

Atmospheric Analysis & Consulting, Inc.

Client : SWAPE
Client Project Name : Bridgeton Sanitary Landfill Air Quality Assessment
Client Project No. : NA
AAC Project No. : 131009
Reporting Date : 08/05/2013

On August 01, 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	131009-65128
U-2 W7 DNPH	131009-65129
D-1 H DNPH	131009-65130
D-2 H DNPH	131009-65131


TO-11A - HPLC/UV analysis - A 10 μ 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.

All the samples were dark orange and were saturated with water and the DNPH had soaked into the glass wool in the back of the samples. The KI was wet and had run into the DNPH causing several large extraneous peaks in the chromatograms. Due to the above the reported values maybe lower than the actual values.

No other 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.

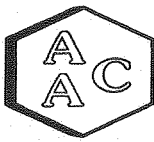
I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy data package.

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


Marcus Hueppe
Laboratory Director

This report consists of 55 pages.





SAMPLE RECEIPT / LOG-IN REPORT

AAC Project 131009

Received By: J. Zachman

<u>Sample Receipt Date</u>	<u>Project Desc</u>	<u>Clients ID</u>	<u>Matrix</u>	<u>Sampling Date/Time</u>	<u>Sampled By</u>	<u>Sample #</u>	<u>Analysis Requested</u>
8/1/2013 0935	Air Liquide Bridgeton Sanitary Landfill Air Quality Assessment	U-1 W1 DNPH	Tube	7/31/2013	Client	65128	TO-11A
8/1/2013 0935	Air Liquide Bridgeton Sanitary Landfill Air Quality Assessment	U-2 W7 DNPH	Tube	7/31/2013	Client	65129	TO-11A
8/1/2013 0935	Air Liquide Bridgeton Sanitary Landfill Air Quality Assessment	D-1 H DNPH	Tube	7/31/2013	Client	65130	TO-11A
8/1/2013 0935	Air Liquide Bridgeton Sanitary Landfill Air Quality Assessment	D-2 H DNPH	Tube	7/31/2013	Client	65131	TO-11A

TURN AROUND TIME: Normal (10days)

Lab Due Date: 8/2/2013

Total Samples: 4

REMARKS:

Samples received at 8.0°C. "Standard TAT for all analyses. If possible deliver report within 2 weeks. Provide Level IV QC package for all analyses."

AAC# 131009

AIR SAMPLING PUMP CALIBRATION LOG

Bridgeton Sanitary Landfill Air Quality Assessment

COMPLETED BY: Scott Miller

DATE: July 31 2013

PAGE: 1 of 1

PERSONNEL:

Scott Miller

CALIBRATION INSTRUMENT:

Biose Defender 510

Serial #131756

INITIAL PUMP SETUP (PRE-SAMPLING FLOW CHECK)

Sample ID <small>e.g. acetaldehyde</small>	Analyte <small>e.g. acetaldehyde</small>	SKC Tube ID <small>e.g. 226-120</small>	Air Pump Serial No. <small>e.g. 123456</small>	START		END		Total Volume Liters
				Flow Rate (L/min)	Start Time (24 Hour)	Flow Rate (L/min)	Stop Time (24 Hour)	
U-1 W-1	Aldehydes	226-120	67385	1.0105	09:22	1.0549	13:22	0
U-2 W-7	Aldehydes	226-120	71526	1.0274	10:17	1.0466	14:17	0
D-1 H	Aldehydes	226-120	67835	1.0206	09:47	1.0537	13:47	0
D-2 H	Aldehydes	226-120	59912	1.0090	10:52	1.0596	14:52	0
								0
								0
								0
								0

NOTES / LOCATION REFERENCES

TUBES:

ANALYTE SKC TUBE ID
 Aldehydes 226-120
 Amines 226-10
 Ammonia 226-29
 Carboxylic Acids 226-55

ANALYTE SKC TUBE ID
 Hydrogen Chloride 226-10-03
 Hydrogen Cyanide 226-28
 Mercury (elemental) 226-17-1A
 Sulfur Dioxide 226-80

AIR SAMPLING PUMP CALIBRATION LOG

Bridgeton Sanitary Landfill Air Quality Assessment

COMPLETED BY: John Blank

DATE: July 31st, 2013

PAGE: 1 of 1

John Blank

CALIBRATION

INSTRUMENT : Biose Defender510

INITIAL PUMP SETUP (PRE-SAMPLING FLOW CHECK)

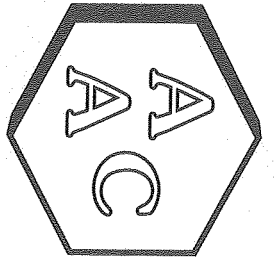
Sample ID <small>e.g. acetaldehyde</small>	Analyte <small>e.g. acetaldehyde</small>	SKC Tube ID <small>e.g. 226-120</small>	Air Pump Serial No. <small>e.g. 123456</small>	START		END		Total Volume Liters
				Flow Rate (L/min)	Start Time (24 Hour)	Flow Rate (L/min)	Stop Time (24 Hour)	
U-1 W1	Aldehydes	4440601057	67385	1.01	9:22:00	1.055	13:22:00	247.8
U-2 W7	Aldehydes	4440601050	71526	1.027	10:17:00	1.047	14:17:00	248.88
D-1 H	Aldehydes	4440601374	67835	1.021	9:47:00	1.054	13:47:00	249
D-2 H	Aldehydes	4440601543	59912	1.009	10:52:00	1.06	14:52:00	248.28

NOTES / LOCATION REFERENCES

TUBES:	ANALYTE	SKC TUBE ID
	Aldehydes	226-120
	Amines	226-10
	Ammonia	226-29
	Carboxylic Acids	226-55

	SKC TUBE ID
	226-10-03
	226-28
	226-17-1A
	226-80

Results



Atmospheric Analysis & Consulting, Inc.

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

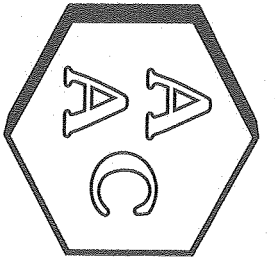
Client : SWAPE
 Client Project Name : Bridgetown Sanitary Landfill Air Quality Assessment
 AAC Project No. : 131009
 Analyst : EG
 Units : ppbv

Sampling Date (s) : 07/31/2013
 Receiving Date : 08/01/2013
 Analysis Date : 08/02/2013
 Reporting Date : 08/05/2013

Client ID	AAC Sample ID	Formaldehyde	Acetaldehyde	Acrolein	Acetone	Propionaldehyde	Crotonaldehyde	Methacrolein	MEK & Butyraldehyde	Benzaldehyde	Valeraldehyde	m-Tolualdehyde	Hexaldehyde
U-1 W1 DNPH	131009-65128	<SRL	<SRL	<SRL	0.619	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL
	SRL	0.246	0.168	0.132	0.127	0.127	0.106	0.106	0.103	0.070	0.086	0.062	<SRL
U-2 W7 DNPH	131009-65129	<SRL	<SRL	<SRL	0.186	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	0.074
	SRL	0.246	0.168	0.132	0.127	0.127	0.105	0.105	0.102	0.070	0.086	0.061	<SRL
D-1 H DNPH	131009-65130	<SRL	<SRL	<SRL	0.221	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	0.074
	SRL	0.245	0.167	0.131	0.127	0.127	0.105	0.105	0.102	0.069	0.086	0.061	<SRL
D-2 H DNPH	131009-65131	<SRL	<SRL	<SRL	0.620	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	0.074
	SRL	0.217	0.148	0.117	0.112	0.112	0.093	0.093	0.091	0.062	0.076	0.054	<SRL

<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

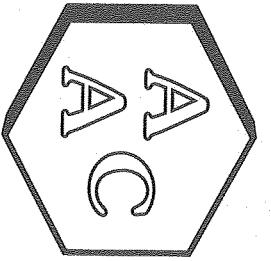
Client : SWAPE
 Client Project Name : Bridgetown Sanitary Landfill Air Quality Assessment
 AC Project No. : 131009
 analyst : EG
 units : ug/m³

Sampling Date (s) : 07/31/2013
 Receiving Date : 08/01/2013
 Analysis Date : 08/02/2013
 Reporting Date : 08/05/2013

Client ID	AAC Sample ID	Formaldehyde	Acetaldehyde	Acrolein	Acetone	Propionaldehyde	Crotonaldehyde	Methacrolein	MEK & Butyraldehyde	Benzaldehyde	Valeraldehyde	m-Tolualdehyde	Hexaldehyde
U-1 W7 DNPH	SRL 131009-65128	<SRL	<SRL	<SRL	1.47	<SRL	<SRL	<SRL	<SRL	<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
U-2 W7 DNPH	SRL 131009-65129	<SRL	<SRL	<SRL	0.442	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL
		0.302	0.302	0.302	0.302	0.302	0.302	0.302	0.302	0.302	0.302	0.302	0.302
D-1 H DNPH	SRL 131009-65130	<SRL	<SRL	<SRL	0.526	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL
		0.301	0.301	0.301	0.301	0.301	0.301	0.301	0.301	0.301	0.301	0.301	0.301
D-2 H DNPH	SRL 131009-65131	<SRL	<SRL	<SRL	1.47	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL
		0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267	0.267

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. : 131009
 Analyst : EG
 Units : ug/sample

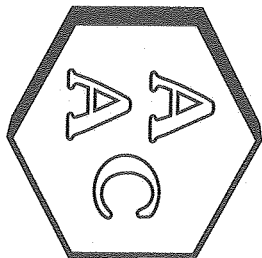
Sampling Date (s) : 07/31/2013
 Receiving Date : 08/01/2013
 Analysis Date : 08/02/2013
 Reporting Date : 08/05/2013

Client ID	AAC Sample ID	Formaldehyde	Acetaldehyde	Acrolein	Acetone	Propionaldehyde	Crotonaldehyde	Methacrolein	MEK & Butyraldehyde	Benzaldehyde	Valeraldehyde	m-Tolualdehyde	Hexaldehyde
U-1 W1 DNPH	131009-65128	<SRL	<SRL	<SRL	0.365	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL
	SRL	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075
U-2 W7 DNPH	131009-65129	<SRL	<SRL	<SRL	0.110	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL
	SRL	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075
D-1 H DNPH	131009-65130	<SRL	<SRL	<SRL	0.131	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL
	SRL	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075
D-2 H DNPH	131009-65131	<SRL	<SRL	<SRL	0.413	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL	<SRL
	SRL	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	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 : 08/02/2013
Analyst : 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)	Crotonaldehyde (ug/mL)	Methacrolein (ug/mL)	MEK & Butyraldehyde (ug/mL)	Benzaldehyde (ug/mL)	Valeraldehyde (ug/mL)	m-Tolualdehyde (ug/mL)	Hexaldehyde (ug/mL)
2.50	2.74	2.73	2.74	2.73	2.72	2.71	2.73	5.43	2.57	2.75	2.72	2.75
Accuracy (%)*	110	109	110	109	109	108	109	109	103	110	109	110

Continuing CCV

Standard Concentration (ug/mL)	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)
2.50	2.75	2.73	2.73	2.75	2.71	2.69	2.74	5.44	2.65	2.75	2.65	2.72
Accuracy (%)*	110	109	109	110	108	108	110	109	106	110	106	109

Continuing CCV

Standard Concentration (ug/mL)	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)
2.50	2.69	2.72	2.72	2.71	2.75	2.71	2.71	5.45	2.73	2.71	2.70	2.70
Accuracy (%)*	108	109	109	108	110	108	108	109	109	108	108	108

Closing CCV

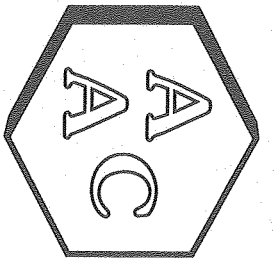
Standard Concentration (ug/mL)	Formaldehyde (ug/mL)	Acetaldehyde (ug/mL)	Acrolein (ug/mL)	Acetone (ug/mL)	Propionaldehyde (ug/mL)	Crotonaldehyde (ug/mL)	Methacrolein (ug/mL)	MEK & Butyraldehyde (ug/mL)	Benzaldehyde (ug/mL)	Valeraldehyde (ug/mL)	m-Tolualdehyde (ug/mL)	Hexaldehyde (ug/mL)
2.50	2.70	2.72	2.72	2.71	2.74	2.73	2.72	5.45	2.73	2.70	2.69	2.75
Accuracy (%)*	108	109	109	108	110	109	109	109	109	108	108	110

Second Source

Standard Concentration (ug/mL)	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)
2.50	2.67	2.70	2.69	2.70	2.73	2.69	2.70	5.42	2.72	2.71	2.71	2.73
Accuracy (%)*	107	108	108	108	109	108	108	108	109	108	108	109

*Must be 100 ± 10%

Marcus Hueppel
 Marcus Hueppel
 Laboratory Director



Atmospheric Analysis & Consulting, Inc.

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

Analysis Date : 08/02/2013

Analyst : EG

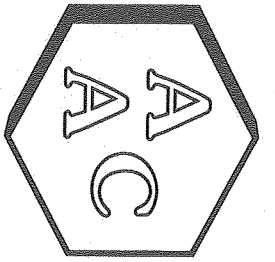
Instrument ID : HPLC 01

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)	m-Tolualdehyde (ug/mL)	Hexaldehyde (ug/mL)
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)	0.395	0.378	0.387	0.423	0.385	0.374	0.423	0.742	0.382	0.408	0.385	0.389
Spike Recovery (%)*	104	99.8	102	112	102	98.6	112	97.9	101	108	102	103

*Must be 100 ± 15%

Laboratory Control Spike 1


Marcus Hueppe
Laboratory Director



Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

TO-11A

Matrix Spike Analysis

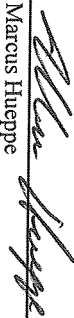
Analysis Date : 08/02/2013

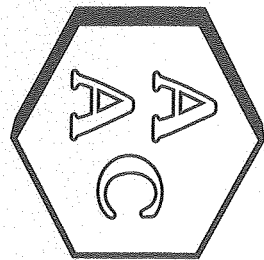
Analyst : EG

Instrument ID : HPLC 01

Sample ID	131007-65126	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)	0.000	0.009	0.000	0.081	0.001	0.000	0.001	0.032	0.007	0.006	0.017	0.006	
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)	1.34	1.33	1.36	1.44	1.36	1.35	1.46	2.62	1.35	1.36	1.37	1.35	
Duplicate Spiked Sample Concentration (ug/mL)	1.34	1.32	1.35	1.43	1.34	1.34	1.47	2.56	1.32	1.36	1.36	1.36	
Spike Recovery (%)*	107	106	109	109	109	108	117	104	107	108	108	108	
Duplicate Spike Recovery (%)*	107	105	108	108	107	107	118	101	105	108	107	108	
RPD**	0.0	0.8	0.7	0.7	1.5	0.7	0.7	2.3	2.2	0.0	0.7	0.7	

*Must be 100± 25%
 ** Must be ≤ 25%


 Marcus Hueppe
 Laboratory Director



Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report


TO-11A
Duplicate Analysis

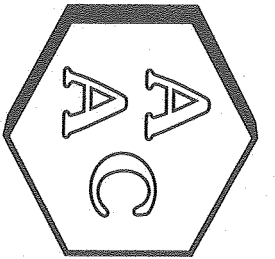
Analysis Date : 08/02/2013
Analyst : EG

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)	MTK & Butyraldehyde (ug/mL)	Benzaldehyde (ug/mL)	Valeraldehyde (ug/mL)	m-Tolualdehyde (ug/mL)	Hexaldehyde (ug/mL)
Sample ID	131007-65126											
Sample Concentration (ug/mL)	ND	<RL	ND	0.161	<RL	ND	<RL	0.065	<RL	<RL	0.033	<RL
Duplicate Sample Concentration (ug/mL)	NP	<RL	ND	0.160	ND	ND	ND	0.068	<RL	<RL	0.031	<RL
RPD**	NA	NA	NA	1.1	NA	NA	NA	4.2	NA	NA	5.9	NA
Sample ID	131007-65119											
Sample Concentration (ug/mL)	0.128	0.084	<RL	0.366	<RL	0.041	<RL	0.077	<RL	0.027	0.029	<RL
Duplicate Sample Concentration (ug/mL)	0.126	0.084	<RL	0.365	<RL	0.040	<RL	0.083	<RL	0.027	0.031	<RL
RPD**	1.4	0.0	NA	0.4	NA	0.2	NA	7.3	NA	2.6	4.7	NA
Sample ID	131009-65128											
Sample Concentration (ug/mL)	<RL	<RL	ND	0.122	<RL	ND	<RL	<RL	<RL	<RL	ND	<RL
Duplicate Sample Concentration (ug/mL)	<RL	<RL	ND	0.127	<RL	ND	<RL	<RL	<RL	<RL	ND	<RL
RPD**	NA	NA	NA	4.0	NA	NA	NA	NA	NA	NA	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 : 08/02/2013
Analyst : EG

Instrument ID : HPLC 01

Analyte	Formaldehyd de (ug/ml)	Acetaldehyd de (ug/ml)	Acrolein (ug/ml)	Acetone (ug/ml)	Propionaldehyd de (ug/ml)	Crotonaldehyd de (ug/ml)	Methacryl aldehyd (ug/ml)	MEK & Butyraldehyd de (ug/ml)	Benzaldehyd de (ug/ml)	Valeraldehyd de (ug/ml)	m- Tolualdehyd de (ug/ml)	Hexaldehyd de (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
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:\Chromepreperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Version: 6

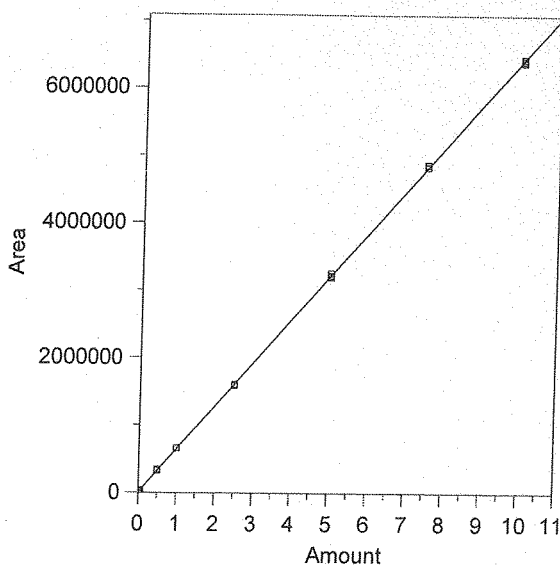
Creator: EG/HP
Description: EPA TO-11

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.

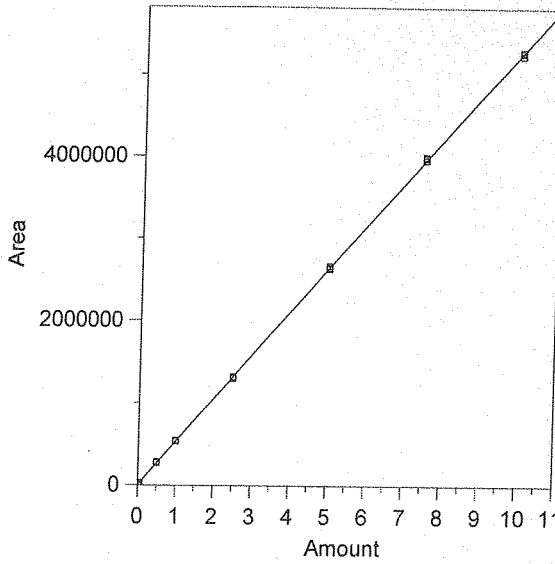
1 Formaldehyde



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	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

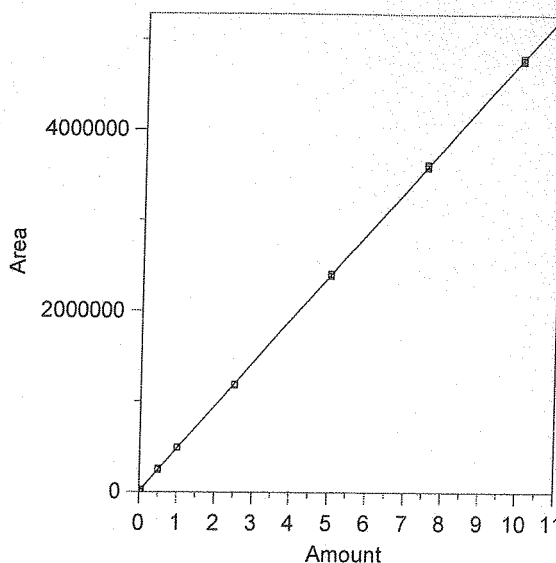
2 Acetaldehyde



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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	269068.5	538137	1.841	C:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	2629002	525800.4	-0.494	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2663350	532670	0.806	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2644688	528937.6	0.100	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	3962025	528270	-0.027	C:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	5275343	527534.3	-0.166	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	5292054	529205.4	0.150	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	5242042	524204.2	-0.796	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

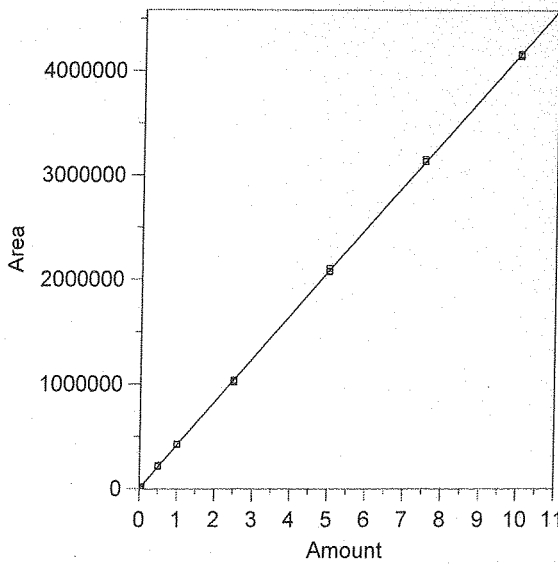
3 Acrolein



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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	254413	508826	6.198	C:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	1188060	475224	-0.815	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	2384550	476910	-0.463	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2408812	481762.4	0.550	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2403943	480788.6	0.346	C:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	4781989	478198.9	-0.194	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	4803733	480373.3	0.260	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	4764090	476409	-0.568	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

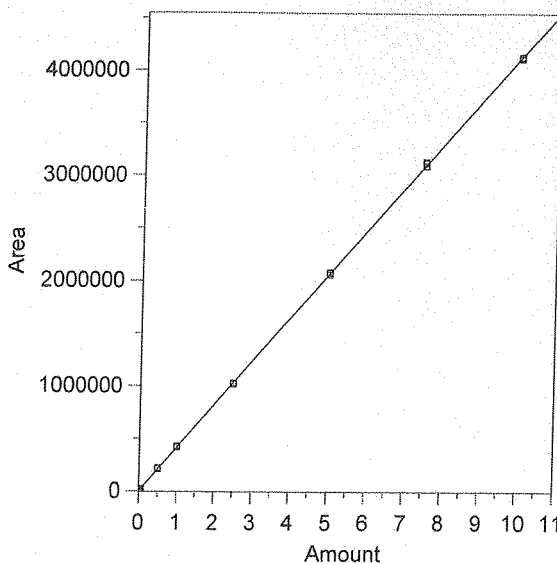
4 Acetone



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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	1019650	407860	-2.054	C:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	2070625	414125	-0.550	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2103557	420711.4	1.032	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2080934	416186.8	-0.055	C:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	4164627	416462.7	0.011	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	4152960	415296	-0.269	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	4141528	414152.8	-0.543	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

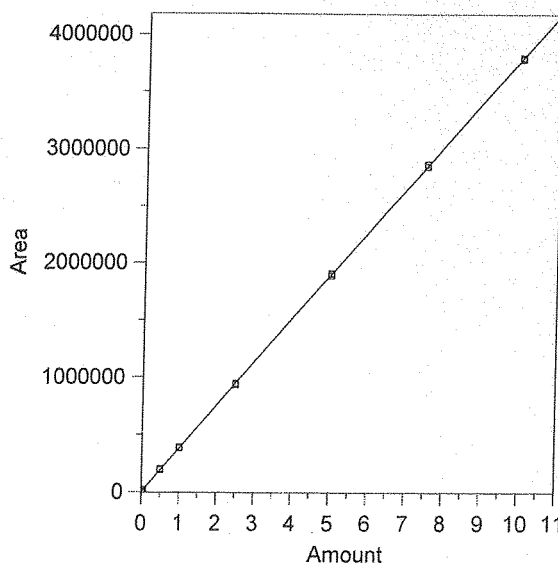
5 Propionaldehyde



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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011.BND	6/13/2013 9:25:13 AM
11	0.5	211193.6	422387.2	2.151	C:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	2060419	412083.8	-0.340	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2076059	415211.8	0.416	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2079987	415997.4	0.606	C:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	4134994	413499.4	0.002	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	4125538	412553.8	-0.227	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	4115842	411584.2	-0.461	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

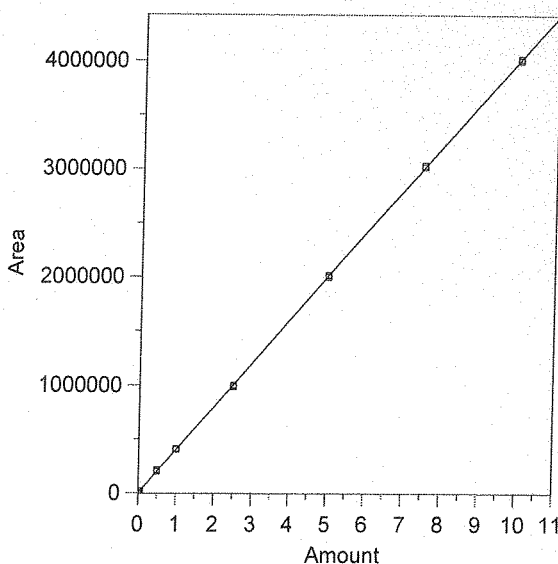
6 Crotonaldehyde



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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011.BND	6/13/2013 9:25:13 AM
11	0.5	192705	385410	1.381	C:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1892096	378419.2	-0.458	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	1909513	381902.6	0.459	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	1905140	381028	0.229	C:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 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:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	3796762	379676.2	-0.127	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	3802364	380236.4	0.020	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	3788300	378830	-0.350	C:\Chromep perfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

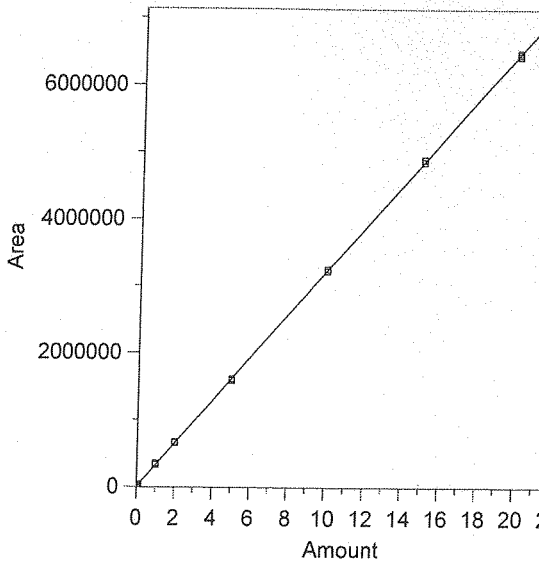
7 Methacrolein



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

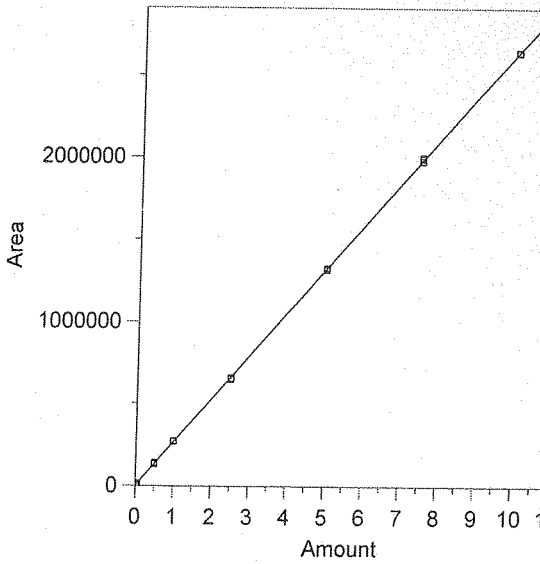
8 MEK & Butyraldehyde



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

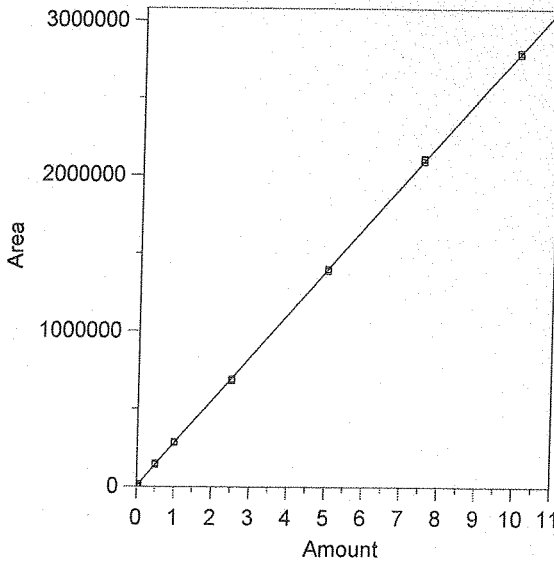
9 Benzaldehyde



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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	131281	262562	-0.745	C:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014	6/13/2013 7:25:25 AM
14	1	266032	266032	0.567	C:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1315721	263144.2	-0.525	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	1324105	264821	0.109	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	1325810	265162	0.238	C:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	7.5	2001675	266890	0.891	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	7.5	1993485	265798	0.478	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	2645002	264500.2	-0.012	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	2641466	264146.6	-0.146	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	2641496	264149.6	-0.145	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

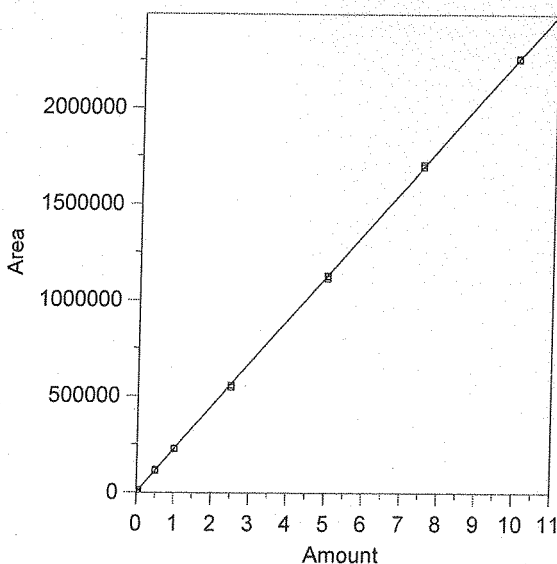
10 Valeraldehyde



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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	140804	281608	0.870	C:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1386088	277217.6	-0.702	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	1398275	279655	0.171	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	1395245	279049	-0.046	C:\Chromperfect 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:\Chromperfect 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:\Chromperfect 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:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	2799263	279926.3	0.268	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	2783838	278383.8	-0.285	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	2783513	278351.3	-0.296	C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

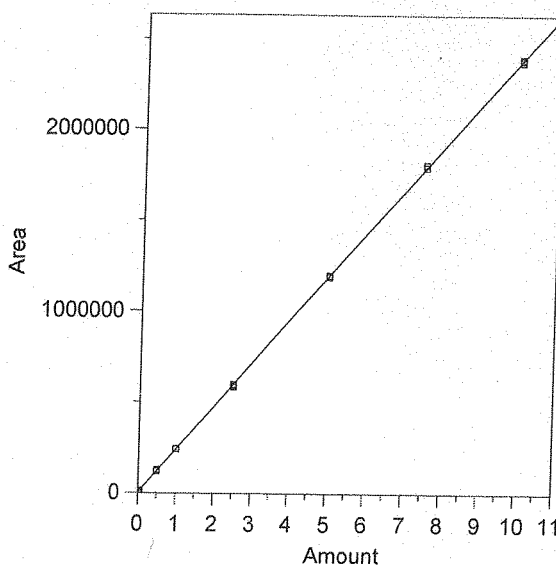
11 m-Tolualdehyde



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	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	112742	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.BND	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

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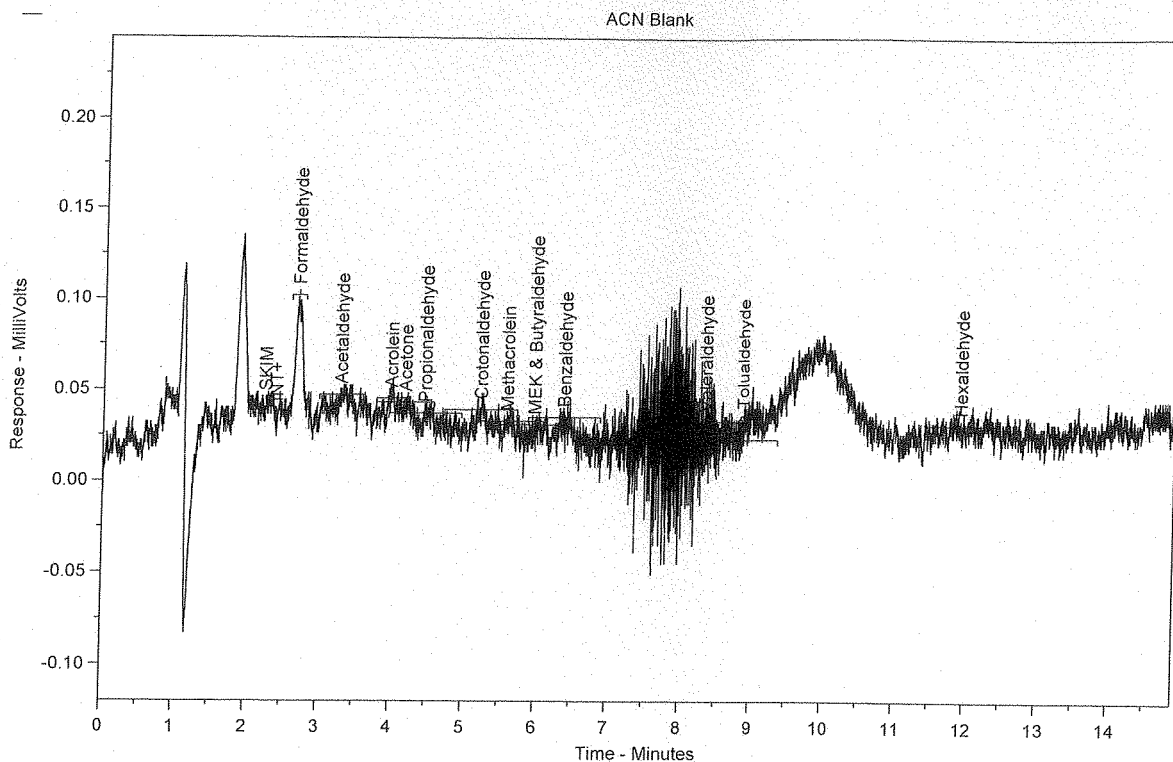
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3	061113.0003.raw	061113 TO-11A.MET	STD 1-2 (.005ug/ml [PS061113-01]x2000]	2	1
4	061113.0004.raw	061113 TO-11A.MET	STD 1-3 (.005ug/ml [PS061113-01]x2000]	2	1
5	061113.0005.raw	061113 TO-11A.MET	STD 2-1 (.025ug/ml [PS061113-01]x400]	3	1
6	061113.0006.raw	061113 TO-11A.MET	STD 2-2 (.025ug/ml [PS061113-01]x400]	3	1
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12	061113.0012.raw	061113 TO-11A.MET	STD 4-2 (.5ug/ml [PS061113-01]x20]	5	1
13	061113.0013.raw	061113 TO-11A.MET	STD 4-3 (.5ug/ml [PS061113-01]x20]	5	1
14	061113.0014.raw	061113 TO-11A.MET	STD 5-1 (1.0ug/ml [PS061113-01]x10]	6	1
15	061113.0015.raw	061113 TO-11A.MET	STD 5-2 (1.0ug/ml [PS061113-01]x10]	6	1
16	061113.0016.raw	061113 TO-11A.MET	STD 5-3 (1.0ug/ml [PS061113-01]x10]	6	1
17	061113.0017.raw	061113 TO-11A.MET	STD 6-1 (2.5ug/ml [PS061113-01]x4]	7	1
18	061113.0018.raw	061113 TO-11A.MET	STD 6-2 (2.5ug/ml [PS061113-01]x4]	7	1
19	061113.0019.raw	061113 TO-11A.MET	STD 6-3 (2.5ug/ml [PS061113-01]x4]	7	1
20	061113.0020.raw	061113 TO-11A.MET	STD 7-1 (5.0ug/ml [PS061113-01]x2]	8	1
21	061113.0021.raw	061113 TO-11A.MET	STD 7-2 (5.0ug/ml [PS061113-01]x2]	8	1
22	061113.0022.raw	061113 TO-11A.MET	STD 7-3 (5.0ug/ml [PS061113-01]x2]	8	1
23	061113.0023.raw	061113 TO-11A.MET	STD 8-1 (7.5ug/ml [PS061113-01]x1.3]	9	1
24	061113.0024.raw	061113 TO-11A.MET	STD 8-2 (7.5ug/ml [PS061113-01]x1.3]	9	1
25	061113.0025.raw	061113 TO-11A.MET	STD 8-3 (7.5ug/ml [PS061113-01]x1.3]	9	1
26	061113.0026.raw	061113 TO-11A.MET	STD 9-1 (10.0ug/ml [PS061113-01]x1]	10	1
27	061113.0027.raw	061113 TO-11A.MET	STD 9-2 (10.0ug/ml [PS061113-01]x1]	10	1
28	061113.0028.raw	061113 TO-11A.MET	STD 9-3 (10.0ug/ml [PS061113-01]x1]	10	1
29	061113.0029.raw	061113 TO-11A.MET	ACN Blank	11	1
30	061113.0030.raw	061113 TO-11A.MET	CCV (2.5ug/ml [PS061113-01]x4]	12	1
31	061113.0031.raw	061113 TO-11A.MET	CCV (2.5ug/ml [PS061113-01]x4]	13	1
32	061113.0032.raw	061113 TO-11A.MET	ACN Blank	14	1
33	061113.0033.raw	061113 TO-11A.MET	STD 2-1 (.025ug/ml [PS061113-01]x400]	15	1

Raw Data

Chrom Perfect Chromatogram Report



Sample Name = ACN Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0001.RAW

Date Taken (end) = 8/2/2013 1:46:40 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 = 1

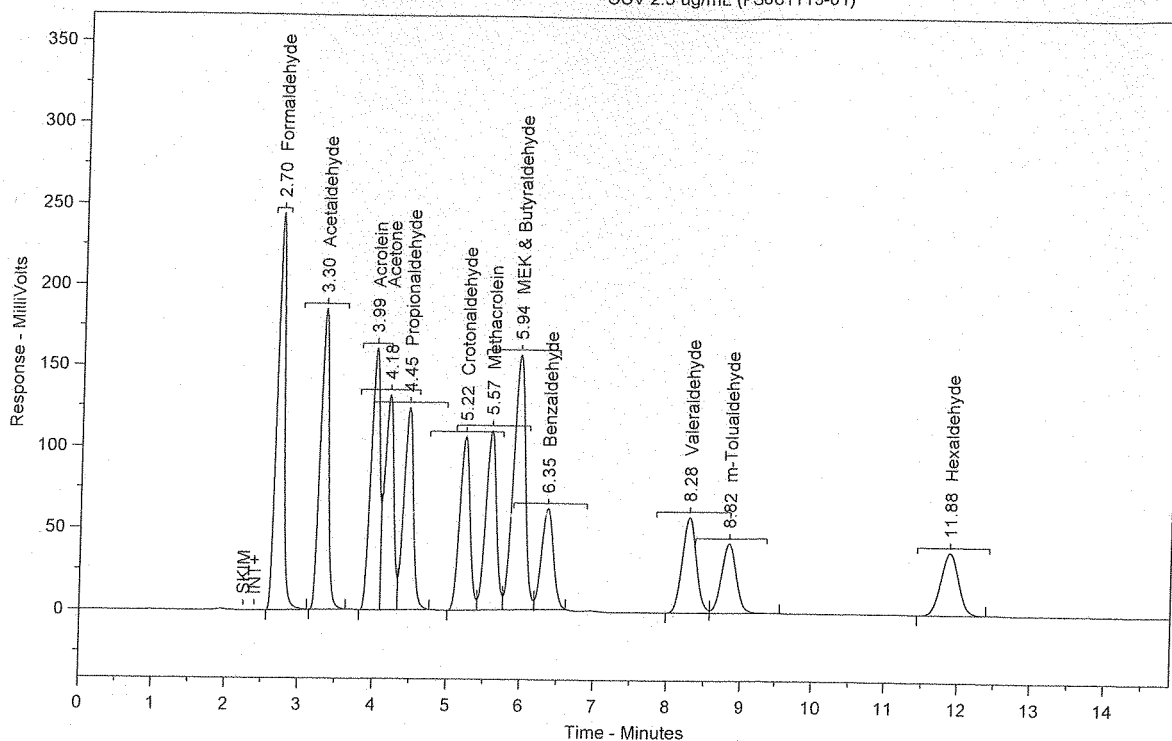
Injection Volume = 10

Dilution Factor = 1

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

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\080213-TO11A\080213a.0002.RAW

Date Taken (end) = 8/2/2013 3:17:34 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 = 2

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.70	Formaldehyde	2.7432	7.766	1765177	13.187	BB	0.11
2	3.30	Acetaldehyde	2.7294	7.727	1442247	10.774	BB	0.12
3	3.99	Acrolein	2.7419	7.763	1313732	9.814	BV	0.14
4	4.18	Acetone	2.7278	7.723	1135895	8.486	VV	0.13
5	4.45	Propionaldehyde	2.7172	7.693	1123537	8.393	VB	0.14
6	5.22	Crotonaldehyde	2.7093	7.671	1029976	7.694	BV	0.15
7	5.57	Methacrolein	2.7334	7.739	1099110	8.211	VV	0.15
8	5.94	MEK & Butyraldehyde	5.4334	15.383	1758920	13.140	VV	0.17
9	6.35	Benzaldehyde	2.5700	7.276	679853	5.079	VB	0.17
10	8.28	Valeraldehyde	2.7497	7.785	767669	5.735	BV	0.20
11	8.82	m-Tolualdehyde	2.7209	7.703	614018	4.587	VB	0.22
12	11.88	Hexaldehyde	2.7451	7.772	655874	4.900	BB	0.27

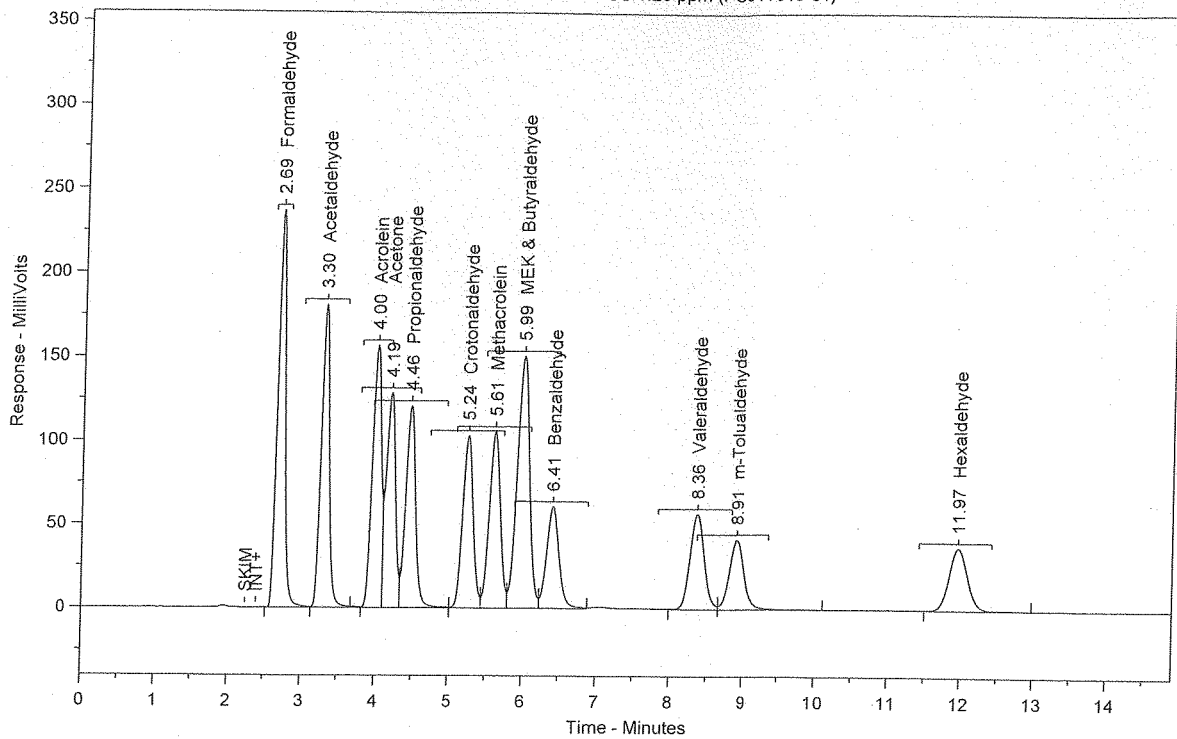
Total Area = 1.338601E+07

Total Height = 1419893

Total Amount = 35.32132

Chrom Perfect Chromatogram Report

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\080213-TO11A\080213a.0003.RAW

Date Taken (end) = 8/2/2013 3:34:13 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 = 3

Injection Volume = 10

Dilution Factor = 1

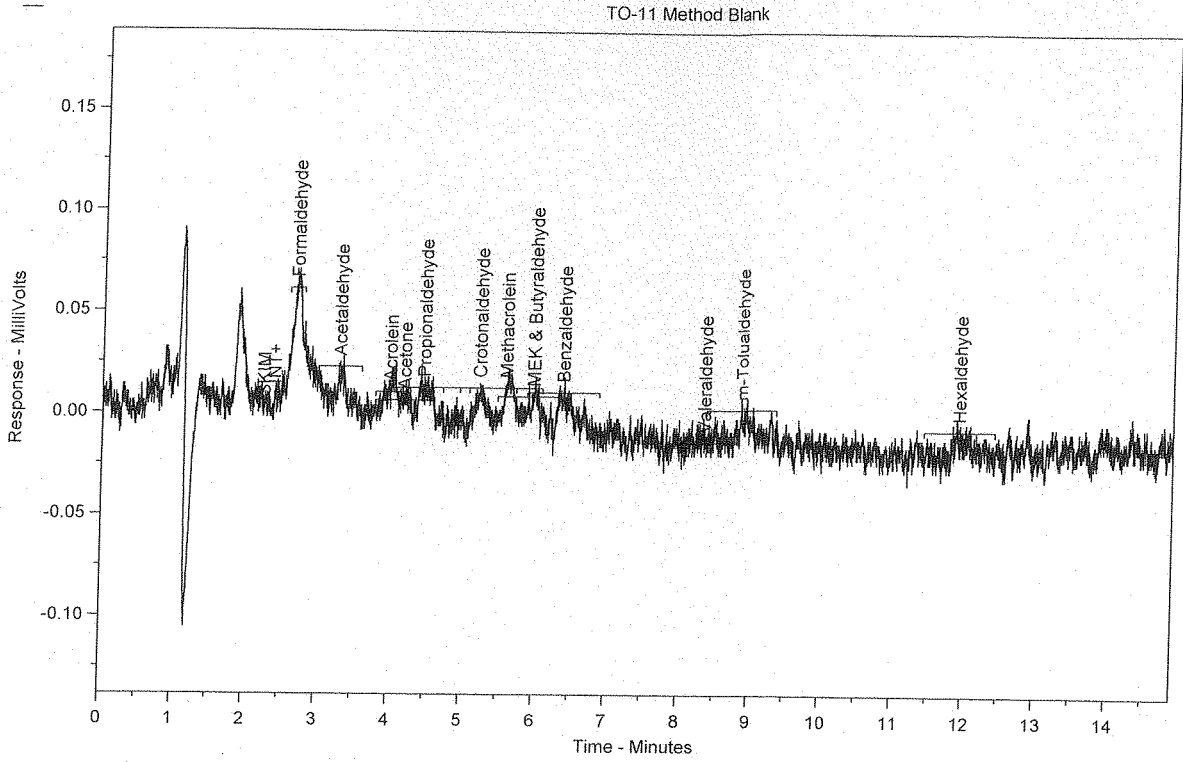
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	2.6716	7.598	1719101	12.939	SBB	0.11
2	3.30	Acetaldehyde	2.6967	7.670	1424971	10.726	TBV	0.12
3	4.00	Acrolein	2.6850	7.636	1286451	9.683	TVV	0.14
4	4.19	Acetone	2.7036	7.689	1125825	8.474	TVV	0.13
5	4.46	Propionaldehyde	2.7292	7.762	1128515	8.494	TVV	0.14
6	5.24	Crotonaldehyde	2.6887	7.647	1022125	7.693	TVV	0.15
7	5.61	Methacrolein	2.6965	7.669	1084267	8.161	TVV	0.15
8	5.99	MEK & Butyraldehyde	5.4202	15.415	1754661	13.207	TVV	0.18
9	6.41	Benzaldehyde	2.7218	7.741	720008	5.419	TVB	0.18
10	8.36	Valeraldehyde	2.7074	7.700	755862	5.689	BV	0.20
11	8.91	m-Tolualdehyde	2.7131	7.716	612263	4.608	VV	0.22
12	11.97	Hexaldehyde	2.7276	7.757	651695	4.905	VB	0.27

Total Area = 1.328574E+07

Total Height = 1380990

Total Amount = 35.16146

Chrom Perfect Chromatogram Report



Sample Name = TO-11 Method Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0004.RAW

Date Taken (end) = 8/2/2013 3:50:52 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 = 4

Injection Volume = 10

Dilution Factor = 1

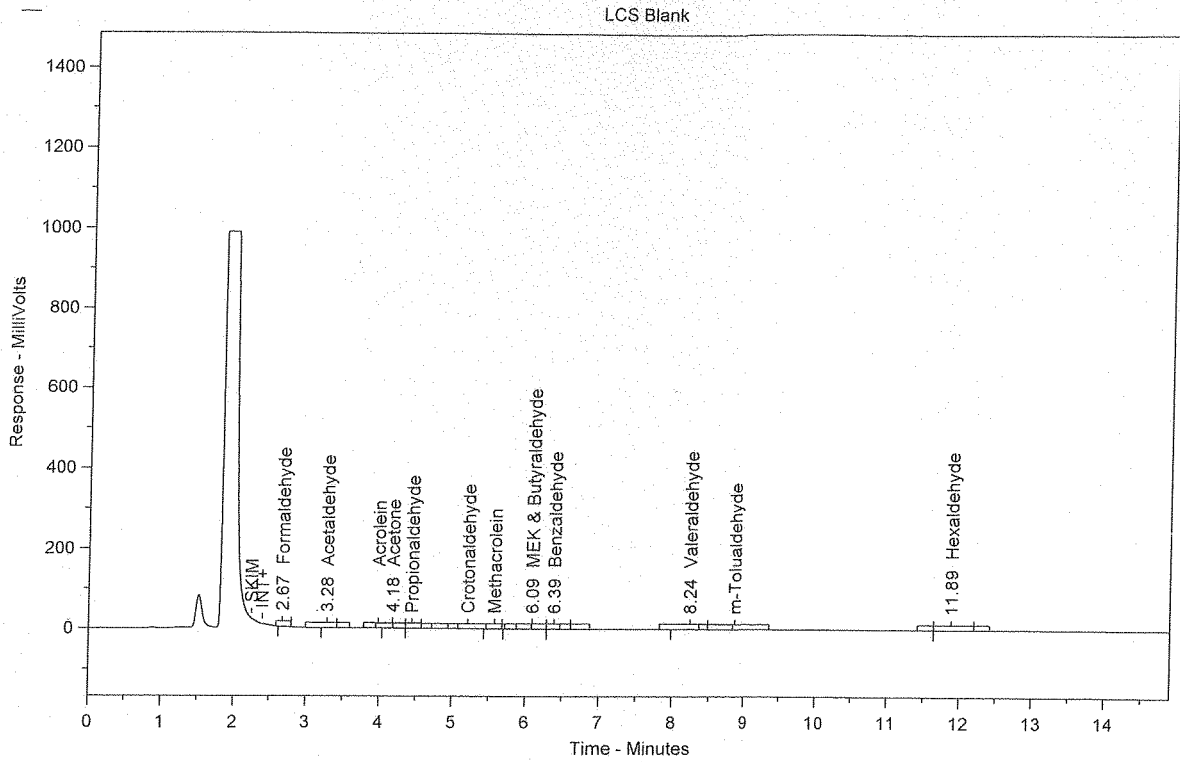
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
--------	-----------	------	--------	-------	------	--------	------	-------

Total Area = 0

Total Height = 0

Total Amount = 0

Chrom Perfect Chromatogram Report



Sample Name = LCS Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0005.RAW

Date Taken (end) = 8/2/2013 4:07:31 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 = 5

Injection Volume = 10

Dilution Factor = 1

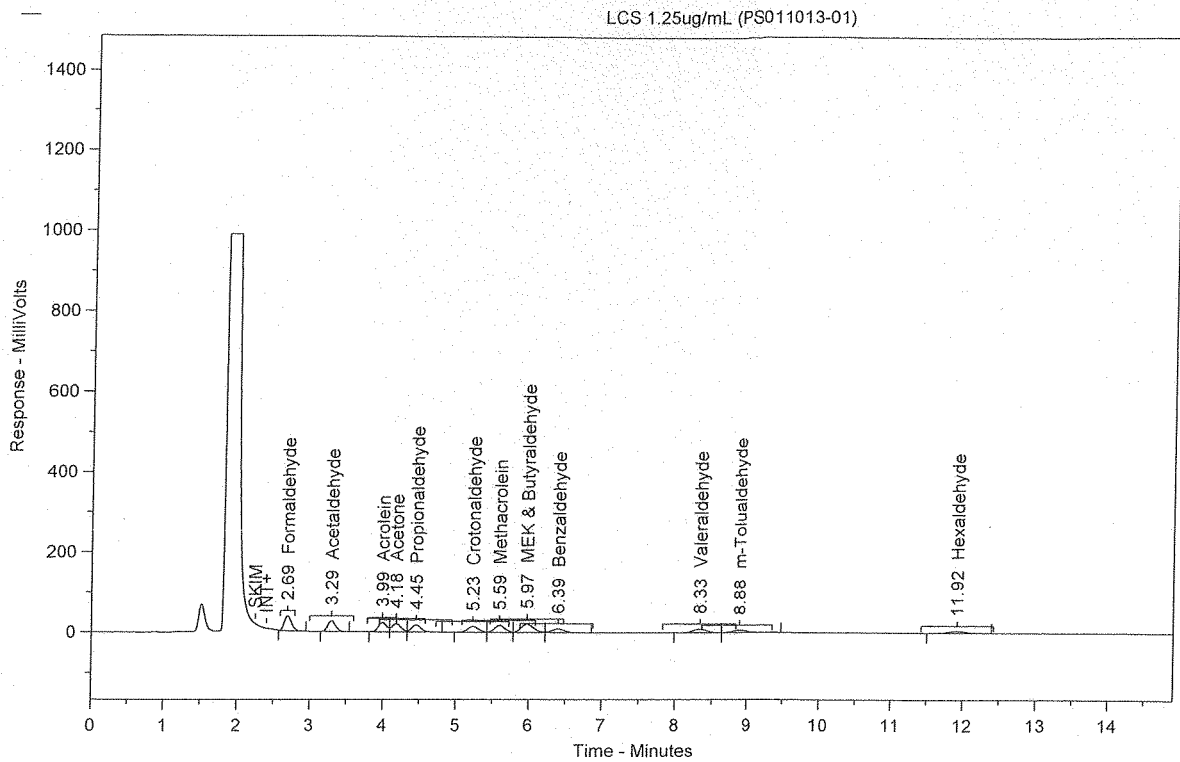
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.67	Formaldehyde	0.0071	5.514	4563	9.883	BB	0.13
2	3.28	Acetaldehyde	0.0088	6.850	4654	10.082	BB	0.15
3	4.18	Acetone	0.0312	24.248	12983	28.122	BV	0.13
6	6.09	MEK & Butyraldehyde	0.0377	29.317	12203	26.432	BV	0.24
7	6.39	Benzaldehyde	0.0127	9.871	3358	7.273	VB	0.20
8	8.24	Valeraldehyde	0.0242	18.792	6746	14.611	BB	0.23
10	11.89	Hexaldehyde	0.0070	5.407	1661	3.598	VB	0.29

Total Area = 46167.99

Total Height = 4486.364

Total Amount = 0.1285817

Chrom Perfect Chromatogram Report



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

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0006.RAW

Date Taken (end) = 8/2/2013 4:24:10 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 = 6

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	0.3952	7.800	254330	13.241	BB	0.11
2	3.29	Acetaldehyde	0.3780	7.459	199729	10.399	BB	0.12
3	3.99	Acrolein	0.3866	7.630	185254	9.645	BV	0.14
4	4.18	Acetone	0.4225	8.337	175923	9.159	VV	0.13
5	4.45	Propionaldehyde	0.3846	7.590	159023	8.279	VB	0.14
6	5.23	Crotonaldehyde	0.3736	7.373	142025	7.394	BV	0.15
7	5.59	Methacrolein	0.4226	8.339	169914	8.846	VV	0.15
8	5.97	MEK & Butyraldehyde	0.7415	14.632	240027	12.497	VV	0.18
9	6.39	Benzaldehyde	0.3820	7.539	101064	5.262	VB	0.18
10	8.33	Valeraldehyde	0.4076	8.043	113783	5.924	BV	0.21
11	8.88	m-Tolualdehyde	0.3847	7.591	86808	4.520	VB	0.22
12	11.92	Hexaldehyde	0.3885	7.667	92831	4.833	BB	0.27

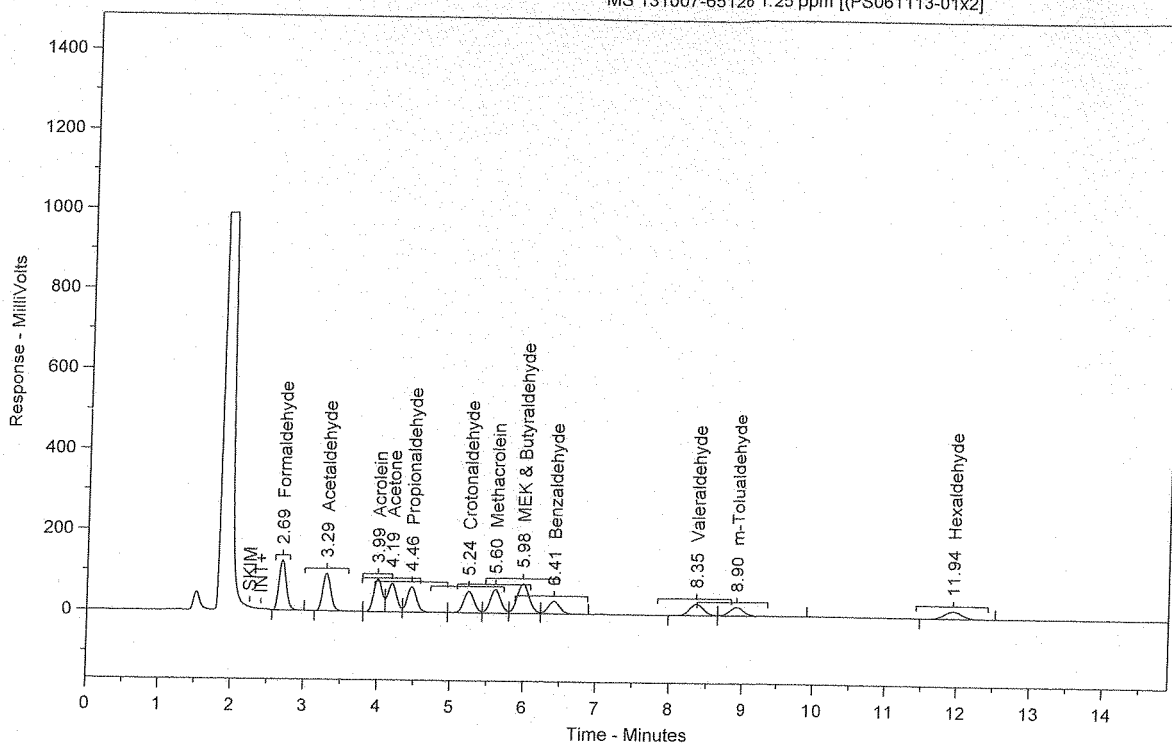
Total Area = 1920712

Total Height = 203212.5

Total Amount = 5.067354

Chrom Perfect Chromatogram Report

MS 131007-65126 1.25 ppm [(PS061113-01x2)]



Sample Name = MS 131007-65126 1.25 ppm [(PS061113-01x2)]

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0007.RAW

Date Taken (end) = 8/2/2013 4:40:49 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 = 7

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	1.3394	7.566	861860	12.863	BB	0.11
2	3.29	Acetaldehyde	1.3312	7.520	703412	10.498	BB	0.12
3	3.99	Acrolein	1.3638	7.704	653421	9.752	BV	0.14
4	4.19	Acetone	1.4412	8.141	600149	8.957	VV	0.13
5	4.46	Propionaldehyde	1.3561	7.660	560722	8.369	VV	0.14
6	5.24	Crotonaldehyde	1.3533	7.645	514481	7.678	VV	0.15
7	5.60	Methacrolein	1.4646	8.273	588929	8.790	VV	0.15
8	5.98	MEK & Butyraldehyde	2.6170	14.783	847204	12.644	VV	0.18
9	6.41	Benzaldehyde	1.3532	7.644	357959	5.342	VB	0.18
10	8.35	Valeraldehyde	1.3609	7.687	379934	5.670	BV	0.21
11	8.90	m-Tolualdehyde	1.3713	7.746	309465	4.619	VB	0.22
12	11.94	Hexaldehyde	1.3508	7.631	322749	4.817	BB	0.28

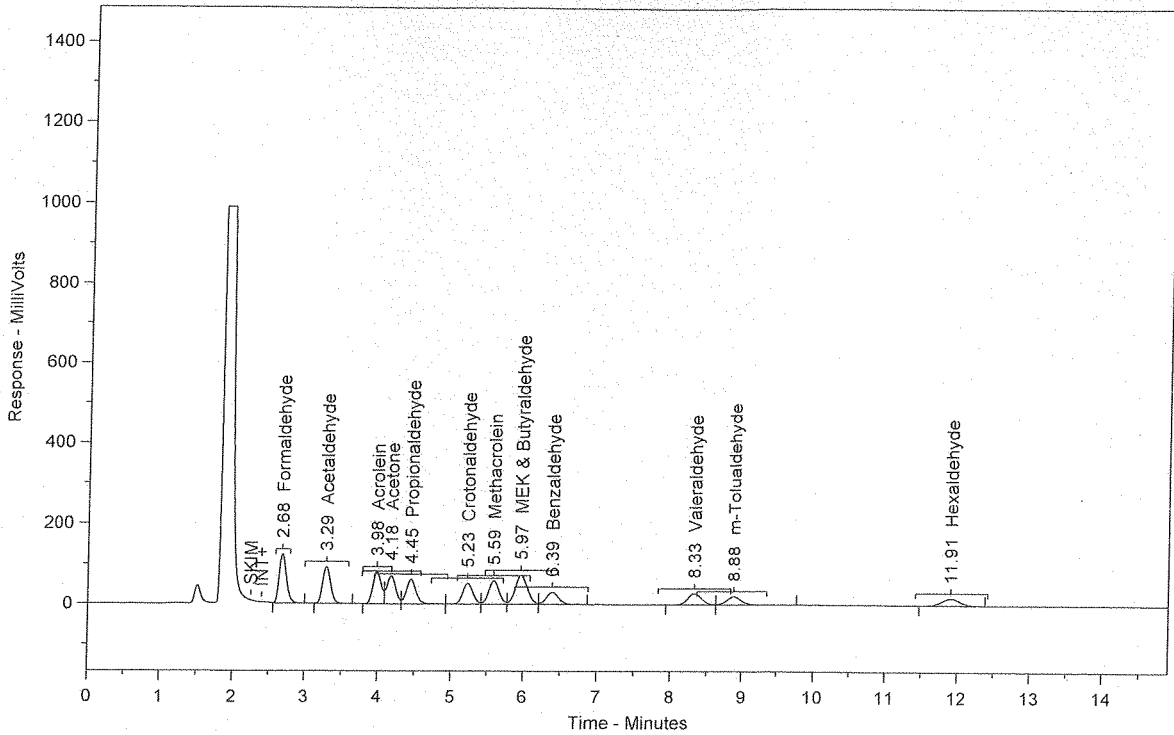
Total Area = 6700285

Total Height = 707294.8

Total Amount = 17.70285

Chrom Perfect Chromatogram Report

MSD 131007-65126 1.25 ppm [(PS061113-01x2)]



Sample Name = MSD 131007-65126 1.25 ppm [(PS061113-01x2)]

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0008.RAW

Date Taken (end) = 8/2/2013 4:57:28 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 = 8

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	1.3355	7.607	859368	12.925	BB	0.11
2	3.29	Acetaldehyde	1.3218	7.528	698437	10.504	BB	0.12
3	3.98	Acrolein	1.3541	7.712	648797	9.758	BV	0.14
4	4.18	Acetone	1.4310	8.151	595910	8.962	VV	0.13
5	4.45	Propionaldehyde	1.3434	7.651	555475	8.354	VV	0.14
6	5.23	Crotonaldehyde	1.3412	7.639	509859	7.668	VV	0.15
7	5.59	Methacrolein	1.4725	8.387	592117	8.905	VV	0.15
8	5.97	MEK & Butyraldehyde	2.5628	14.596	829629	12.477	VV	0.17
9	6.39	Benzaldehyde	1.3235	7.538	350098	5.265	VB	0.18
10	8.33	Valeraldehyde	1.3569	7.728	378807	5.697	BV	0.21
11	8.88	m-Tolualdehyde	1.3597	7.744	306846	4.615	VB	0.22
12	11.91	Hexaldehyde	1.3552	7.719	323789	4.870	BB	0.28

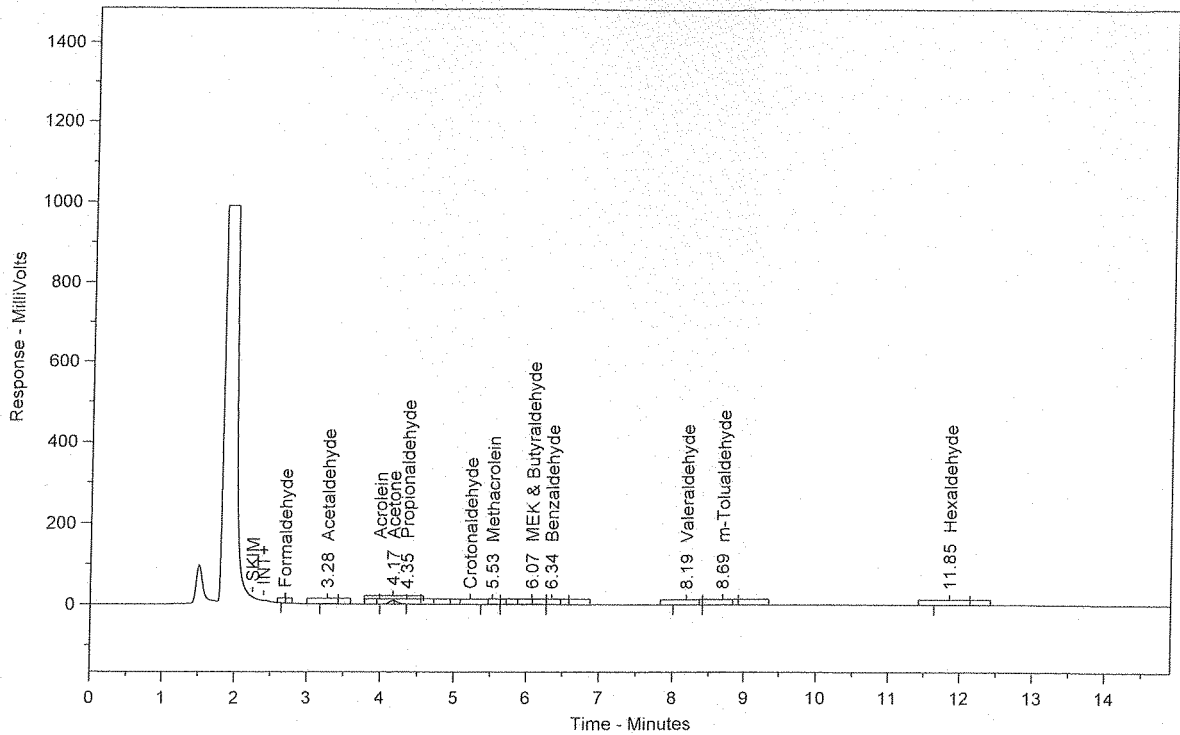
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Total Height = 704540.9

Total Amount = 17.55751

Chrom Perfect Chromatogram Report

131007-65126



Sample Name = 131007-65126

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0009.RAW

Date Taken (end) = 8/2/2013 5:14:10 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 = 9

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
2	3.28	Acetaldehyde	0.0172	5.383	9096	7.789	BB	0.13
3	4.17	Acetone	0.1613	50.445	67177	57.527	SBB	0.13
4	4.35	Propionaldehyde	0.0026	0.807	1067	0.913	TBB	0.11
5	5.53	Methacrolein	0.0025	0.792	1019	0.872	BV	0.15
6	6.07	MEK & Butyraldehyde	0.0647	20.231	20945	17.936	VV	0.25
7	6.34	Benzaldehyde	0.0133	4.152	3512	3.008	VB	0.19
8	8.19	Valeraldehyde	0.0124	3.887	3470	2.972	BV	0.25
9	8.69	m-Tolualdehyde	0.0332	10.392	7500	6.423	VB	0.23
10	11.85	Hexaldehyde	0.0125	3.912	2989	2.560	BB	0.29

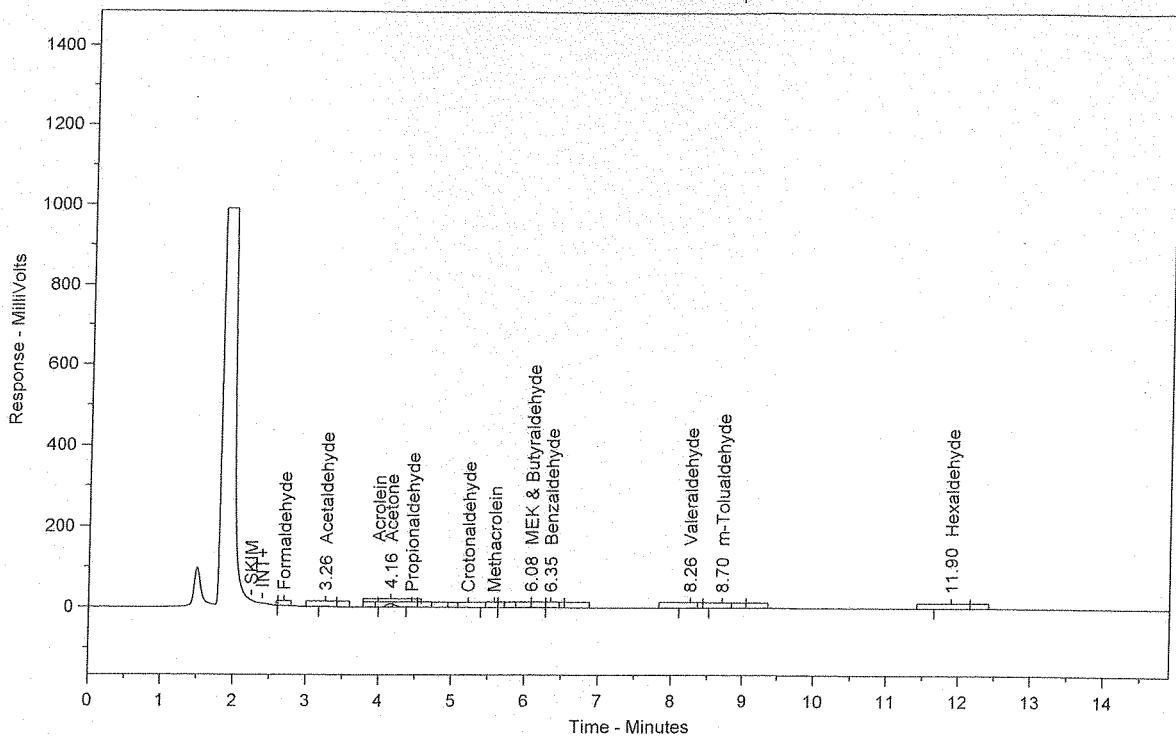
Total Area = 116774.9

Total Height = 12081.68

Total Amount = 0.319801

Chrom Perfect Chromatogram Report

131007-65126 dup



Sample Name = 131007-65126 dup

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0010.RAW

Date Taken (end) = 8/2/2013 5:30:50 PM

Method File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0010.BND

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0010.BND

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 10

Injection Volume = 10

Dilution Factor = 1

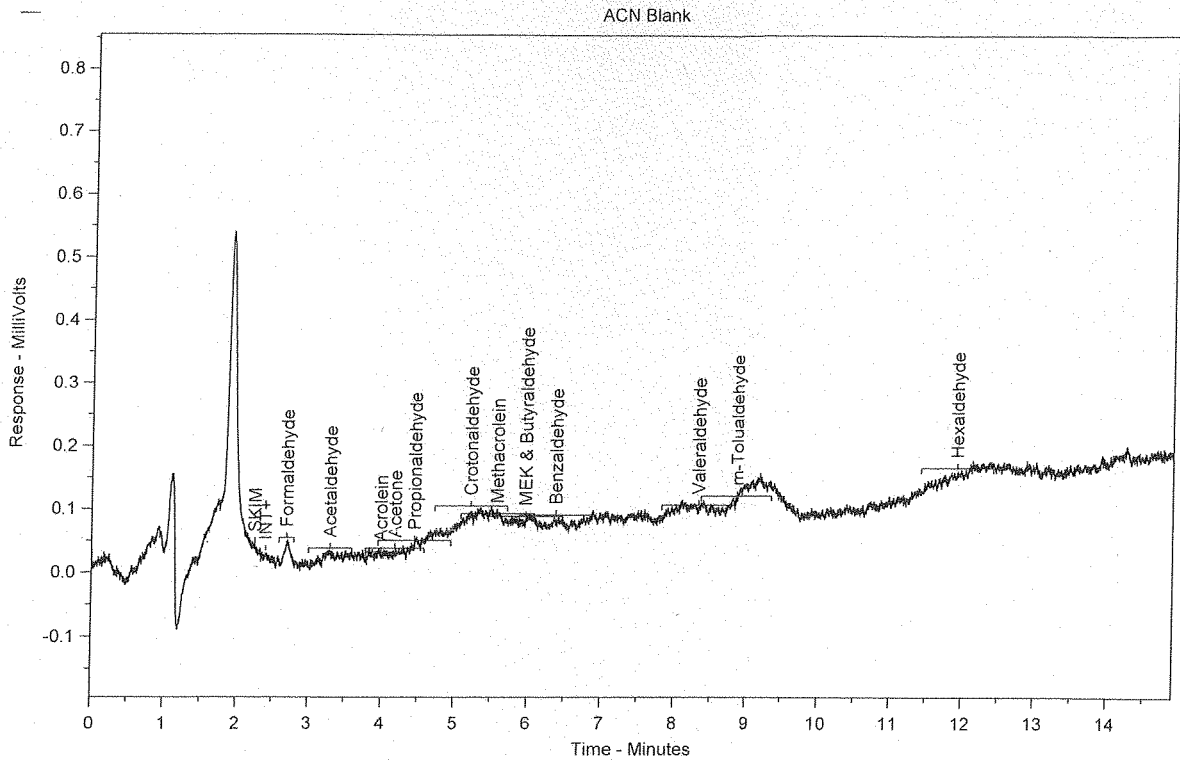
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
2	3.26	Acetaldehyde	0.0167	5.420	8829	7.822	BB	0.13
3	4.16	Acetone	0.1596	51.781	66475	58.892	SBB	0.13
6	6.08	MEK & Butyraldehyde	0.0675	21.889	21846	19.354	VV	0.30
7	6.35	Benzaldehyde	0.0102	3.314	2702	2.394	VB	0.18
8	8.26	Valeraldehyde	0.0119	3.858	3320	2.942	BB	0.22
9	8.70	m-Tolualdehyde	0.0313	10.160	7068	6.262	BB	0.30
10	11.90	Hexaldehyde	0.0110	3.578	2636	2.335	BB	0.29

Total Area = 112877.4

Total Height = 11549.52

Total Amount = 0.3082914

Chrom Perfect Chromatogram Report



Sample Name = ACN Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0012.RAW

Date Taken (end) = 8/2/2013 6:04:07 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 = 12

Injection Volume = 10

Dilution Factor = 1

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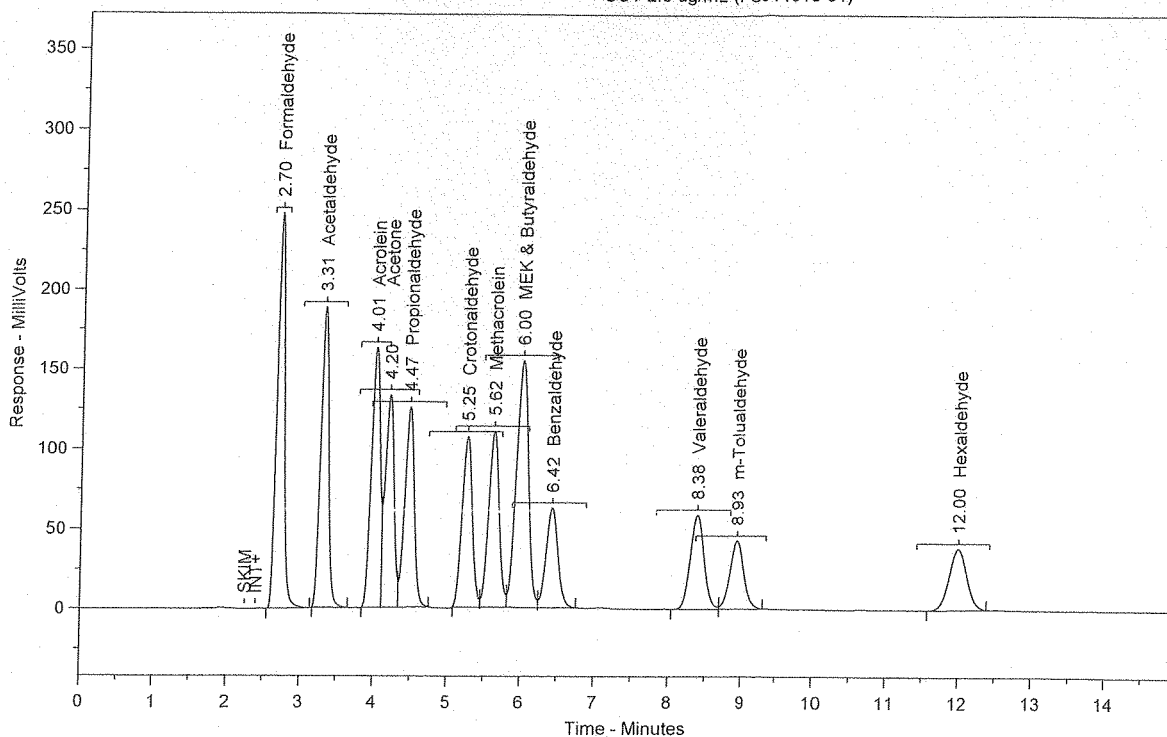
Total Area = 0

Total Height = 0

Total Amount = 0

Chrom Perfect Chromatogram Report

CCV 2.5 ug/mL (PS011613-01)



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

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0013.RAW

Date Taken (end) = 8/2/2013 6:20:46 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	2.70	Formaldehyde	2.7465	7.783	1767307	13.208	BB	0.11
2	3.31	Acetaldehyde	2.7267	7.727	1440843	10.768	BB	0.12
3	4.01	Acrolein	2.7295	7.734	1307774	9.774	BV	0.14
4	4.20	Acetone	2.7487	7.789	1144597	8.554	VV	0.13
5	4.47	Propionaldehyde	2.7125	7.686	1121597	8.382	VB	0.14
6	5.25	Crotonaldehyde	2.6920	7.628	1023394	7.648	BV	0.15
7	5.62	Methacrolein	2.7377	7.758	1100830	8.227	VV	0.15
8	6.00	MEK & Butyraldehyde	5.4379	15.409	1760398	13.156	VV	0.17
9	6.42	Benzaldehyde	2.6464	7.499	700055	5.232	VB	0.17
10	8.38	Valeraldehyde	2.7458	7.781	766581	5.729	BV	0.20
11	8.93	m-Tolualdehyde	2.6450	7.495	596898	4.461	VB	0.22
12	12.00	Hexaldehyde	2.7216	7.712	650269	4.860	BB	0.27

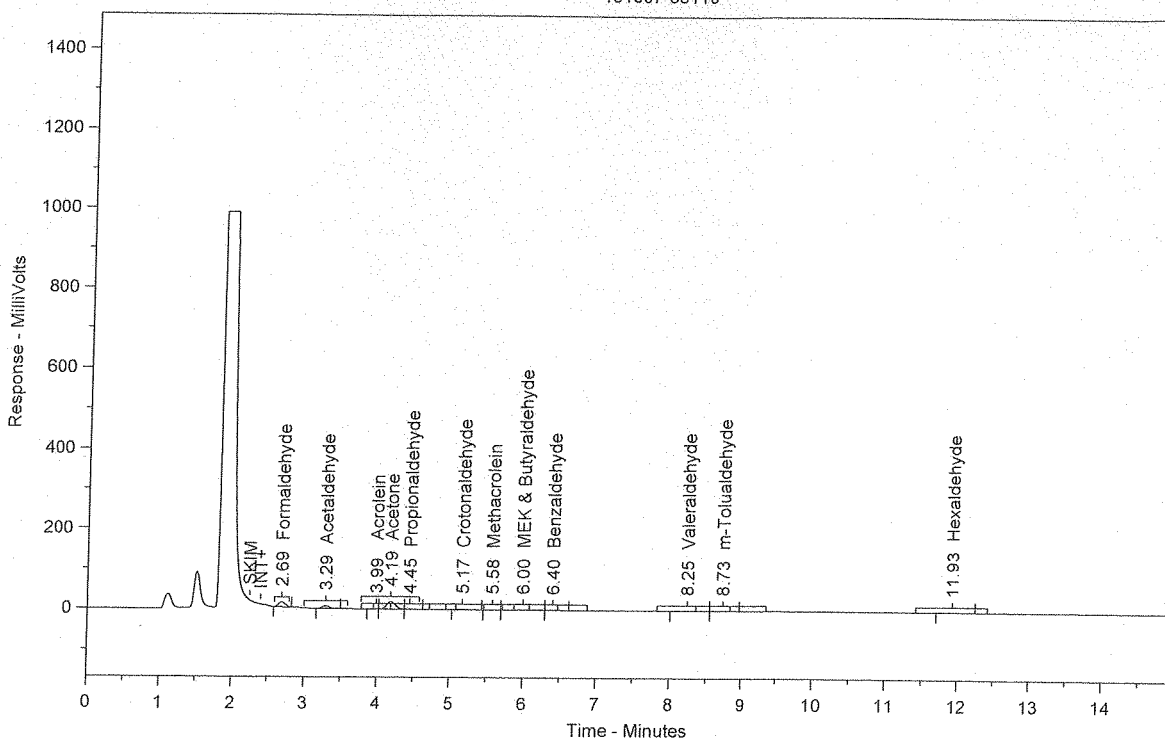
Total Area = 1.338054E+07

Total Height = 1431184

Total Amount = 35.29043

Chrom Perfect Chromatogram Report

131007-65119



Sample Name = 131007-65119

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0014.RAW

Date Taken (end) = 8/2/2013 6:37:25 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 = 14

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	0.1280	15.627	82345	23.182	BB	0.10
2	3.29	Acetaldehyde	0.0839	10.246	44337	12.482	BB	0.12
3	3.99	Acrolein	0.0039	0.476	1868	0.526	BV	0.09
4	4.19	Acetone	0.3664	44.742	152571	42.951	VV	0.13
5	4.45	Propionaldehyde	0.0187	2.283	7731	2.177	VB	0.14
6	5.17	Crotonaldehyde	0.0405	4.948	15402	4.336	BB	0.18
7	5.58	Methacrolein	0.0053	0.645	2124	0.598	BV	0.15
8	6.00	MEK & Butyraldehyde	0.0770	9.398	24914	7.014	VV	0.31
9	6.40	Benzaldehyde	0.0175	2.138	4632	1.304	VB	0.20
10	8.25	Valeraldehyde	0.0274	3.345	7647	2.153	BV	0.28
11	8.73	m-Tolualdehyde	0.0294	3.585	6626	1.865	VB	0.25
12	11.93	Hexaldehyde	0.0210	2.566	5020	1.413	BB	0.30

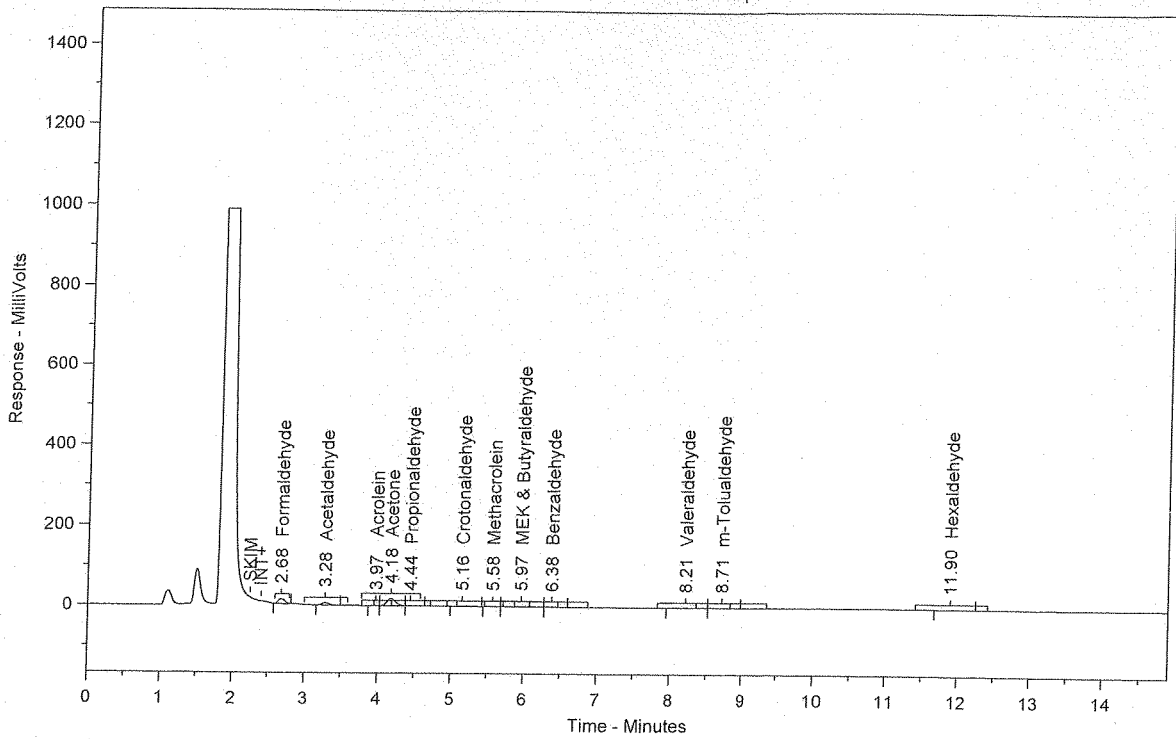
Total Area = 355218.8

Total Height = 41984.78

Total Amount = 0.8188981

Chrom Perfect Chromatogram Report

131007-65119 dup



Sample Name = 131007-65119 dup

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0015.RAW

Date Taken (end) = 8/2/2013 6:54:04 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

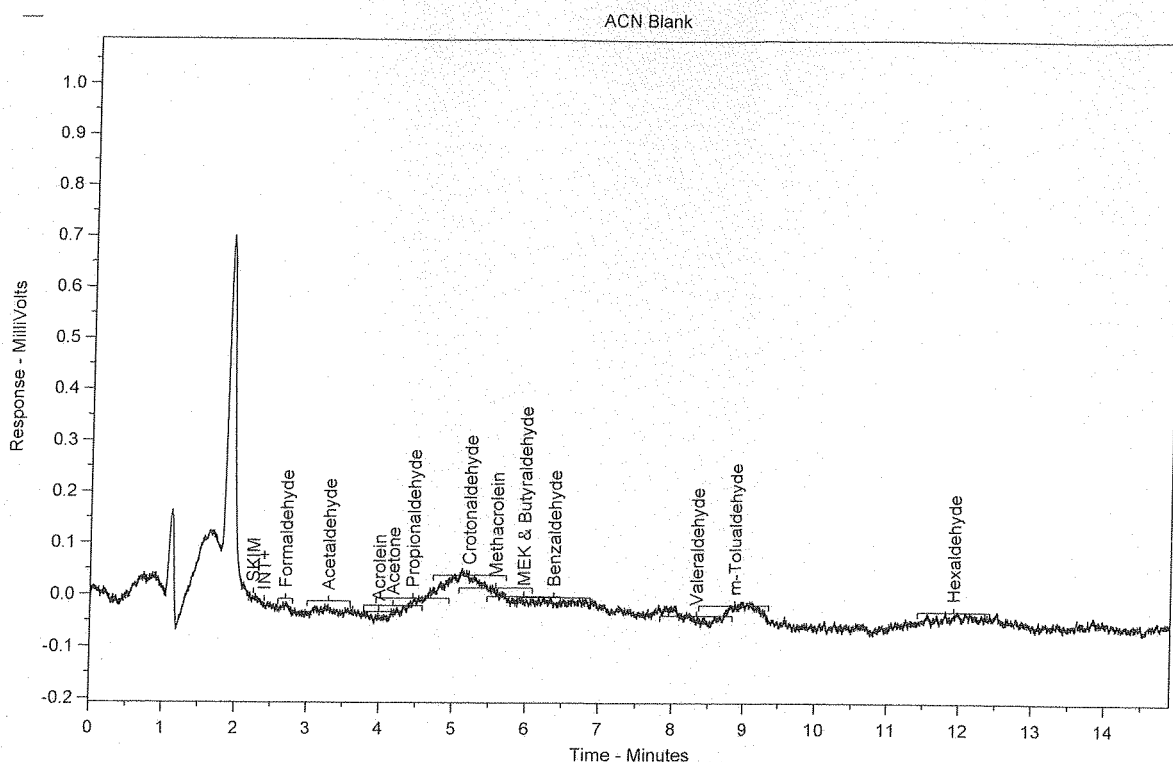
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	0.1262	15.368	81237	22.875	BB	0.10
2	3.28	Acetaldehyde	0.0839	10.210	44320	12.480	BB	0.12
3	3.97	Acrolein	0.0037	0.451	1775	0.500	BV	0.10
4	4.18	Acetone	0.3649	44.417	151939	42.784	VV	0.13
5	4.44	Propionaldehyde	0.0181	2.199	7470	2.103	VB	0.13
6	5.16	Crotonaldehyde	0.0404	4.913	15342	4.320	BB	0.19
7	5.58	Methacrolein	0.0054	0.661	2182	0.614	BV	0.18
8	5.97	MEK & Butyraldehyde	0.0828	10.076	26794	7.545	VV	0.32
9	6.38	Benzaldehyde	0.0169	2.060	4476	1.260	VB	0.19
10	8.21	Valeraldehyde	0.0267	3.248	7448	2.097	BV	0.27
11	8.71	m-Tolualdehyde	0.0308	3.744	6941	1.954	VB	0.27
12	11.90	Hexaldehyde	0.0218	2.653	5208	1.466	BB	0.31

Total Area = 355131.4

Total Height = 41816.66

Total Amount = 0.8214689

Chrom Perfect Chromatogram Report



Sample Name = ACN Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0022.RAW

Date Taken (end) = 8/2/2013 8:50:39 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
--------	-----------	------	--------	-------	------	--------	------	-------

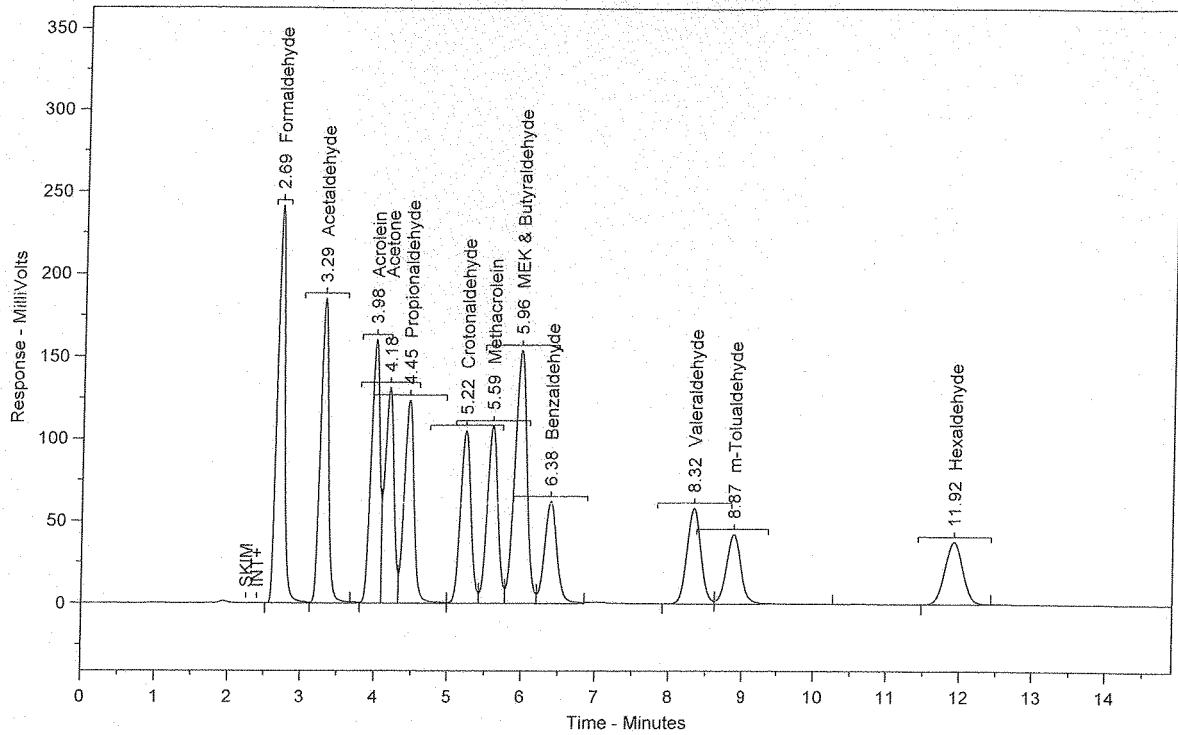
Total Area = 0

Total Height = 0

Total Amount = 0

Chrom Perfect Chromatogram Report

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\080213-TO11A\080213a.0023.RAW

Date Taken (end) = 8/2/2013 9:07:18 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 = 23

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	2.6892	7.620	1730400	12.961	SBB	0.11
2	3.29	Acetaldehyde	2.7190	7.704	1436725	10.762	TBV	0.12
3	3.98	Acrolein	2.7177	7.701	1302136	9.754	TVV	0.14
4	4.18	Acetone	2.7138	7.690	1130047	8.465	TVV	0.13
5	4.45	Propionaldehyde	2.7450	7.778	1135029	8.502	TVV	0.14
6	5.22	Crotonaldehyde	2.7054	7.666	1028468	7.704	TVV	0.15
7	5.59	Methacrolein	2.7109	7.682	1090081	8.165	TVV	0.15
8	5.96	MEK & Butyraldehyde	5.4504	15.444	1764442	13.216	TVV	0.17
9	6.38	Benzaldehyde	2.7259	7.724	721101	5.401	TVB	0.17
10	8.32	Valeraldehyde	2.7129	7.687	757395	5.673	BV	0.20
11	8.87	m-Tolualdehyde	2.7023	7.657	609823	4.568	VB	0.22
12	11.92	Hexaldehyde	2.6986	7.647	644772	4.830	BB	0.27

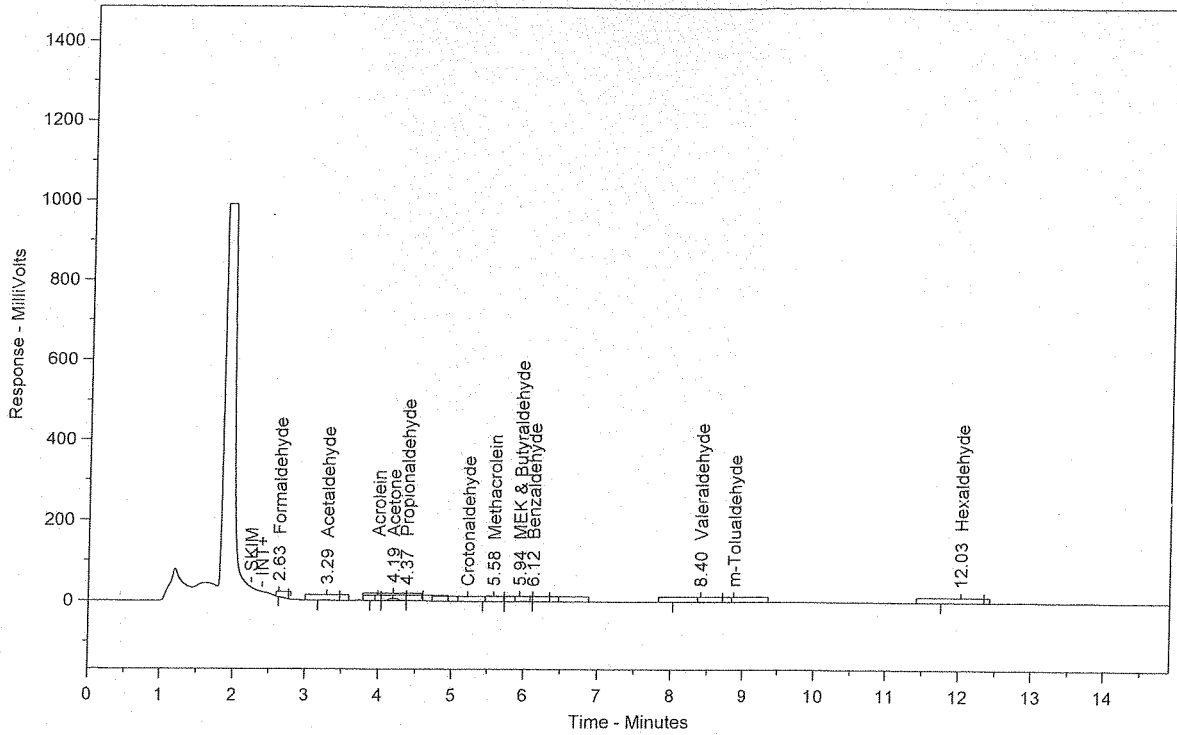
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Total Height = 1410996

Total Amount = 35.29108

Chrom Perfect Chromatogram Report

131009-65128



Sample Name = 131009-65128

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0024.RAW

Date Taken (end) = 8/2/2013 9:23:57 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

Vial Number = 24

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.63	Formaldehyde	0.0061	2.878	3899	4.608	BB N	0.09
2	3.29	Acetaldehyde	0.0174	8.253	9180	10.851	BB	0.12
4	4.19	Acetone	0.1215	57.722	50596	59.805	VV	0.13
5	4.37	Propionaldehyde	0.0130	6.163	5364	6.341	VB	0.16
6	5.58	Methacrolein	0.0043	2.056	1740	2.057	BV	0.17
7	5.94	MEK & Butyraldehyde	0.0208	9.869	6725	7.949	VV	0.16
8	6.12	Benzaldehyde	0.0061	2.894	1611	1.905	VB	0.14
9	8.40	Valeraldehyde	0.0093	4.409	2591	3.062	BB	0.40
10	12.03	Hexaldehyde	0.0121	5.757	2895	3.422	BB	0.32

Total Area = 84600.91

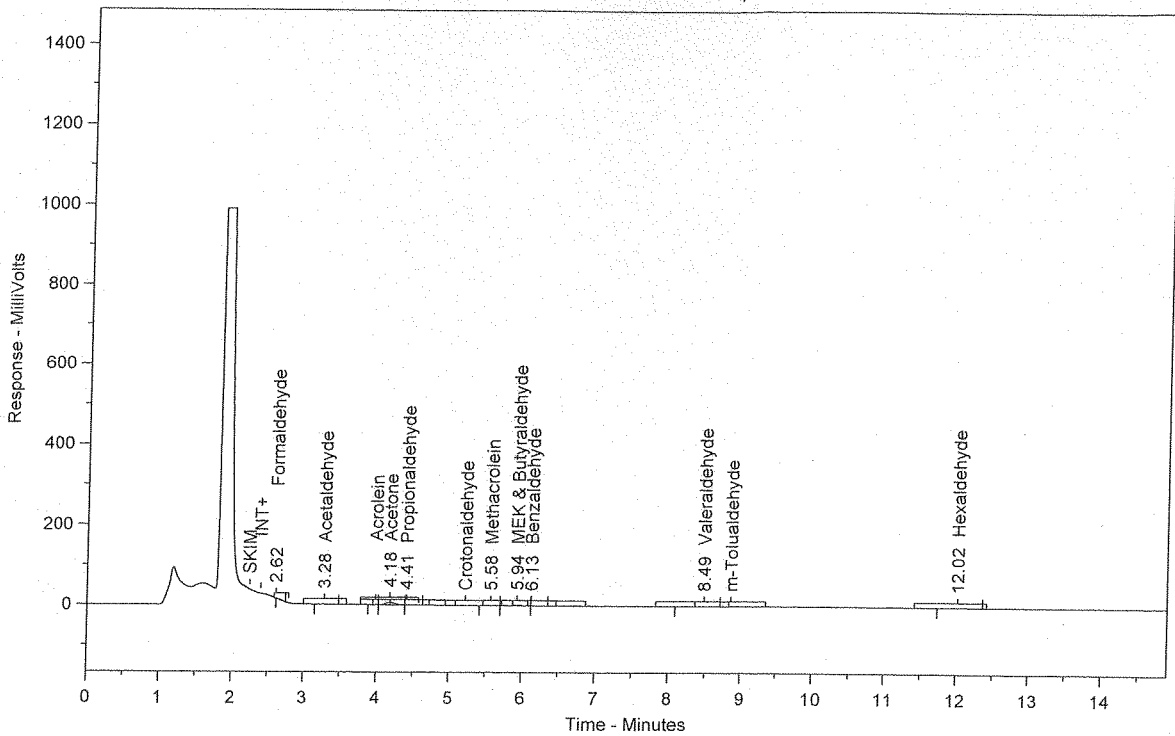
Total Height = 8803.976

Total Amount = 0.2104975

08/05/13

Chrom Perfect Chromatogram Report

131009-65128 dup



Sample Name = 131009-65128 dup

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0025.RAW

Date Taken (end) = 8/2/2013 9:40:35 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 = 25

Injection Volume = 10

Dilution Factor = 1

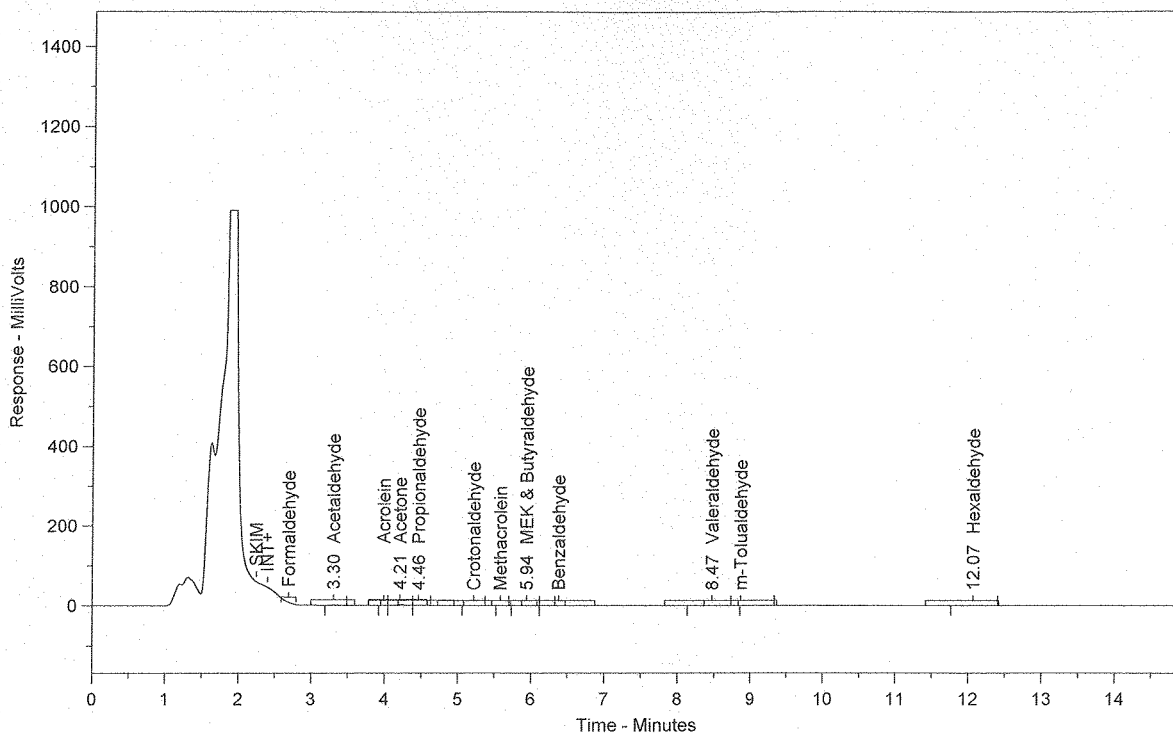
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.62	Formaldehyde	0.0070	3.158	4508	5.045	BB N	0.08
2	3.28	Acetaldehyde	0.0180	8.111	9508	10.640	BB	0.12
4	4.18	Acetone	0.1265	57.013	52667	58.940	VV	0.13
5	4.41	Propionaldehyde	0.0153	6.894	6324	7.077	VB	0.16
6	5.58	Methacrolein	0.0038	1.735	1548	1.732	BV	0.16
7	5.94	MEK & Butyraldehyde	0.0239	10.770	7734	8.655	VV	0.18
8	6.13	Benzaldehyde	0.0063	2.848	1672	1.871	VB	0.14
9	8.49	Valeraldehyde	0.0094	4.230	2620	2.932	BB	0.30
10	12.02	Hexaldehyde	0.0116	5.240	2777	3.108	BB	0.29

Total Area = 89358.36

Total Height = 9012.519

Total Amount = 0.2218399

131009-65129



Sample Name = 131009-65129

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0026.RAW

Date Taken (end) = 8/2/2013 9:57:13 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 = 26

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	3.30	Acetaldehyde	0.0149	16.442	7850	22.792	BB	0.12
3	4.21	Acetone	0.0366	40.465	15226	44.205	VV	0.13
4	4.46	Propionaldehyde	0.0059	6.508	2432	7.059	VB	0.18
7	5.94	MEK & Butyraldehyde	0.0079	8.747	2559	7.429	BV	0.21
9	8.47	Valeraldehyde	0.0091	10.098	2547	7.396	BB	0.31
11	12.07	Hexaldehyde	0.0160	17.740	3830	11.119	BB	0.30

Total Area = 34443.75

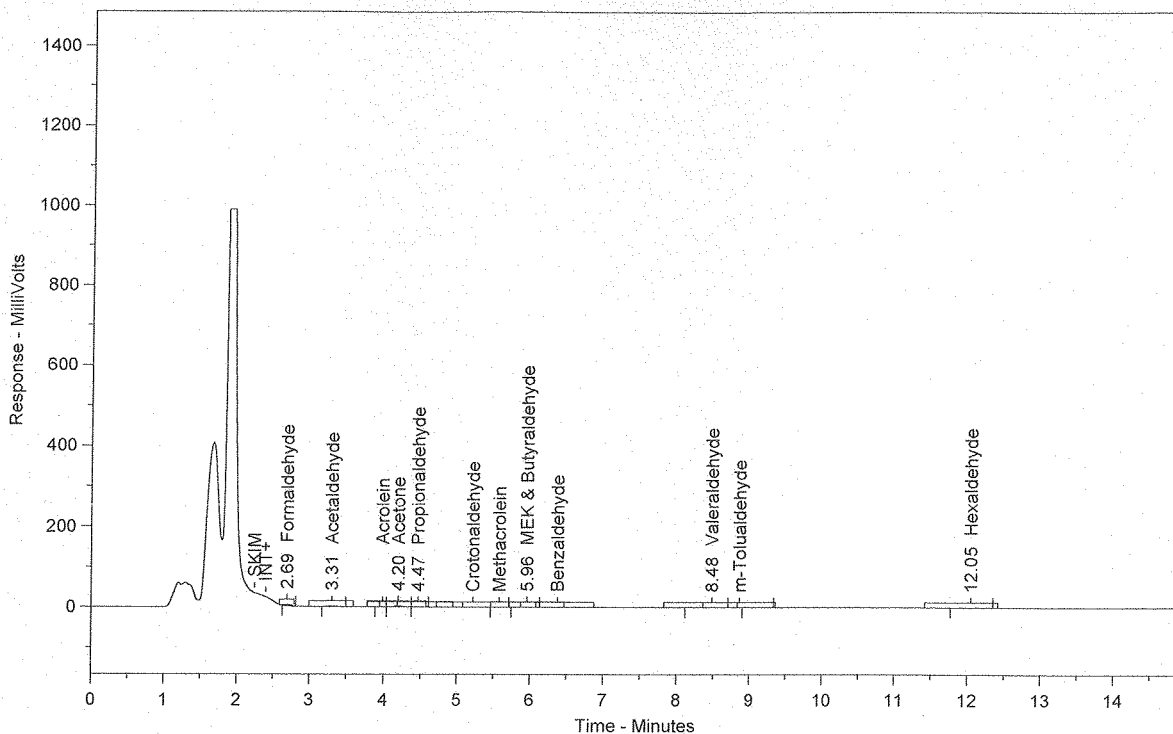
Total Height = 3638.171

Total Amount = 9.035937E-02

OC
08/05/13

Chrom Perfect Chromatogram Report

131009-65130



Sample Name = 131009-65130

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0027.RAW

Date Taken (end) = 8/2/2013 10:13:52 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 = 27

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	0.0218	17.437	14016	25.430	BB	0.12
2	3.31	Acetaldehyde	0.0213	17.085	11278	20.461	BB	0.12
4	4.20	Acetone	0.0436	34.870	18139	32.910	VV	0.12
5	4.47	Propionaldehyde	0.0053	4.246	2193	3.979	VB	0.17
7	5.96	MEK & Butyraldehyde	0.0162	12.943	5234	9.496	BB	0.17
8	8.48	Valeraldehyde	0.0063	5.016	1749	3.174	BB	0.26
10	12.05	Hexaldehyde	0.0105	8.403	2508	4.550	BB	0.31

Total Area = 55118.31

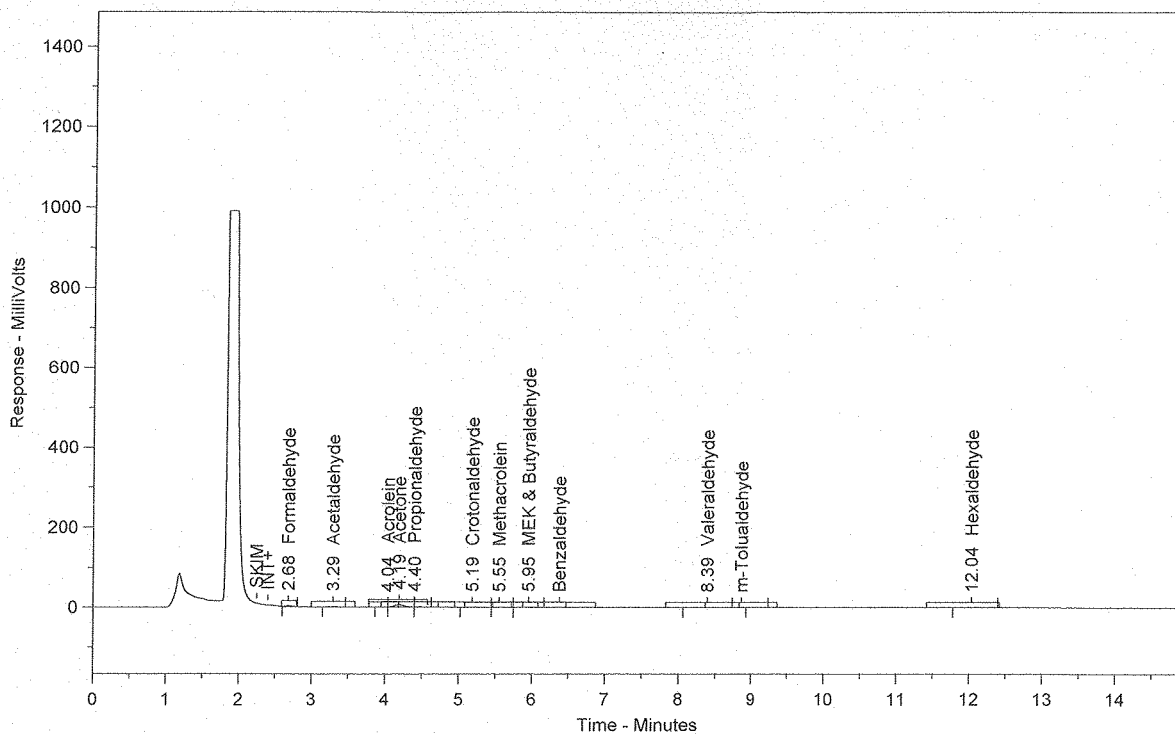
Total Height = 7243.495

Total Amount = 0.1249217

ES
C-8/05/13

Chrom Perfect Chromatogram Report

131009-65131



Sample Name = 131009-65131

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0028.RAW

Date Taken (end) = 8/2/2013 10:30:30 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 = 28

Injection Volume = 10

Dilution Factor = 1

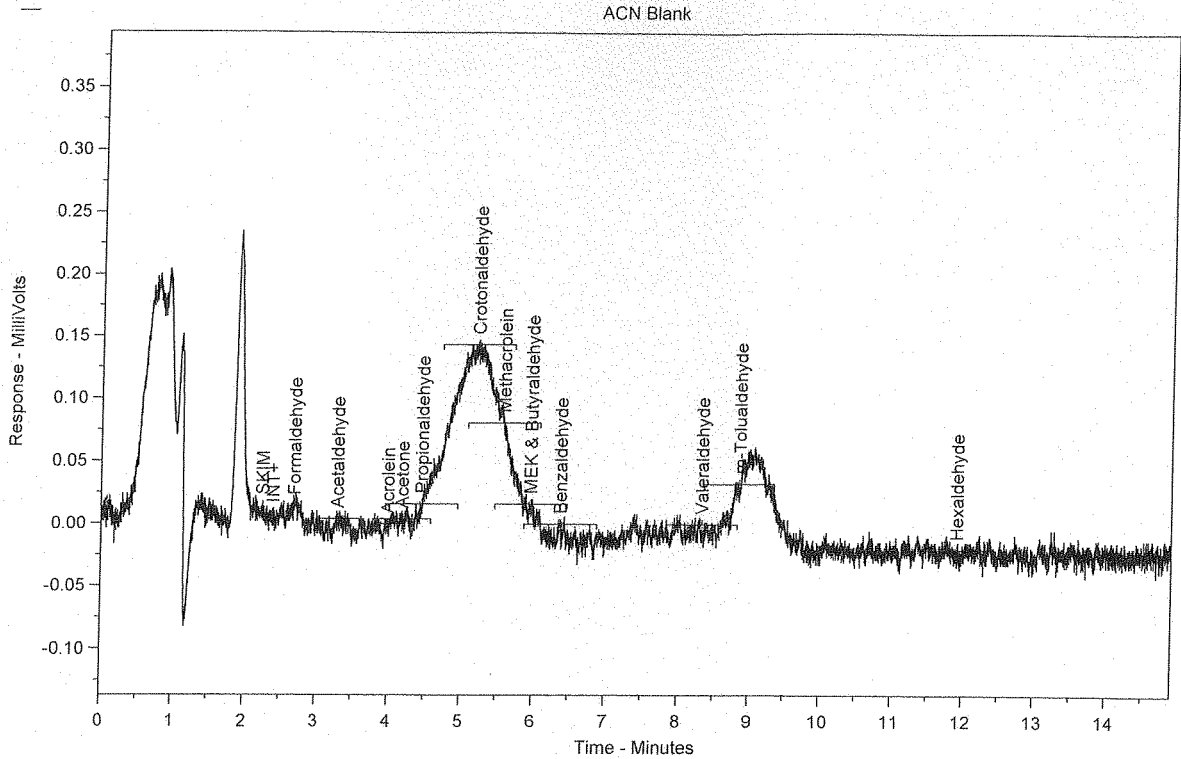
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	0.0169	6.922	10882	10.637	BB	0.12
2	3.29	Acetaldehyde	0.0198	8.116	10478	10.242	BB	0.11
3	4.04	Acrolein	0.0027	1.104	1292	1.263	BV	0.07
4	4.19	Acetone	0.1378	56.391	57372	56.079	VV	0.13
5	4.40	Propionaldehyde	0.0116	4.757	4805	4.697	VB	0.15
6	5.19	Crotonaldehyde	0.0095	3.899	3621	3.539	BV	0.21
7	5.55	Methacrolein	0.0052	2.121	2084	2.037	VV	0.21
8	5.95	MEK & Butyraldehyde	0.0190	7.766	6142	6.004	VB	0.18
9	8.39	Valeraldehyde	0.0104	4.251	2900	2.834	BB	0.40
11	12.04	Hexaldehyde	0.0114	4.674	2728	2.667	BB	0.31

Total Area = 102305.4

Total Height = 11813.96

Total Amount = 0.244323

Chrom Perfect Chromatogram Report



Sample Name = ACN Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\080213-TO11A\080213a.0029.RAW

Date Taken (end) = 8/2/2013 10:47:12 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 = 29

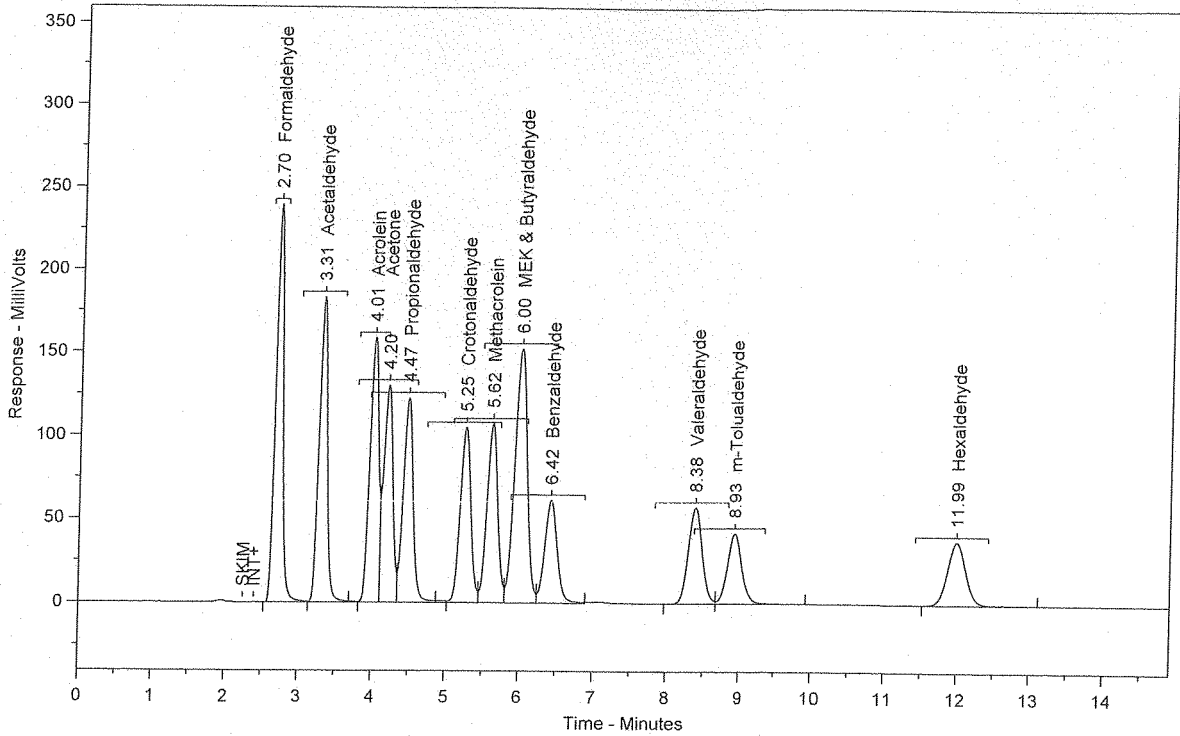
Injection Volume = 10

Dilution Factor = 1

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

Chrom Perfect Chromatogram Report

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\080213-TO11A\080213a.0030.RAW

Date Taken (end) = 8/2/2013 11:03:51 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 = 30

Injection Volume = 10

Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.70	Formaldehyde	2.7021	7.645	1738733	13.004	SBB	0.11
2	3.31	Acetaldehyde	2.7182	7.691	1436346	10.743	TBV	0.12
3	4.01	Acrolein	2.7195	7.694	1303003	9.745	TVV	0.14
4	4.20	Acetone	2.7052	7.654	1126499	8.425	TVV	0.13
5	4.47	Propionaldehyde	2.7405	7.754	1133169	8.475	TVV	0.14
6	5.25	Crotonaldehyde	2.7322	7.730	1038662	7.768	TVV	0.15
7	5.62	Methacrolein	2.7169	7.687	1092474	8.171	TVV	0.15
8	6.00	MEK & Butyraldehyde	5.4467	15.410	1763219	13.187	TVV	0.18
9	6.42	Benzaldehyde	2.7257	7.712	721027	5.393	TVB	0.18
10	8.38	Valeraldehyde	2.7028	7.647	754575	5.644	BV	0.20
11	8.93	m-Tolualdehyde	2.6876	7.604	606514	4.536	VB	0.22
12	11.99	Hexaldehyde	2.7466	7.771	656235	4.908	BB	0.27

Total Area = 1.337046E+07

Total Height = 1399213

Total Amount = 35.34402

File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\080213 (TO-11).SEQ

File Date = 8/2/2013 12:49:02 PM

Analyst=

Entry #	Raw File Name	Method File Name	Sample Name	Vial #	DF
1	080213a.0001.raw	061113 TO-11A.MET	ACN Blank	1	1
2	080213a.0002.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS061113-01)	2	1
3	080213a.0003.raw	061113 TO-11A.MET	SS 1.25 ppm (PS011613-01)	3	1
4	080213a.0004.raw	061113 TO-11A.MET	TO-11 Method Blank	4	1
5	080213a.0005.raw	061113 TO-11A.MET	LCS Blank	5	1
6	080213a.0006.raw	061113 TO-11A.MET	LCS 1.25ug/mL (PS011013-01)	6	1
7	080213a.0007.raw	061113 TO-11A.MET	MS 131007-65126 1.25 ppm [(PS061113-01x2]	7	1
8	080213a.0008.raw	061113 TO-11A.MET	MSD 131007-65126 1.25 ppm [(PS061113-01x2]	8	1
9	080213a.0009.raw	061113 TO-11A.MET	131007-65126	9	1
10	080213a.0010.raw	061113 TO-11A.MET	131007-65126 dup	10	1
11	080213a.0011.raw	061113 TO-11A.MET	131007-65118	11	1
12	080213a.0012.raw	061113 TO-11A.MET	ACN Blank	12	1
13	080213a.0013.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS011613-01)	13	1
14	080213a.0014.raw	061113 TO-11A.MET	131007-65119	14	1
15	080213a.0015.raw	061113 TO-11A.MET	131007-65119 dup	15	1
16	080213a.0016.raw	061113 TO-11A.MET	131007-65120	16	1
17	080213a.0017.raw	061113 TO-11A.MET	131007-65121	17	1
18	080213a.0018.raw	061113 TO-11A.MET	131007-65122	18	1
19	080213a.0019.raw	061113 TO-11A.MET	131007-65123	19	1
20	080213a.0020.raw	061113 TO-11A.MET	131007-65124	20	1
21	080213a.0021.raw	061113 TO-11A.MET	131007-65125	21	1
22	080213a.0022.raw	061113 TO-11A.MET	ACN Blank	22	1
23	080213a.0023.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS011613-01)	23	1
24	080213a.0024.raw	061113 TO-11A.MET	131009-65128	24	1
25	080213a.0025.raw	061113 TO-11A.MET	131009-65128 dup	25	1
26	080213a.0026.raw	061113 TO-11A.MET	131009-65129	26	1
27	080213a.0027.raw	061113 TO-11A.MET	131009-65130	27	1
28	080213a.0028.raw	061113 TO-11A.MET	131009-65131	28	1
29	080213a.0029.raw	061113 TO-11A.MET	ACN Blank	29	1
30	080213a.0030.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS011613-01)	30	1