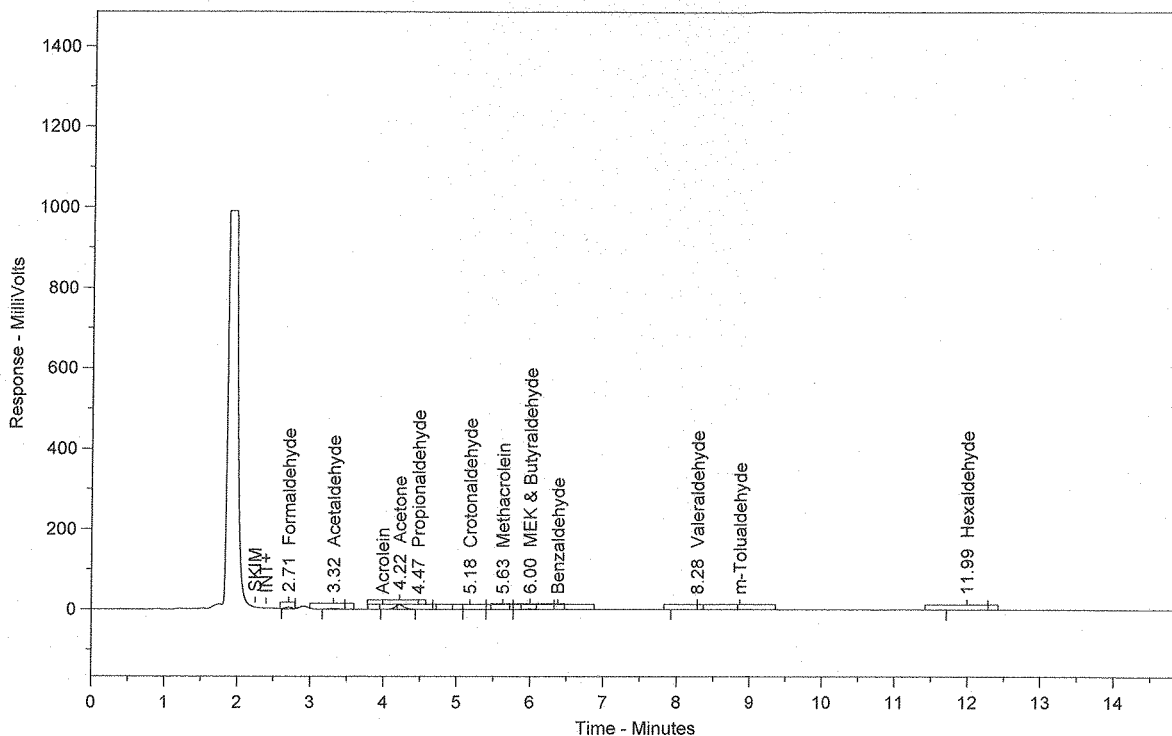
Total Area = 1957361

Total Height = 274015.4

Total Amount = 3.204962

Chrom Perfect Chromatogram Report

130753-63741



Sample Name = 130753-63741

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0017.RAW

Date Taken (end) = 6/24/2013 2:46:53 PM

Method File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0017.BND

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0017.BND

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 17

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.71	Formaldehyde	0.0359	9.222	23069	13.983	BB	0.09
2	3.32	Acetaldehyde	0.0270	6.934	14244	8.634	BB	0.12
3	4.22	Acetone	0.2300	59.167	95785	58.058	SBB	0.13
4	4.47	Propionaldehyde	0.0076	1.965	3159	1.915	TBB	0.11
5	5.18	Crotonaldehyde	0.0071	1.814	2680	1.625	BV	0.19
6	5.63	Methacrolein	0.0124	3.189	4985	3.022	VV	0.16
7	6.00	MEK & Butyraldehyde	0.0522	13.429	16901	10.244	VB	0.17
8	8.28	Valeraldehyde	0.0045	1.150	1249	0.757	BB	0.15
9	11.99	Hexaldehyde	0.0122	3.131	2908	1.763	BB	0.27

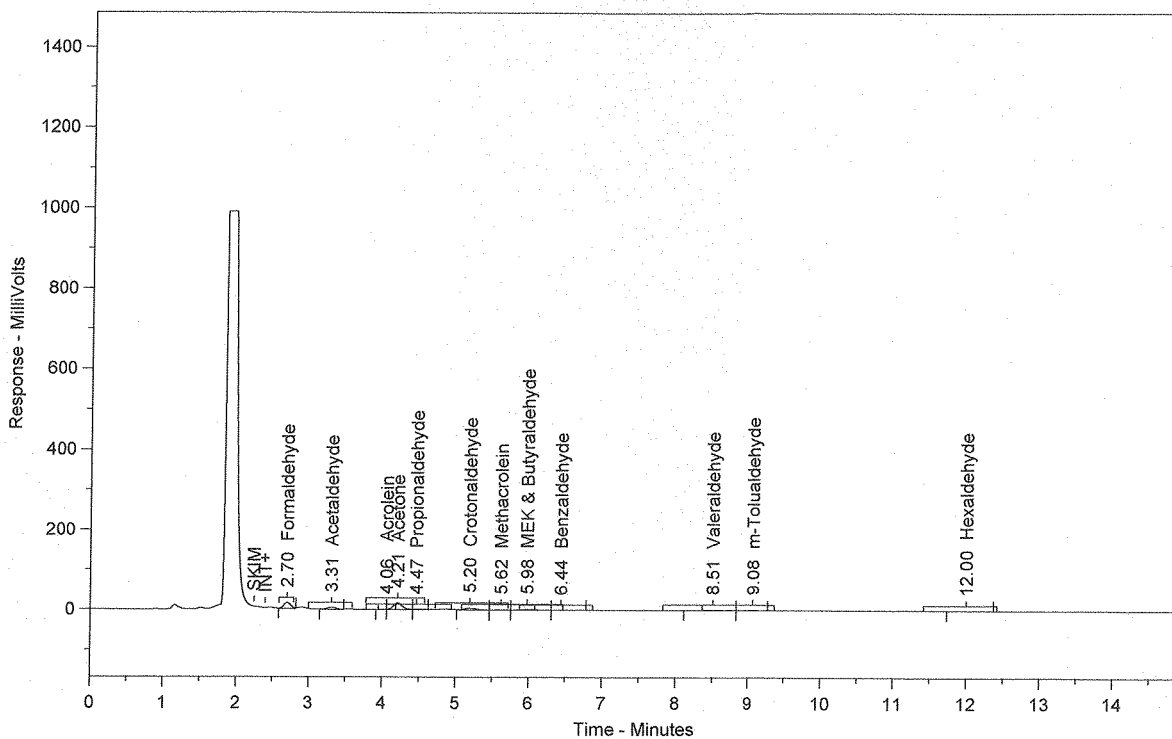
Total Area = 164979.8

Total Height = 19439.35

Total Amount = 0.3887693

EC  
G (125A)

130753-63742



Sample Name = 130753-63742

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413\TO-11\062413.0018.RAW

Date Taken (end) = 6/24/2013 3:03:29 PM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 18

Injection Volume = 10

Dilution Factor = 1

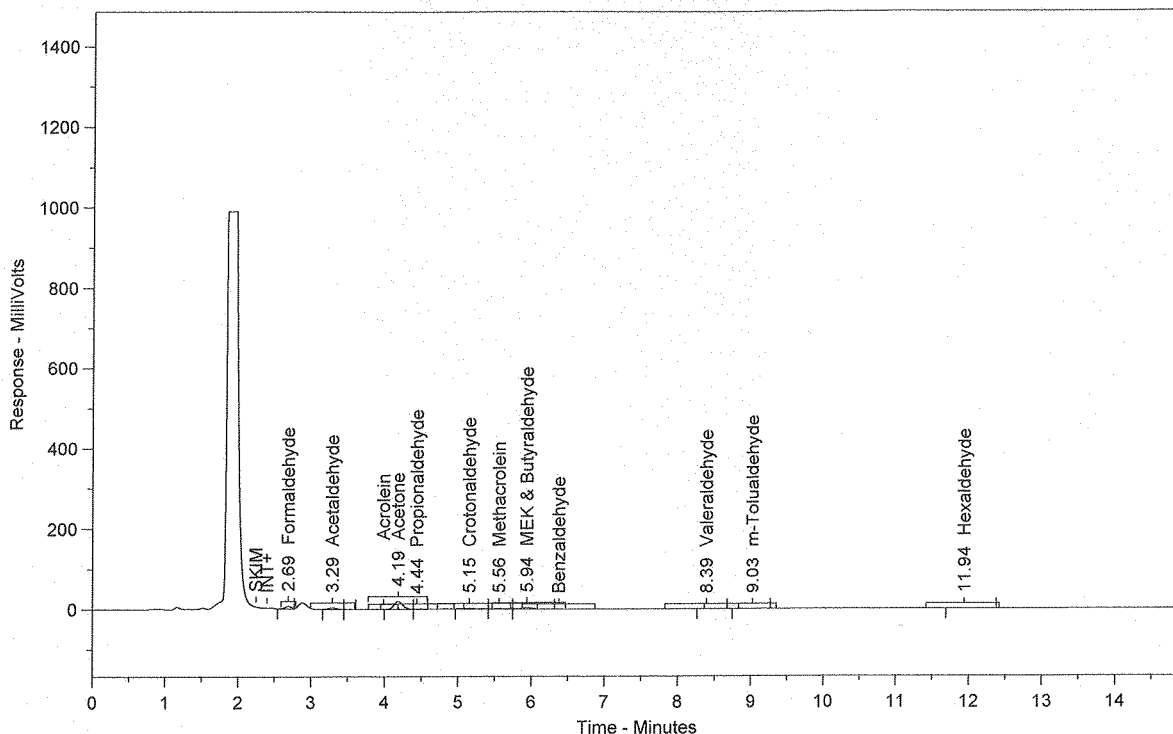
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.70	Formaldehyde	0.1529	16.396	98357	24.784	BB	0.10
2	3.31	Acetaldehyde	0.0694	7.447	36684	9.244	BB	0.12
3	4.06	Acrolein	0.0022	0.231	1032	0.260	BV	0.04
4	4.21	Acetone	0.3352	35.959	139601	35.177	VV	0.13
5	4.47	Propionaldehyde	0.0153	1.639	6318	1.592	VB	0.12
6	5.20	Crotonaldehyde	0.1293	13.873	49168	12.389	BV	0.17
7	5.62	Methacrolein	0.0191	2.048	7676	1.934	VV	0.14
8	5.98	MEK & Butyraldehyde	0.0728	7.812	23578	5.941	VV	0.18
9	6.44	Benzaldehyde	0.0103	1.105	2725	0.687	VB	0.24
10	8.51	Valeraldehyde	0.0559	5.992	15595	3.930	BV	0.27
11	9.08	m-Tolualdehyde	0.0438	4.693	9874	2.488	VB	0.23
12	12.00	Hexaldehyde	0.0262	2.805	6249	1.575	BB	0.28

Total Area = 396857.5

Total Height = 45759.18

Total Amount = 0.9322838

130753-63743



Sample Name = 130753-63743

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0019.RAW

Date Taken (end) = 6/24/2013 3:20:07 PM

Method File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0019.BND

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0019.BND

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 19

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	0.0587	7.553	37754	11.716	BB	0.10
2	3.29	Acetaldehyde	0.0523	6.728	27615	8.570	BV	0.11
4	4.19	Acetone	0.3887	50.046	161876	50.235	BV	0.13
5	4.44	Propionaldehyde	0.0144	1.860	5974	1.854	VB	0.12
6	5.15	Crotonaldehyde	0.0688	8.861	26167	8.121	BV	0.21
7	5.56	Methacrolein	0.0401	5.165	16132	5.006	VV	0.16
8	5.94	MEK & Butyraldehyde	0.1152	14.836	37307	11.577	VB	0.17
9	8.39	Valeraldehyde	0.0092	1.184	2568	0.797	BB	0.27
10	9.03	m-Tolualdehyde	0.0109	1.407	2466	0.765	BB	0.38
11	11.94	Hexaldehyde	0.0183	2.360	4380	1.359	BB	0.29

Total Area = 322238.9

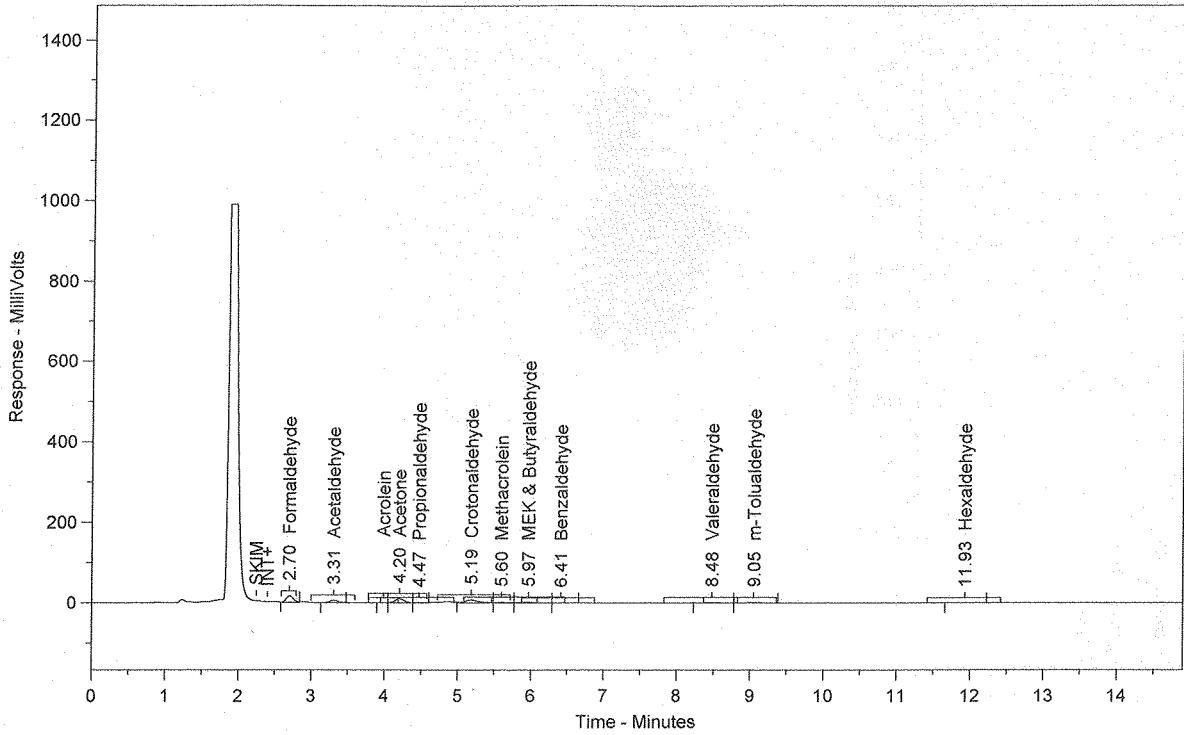
Total Height = 35849.93

Total Amount = 0.7767681

bc  
06/25/13

Chrom Perfect Chromatogram Report

130753-63744



Sample Name = 130753-63744

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413\TO-11\062413.0020.RAW

Date Taken (end) = 6/24/2013 3:36:43 PM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 20

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.70	Formaldehyde	0.1628	16.335	104765	24.837	BB	0.11
2	3.31	Acetaldehyde	0.0875	8.776	46218	10.957	BB	0.12
4	4.20	Acetone	0.2084	20.905	86765	20.570	VV	0.13
5	4.47	Propionaldehyde	0.0232	2.326	9585	2.272	VB	0.11
6	5.19	Crotonaldehyde	0.2577	25.852	97953	23.222	BV	0.17
7	5.60	Methacrolein	0.0440	4.413	17686	4.193	VV	0.19
8	5.97	MEK & Butyraldehyde	0.0734	7.362	23755	5.632	VV	0.20
9	6.41	Benzaldehyde	0.0146	1.460	3850	0.913	VB	0.22
10	8.48	Valeraldehyde	0.0506	5.073	14117	3.347	BV	0.26
11	9.05	m-Tolualdehyde	0.0559	5.606	12609	2.989	VB	0.23
12	11.93	Hexaldehyde	0.0189	1.892	4505	1.068	BB	0.26

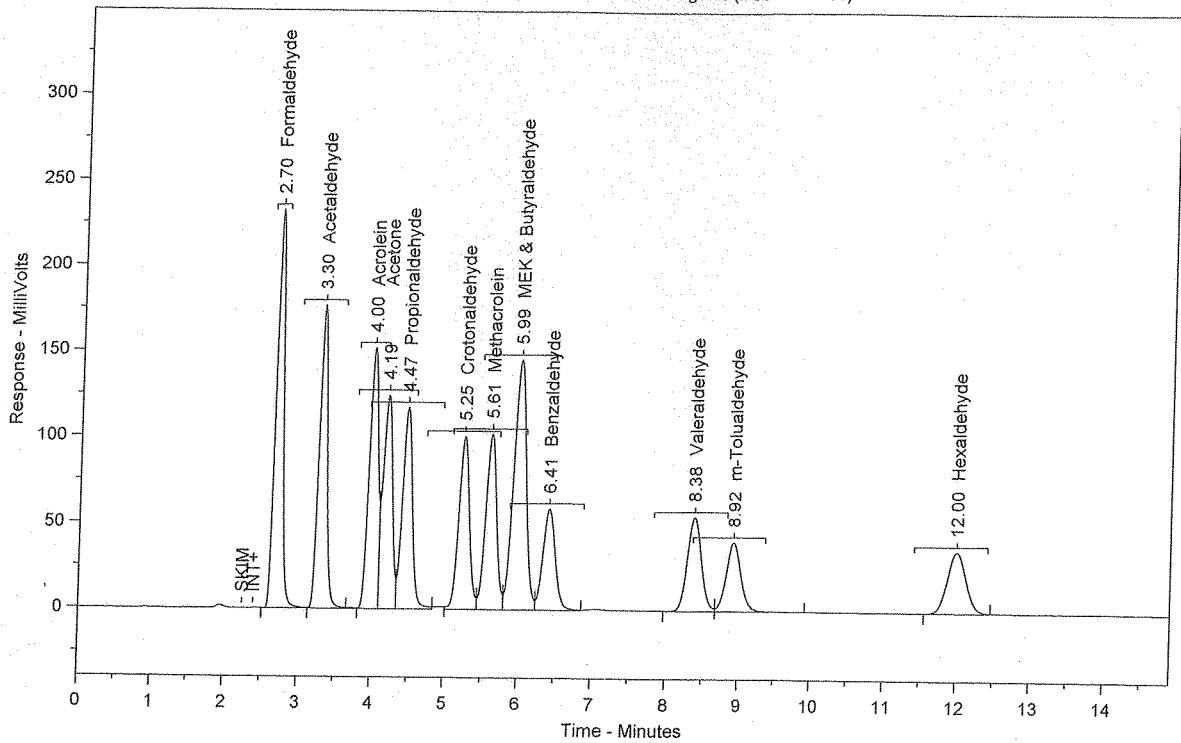
Total Area = 421806.9

Total Height = 44408.74

Total Amount = 0.996693

56  
06/25/13

CCV 2.5 ug/mL (PS011613-01)



Sample Name = CCV 2.5 ug/mL (PS011613-01)

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\062413TO-11\062413.0022.RAW

Date Taken (end) = 6/24/2013 4:09:54 PM

Method File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET  
 Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL  
 Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 22

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.70	Formaldehyde	2.6056	7.626	1676647	12.970	SBB	0.11
2	3.30	Acetaldehyde	2.6217	7.673	1385314	10.716	TBV	0.12
3	4.00	Acrolein	2.6149	7.653	1252894	9.692	TVV	0.14
4	4.19	Acetone	2.6147	7.652	1088820	8.423	TVV	0.13
5	4.47	Propionaldehyde	2.6589	7.782	1099442	8.505	TVB	0.14
6	5.25	Crotonaldehyde	2.6702	7.815	1015116	7.853	BV	0.15
7	5.61	Methacrolein	2.6337	7.708	1059008	8.192	VV	0.15
8	5.99	MEK & Butyraldehyde	5.2879	15.476	1711828	13.242	VV	0.18
9	6.41	Benzaldehyde	2.6053	7.625	689199	5.332	VB	0.18
10	8.38	Valeraldehyde	2.6319	7.703	734764	5.684	BV	0.21
11	8.92	m-Tolualdehyde	2.5837	7.562	583073	4.511	VB	0.22
12	12.00	Hexaldehyde	2.6402	7.727	630817	4.880	BB	0.27

Total Area = 1.292692E+07

Total Height = 1341391

Total Amount = 34.16888

## Chrom Perfect Sequence File

File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\062413 (TO-11).SEQ

File Date = 6/21/2013 4:27:41 PM

Analyst=

Entry #	Raw File Name	Method File Name	Sample Name	Vial #	DF
1	062413.0001.raw	061113 TO-11A.MET	ACN Blank	1	1
2	062413.0002.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS061113-01)	2	1
3	062413.0003.raw	061113 TO-11A.MET	SS 1.25 ppm (PS011613-01)	3	1
4	062413.0004.raw	061113 TO-11A.MET	TO-11 Method Blank	4	1
5	062413.0005.raw	061113 TO-11A.MET	LCS Blank	5	1
6	062413.0006.raw	061113 TO-11A.MET	LCS 1.25ug/mL (PS011013-01)	6	1
7	062413.0007.raw	061113 TO-11A.MET	MS 130750-63736 1.25 ppm [(PS061113-01x2]	7	1
8	062413.0008.raw	061113 TO-11A.MET	MSD 130750-63736 1.25 ppm [(PS061113-01x2]	8	1
9	062413.0009.raw	061113 TO-11A.MET	130750-63736	9	1
10	062413.0010.raw	061113 TO-11A.MET	130750-63736 dup	10	1
11	062413.0011.raw	061113 TO-11A.MET	130751-63737	11	1
12	062413.0012.raw	061113 TO-11A.MET	ACN Blank	12	1
13	062413.0013.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS011613-01)	13	1
14	062413.0014.raw	061113 TO-11A.MET	130751-63738	14	1
15	062413.0015.raw	061113 TO-11A.MET	130751-63738 dup	15	1
16	062413.0016.raw	061113 TO-11A.MET	130751-63738 trip	16	1
17	062413.0017.raw	061113 TO-11A.MET	130753-63741	17	1
18	062413.0018.raw	061113 TO-11A.MET	130753-63742	18	1
19	062413.0019.raw	061113 TO-11A.MET	130753-63743	19	1
20	062413.0020.raw	061113 TO-11A.MET	130753-63744	20	1
21	062413.0021.raw	061113 TO-11A.MET	ACN Blank	21	1
22	062413.0022.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS011613-01)	22	1