Atmospheric Analysis & Consulting, Inc.

Client	: SWAPE
Client Project Name	: Bridgeton Sanitary Landfill Air Quality Assessment
Client Project No.	: NA
AAC Project No.	: 131165
Reporting Date	: 08/29/2013

On August 28, 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 FR Service DNPH	131165-65934
U-2 W6 DNPH	131165-65935
D-1 W4 DNPH	131165-65936
D-2 K DNPH	131165-65937

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

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

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

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

Marcus Hueppe
Laboratory Director

This report consists of 54 pages.

ACCREDITED IN ACCORDANCE WITH nelac Certificate #E87837

1534 Eastman Ave., Ste. A • Ventura, • CA 93003 www.aaclab.com • (805) 650-1642 • FAX (805) 650-1644

Atmospheric Analysis & Consulting, Inc.

SAMPLE RECEIPT / LOG-IN REPORT

AAC Project **131165** **Received By: J. Zachman**

Sample Receipt Date	Project Desc	Clients ID	Matrix	Sampling Date/Time	Sampled By	Sample #	Analysis Requested
8/28/2013 1230	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	U-1 Fr Service DNPH	Tube	8/26/2013	Client	65934	TO-11A
8/28/2013 1230	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	U-2 W6 DNPH	Tube	8/26/2013	Client	65935	TO-11A
8/28/2013 1230	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	D-1 W4 DNPH	Tube	8/26/2013	Client	65936	TO-11A
8/28/2013 1230	Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment	D-2 K DNPH	Tube	8/26/2013	Client	65937	TO-11A

TURN AROUND TIME: Normal (10days)

Lab Due Date: 9/4/2013

Total Samples: 4

REMARKS:

Samples received at 15.7*C, above the suggested preservation temperature of 4.0*C. "Standard TAT for all analyses. If possible deliver report within 2 weeks. Provide Level IV QC package for all analyses."

AAC# 131165

AIR SAMPLING PUMP CALIBRATION LOG

Bridgeton Sanitary Landfill Air Quality Assessment

COMPLETED BY: John Blank

DATE: August 26th, 2013

PAGE: 1 OF 1

CALIBRATION INSTRUMENT : ***Biose Defender510***

INITIAL PUMP SETUP (PRE-SAMPLING FLOW CHECK)

Sample ID e.g. acetaldehyde	Analyte	SKC Tube ID 226-120	Air Pump Serial No.	START		END		Average	Total	Total
				Flow Rate (L/min)	Start Time (24 Hour)	Flow Rate (L/min)	Stop Time (24 Hour)	Flow Rate L/Min	Sampled Minutes	Volume Liters
U-1 FR Service	Aldehydes	444006010705	59912	1.035	12:05:00	0.989	16:20:00	1.012	240	242.88
U-2 W6	Aldehydes	444006010708	67835	1.055	12:23:00	1.04	16:23:00	1.048	240	251.40
D-1 W4	Aldehydes	444006010719	67992	1.034	11:20:00	1.094	15:20:00	1.064	240	255.36
D-2 K	Aldehydes	444006010650	67385	1.057	11:40:00	1.105	15:40:00	1.081	240	259.44

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

SOIL / WATER / AIR PROTECTION ENTERPRISE

AAC#131165

CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE

Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011

Date: **August 26th**

Project Manager: PAUL ROSENFELD, PH.D.

Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401

Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT

Sampled By: John Blank

Sampler Signature: John Blank

REQUESTED TESTS / ANALYSES

LAB ID	SAMPLE ID NUMBER		Type	Date	Time	VOCS - EPA TO-15	Reduced Sulfur Compounds - ASTM D5504	Carbonyls - EPA TO-11A	Carboxlyic Acids - Tube GC-MS	HCL - NIOSH 7903	Ammonia - OSHA ID-188	SO2 - OSHA ID-200	HCN - NIOSH 6010	Amines - NIOSH 2010M	Fixed Gases - EPA 3C	PAHs / Dioxins EPA TO-13A / 9A	Mercury - NIOSH 6009	Odor Evaluation	Sample Tube Volume
65934	U-1 Fr Service	DNPH	Tube	August 26th	240 min			X											Tube # 444006010705 — 242.88 L
65935	U-2 W6	DNPH	Tube	August 26th	240 min			X											Tube # 444006010708 — 251.40 L
65936	D-1 W4	DNPH	Tube	August 26th	240 min			X											Tube # 444006010719 — 255.36 L
65937	D-2 K	DNPH	Tube	August 26th	240 min			X											Tube # 444006010650 — 259.44 L

Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.

QC Requirements: Provide Level IV QC Package for all Analyses.

Relinquished By: John Blank	Date: August 26th	12 Noon	Received By:	Date: 8/28/13	Time: 1230 15.7°C
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

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. : 131165
Analyst : EG/HP
Units : ppbv

Sampling Date (s) : 08/26/2013
Receiving Date : 08/28/2013
Analysis Date : 08/28/2013
Reporting Date : 08/29/2013

Client ID	AAC Sample ID	Formaldehyde	Acetaldehyde	Acrolein	Acetone	Propionaldehyde	Crotonaldehyde	Methacrolein	MEK & Butyraldehyde	Benzaldehyde	Valeraldehyde	m-Tolualdehyde	Hexaldehyde
U-1 FR Service DNPH	131165-65934	0.631	0.281	<SRL	1.46	<SRL	<SRL	<SRL	0.208	<SRL	<SRL	<SRL	<SRL
SRL		0.251	0.171	0.135	0.130	0.130	0.108	0.108	0.105	0.071	0.088	0.063	0.075
U-2 W6 DNPH	131165-65935	0.909	0.341	<SRL	1.36	<SRL	<SRL	<SRL	0.187	<SRL	<SRL	<SRL	<SRL
SRL		0.243	0.166	0.130	0.126	0.126	0.104	0.104	0.101	0.069	0.085	0.061	0.073
D-1 W4 DNPH	131165-65936	<SRL	<SRL	<SRL	1.39	<SRL	<SRL	<SRL	0.191	<SRL	<SRL	<SRL	<SRL
SRL		0.239	0.163	0.128	0.124	0.124	0.102	0.102	0.100	0.068	0.083	0.060	0.072
D-2 K DNPH	131165-65937	2.20	0.902	<SRL	1.10	0.199	0.739	0.165	0.203	<SRL	0.256	0.064	<SRL
SRL		0.235	0.160	0.126	0.122	0.122	0.101	0.101	0.098	0.067	0.082	0.059	0.071

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

Marcus Hueppe
Laboratory Director

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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. : 131165
Analyst : EG/HP
Units : ug/m^3

Sampling Date (s) : 08/26/2013
Receiving Date : 08/28/2013
Analysis Date : 08/28/2013
Reporting Date : 08/29/2013

Client ID	AAC Sample ID	Formaldehyde	Acetaldehyde	Acrolein	Acetone	Propionaldehyde	Crotonaldehyde	Methacrolein	MEK & Butyraldehyde	Benzaldehyde	Valeraldehyde	m-Tolualdehyde	Hexaldehyde
U-1 FR Service DNPH	131165-65934	0.774	0.506	<SRL	3.47	<SRL	<SRL	<SRL	0.614	<SRL	<SRL	<SRL	<SRL
SRL		0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309
U-2 W6 DNPH	131165-65935	1.12	0.615	<SRL	3.24	<SRL	<SRL	<SRL	0.553	<SRL	<SRL	<SRL	<SRL
SRL		0.298	0.298	0.298	0.298	0.298	0.298	0.298	0.298	0.298	0.298	0.298	0.298
D-1 W4 DNPH	131165-65936	<SRL	<SRL	<SRL	3.29	<SRL	<SRL	<SRL	0.563	<SRL	<SRL	<SRL	<SRL
SRL		0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294	0.294
D-2 K DNPH	131165-65937	2.71	1.62	<SRL	2.61	0.473	2.12	0.473	0.600	<SRL	0.901	0.315	<SRL
SRL		0.289	0.289	0.289	0.289	0.289	0.289	0.289	0.289	0.289	0.289	0.289	0.289

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

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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. : 131165
Analyst : EG/HP
Units : ug/sample

Sampling Date (s) : 08/26/2013
Receiving Date : 08/28/2013
Analysis Date : 08/28/2013
Reporting Date : 08/29/2013

Client ID	AAC Sample ID	Formaldehyde	Acetaldehyde	Acrolein	Acetone	Propionaldehyde	Crotonaldehyde	Methacrolein	MEK & Butyraldehyde	Benzaldehyde	Valeraldehyde	m-Tolualdehyde	Hexaldehyde
U-1 FR Service DNPH	131165-65934	0.188	0.123	<SRL	0.843	<SRL	<SRL	<SRL	0.149	<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 W6 DNPH	131165-65935	0.281	0.155	<SRL	0.814	<SRL	<SRL	<SRL	0.139	<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 W4 DNPH	131165-65936	<SRL	<SRL	<SRL	0.841	<SRL	<SRL	<SRL	0.144	<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 K DNPH	131165-65937	0.702	0.422	<SRL	0.678	0.123	0.550	0.123	0.156	<SRL	0.234	0.082	<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)

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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 : 08/28/2013
Analyst : HP/EG

Instrument ID : HPLC 01

Opening CCV

Standard Concentration (ug/mL)	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*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	2.31	2.33	2.31	2.33	2.36	2.32	2.34	4.69	2.39	2.34	2.34	2.37
Accuracy (%)*	92.4	93.2	92.4	93.2	94.4	92.8	93.6	93.8	95.6	93.6	93.6	94.8

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	2.28	2.32	2.31	2.32	2.35	2.31	2.33	4.67	2.35	2.32	2.31	2.35
Accuracy (%)*	91.2	92.8	92.4	92.8	94.0	92.4	93.2	93.4	94.0	92.8	92.4	94.0

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	2.30	2.34	2.33	2.35	2.36	2.33	2.34	4.70	2.37	2.33	2.34	2.37
Accuracy (%)*	92.0	93.6	93.2	94.0	94.4	93.2	93.6	94.0	94.8	93.2	93.6	94.8

ClosingCCV

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	2.28	2.33	2.31	2.34	2.43	2.39	2.35	4.67	2.34	2.31	2.31	2.36
Accuracy (%)*	91.2	93.2	92.4	93.6	97.2	95.6	94.0	93.4	93.6	92.4	92.4	94.4

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	2.71	2.69	2.70	2.72	2.67	2.69	5.40	2.66	2.71	2.71	2.72
Accuracy (%)*	107	108	108	108	109	107	108	108	106	108	108	109

*Must be 100 ± 10%

Marcus Hueppe
Laboratory Director

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Quality Control/Quality Assurance Report

TO-11A

Laboratory Control Spike Analysis

Analysis Date : 08/28/2013 Analyst : HP/EG Instrument ID : HPLC 01

Analytes	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
Laboratory Control Spike 1												
Sample Concentration (ug/mL)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Spike Concentration (ug/mL)	0.379	0.379	0.379	0.379	0.379	0.379	0.379	0.758	0.379	0.379	0.379	0.379
Spiked Sample Concentration (ug/mL)	0.359	0.333	0.337	0.361	0.353	0.346	0.374	0.655	0.336	0.356	0.340	0.341
Spike Recovery (%)*	94.8	88.0	89.1	95.3	93.2	91.2	98.8	86.4	88.8	94.0	89.7	90.0

*Must be 100 ± 15%

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Laboratory Director

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Quality Control/Quality Assurance Report

TO-11A

Matrix Spike Analysis

Analysis Date : 08/28/2013 Analyst : HP/EG Instrument ID : HPLC 01

Analytes	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
Sample ID	131143-65850											
Sample Concentration (ug/mL)	0.001	0.010	0.000	0.086	0.005	0.010	0.002	0.012	0.007	0.010	0.015	0.005
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)	1.15	1.17	1.19	1.29	1.20	1.19	1.22	2.35	1.17	1.19	1.20	1.18
Duplicate Spiked Sample Concentration (ug/mL)	1.15	1.16	1.18	1.28	1.20	1.18	1.22	2.35	1.17	1.19	1.20	1.18
Spike Recovery (%)*	91.9	92.8	95.2	96.3	95.6	94.4	97.5	93.5	93.0	94.4	94.8	94.0
Dulicate Spike Recovery (%)*	91.9	92.0	94.4	95.5	95.6	93.6	97.5	93.5	93.0	94.4	94.8	94.0
RPD**	0.0	0.9	0.8	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0

*Must be 100± 25%

** Must be ≤ 25%

Marcus Hueppe
Laboratory Director

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Quality Control/Quality Assurance Report

TO-11A

Duplicate Analysis

Analysis Date : 08/28/2013
Analyst : HP/EG

Instrument ID : HPLC 01

Analyte	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
Sample ID	131143-65850											
Sample Concentration (ug/mL)	<RL	<RL	ND	0.172	<RL	<RL	<RL	<RL	<RL	<RL	0.030	<RL
Duplicate Sample Concentration (ug/mL)	<RL	<RL	ND	0.171	<RL	<RL	<RL	<RL	<RL	<RL	0.030	<RL
RPD**	NA	NA	NA	0.6	NA	NA	NA	NA	NA	NA	0.3	NA
Sample ID	131143-65847											
Sample Concentration (ug/mL)	0.123	0.105	<RL	0.549	0.030	0.034	<RL	0.053	<RL	0.043	0.029	<RL
Duplicate Sample Concentration (ug/mL)	0.122	0.098	<RL	0.494	0.029	0.033	<RL	0.051	<RL	0.041	0.031	<RL
RPD**	0.6	7.1	NA	10.5	1.7	3.6	NA	3.9	NA	5.5	5.0	NA
Sample ID	131143-65855											
Sample Concentration (ug/mL)	0.132	0.131	<RL	0.570	0.031	0.038	<RL	0.039	<RL	0.043	0.031	<RL
Duplicate Sample Concentration (ug/mL)	0.129	0.129	<RL	0.560	0.031	0.035	<RL	0.041	<RL	0.041	0.032	<RL
RPD**	2.3	1.5	NA	1.7	0.3	7.1	NA	6.5	NA	3.8	3.5	NA

** Must be ≤ 20%
<RL=less than the Reporting Limit
ND = Not Detected
NA=Not Applicable

Marcus Hueppe
Laboratory Director

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Quality Control/Quality Assurance Report

TO-11A

System and Method Blank Analysis

Analysis Date : 08/28/2013
Analyst : HP/EG

Instrument ID : HPLC 01

Analyte	*Formaldehyde (ug/mL)*	*Acetaldehyde (ug/mL)*	*Acrolein (ug/mL)*	*Acetone (ug/mL)*	*Propionaldehyde (ug/mL)*	*Crotonaldehyde (ug/mL)*	*Methacrolein (ug/mL)*	*MEK & Butyraldehyde (ug/mL)*	*Benzaldehyde (ug/mL)*	*Valeraldehyde (ug/mL)*	*m-Tolualdehyde (ug/mL)*	*Hexaldehyde (ug/mL)*
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:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Version: 8

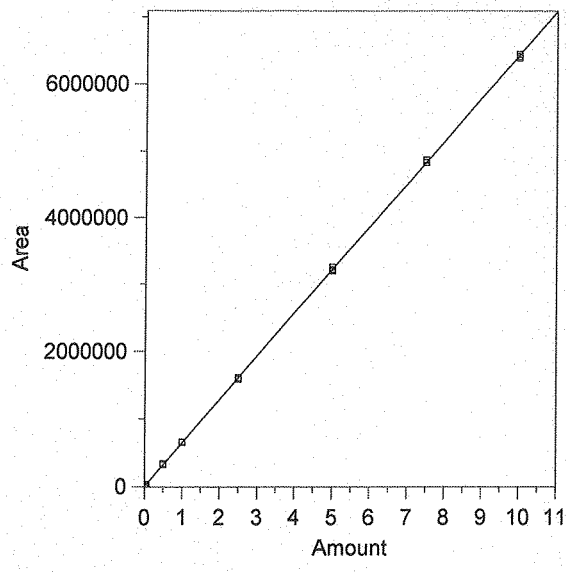
Creator: EG/HP
Description: EPA TO-11

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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	0.5	328901	657802	2.227	C:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	3196329	639265.8	-0.654	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	3251038	650207.6	1.047	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	3213737	642747.4	-0.113	C:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	6411879	641187.9	-0.355	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	6443770	644377	0.141	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	6389328	638932.8	-0.705	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

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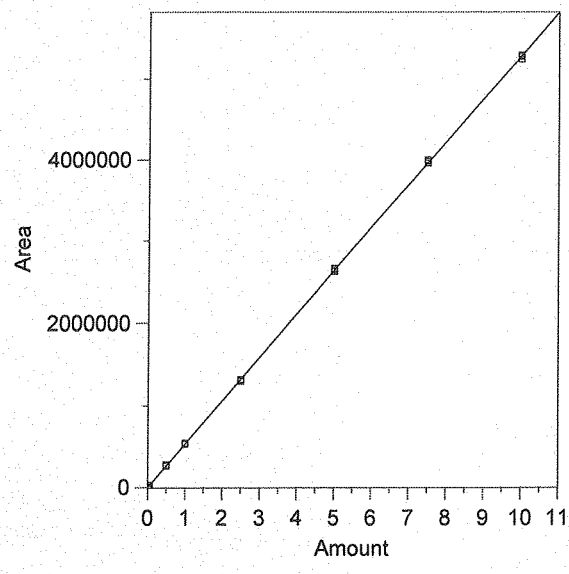
2 Acetaldehyde



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

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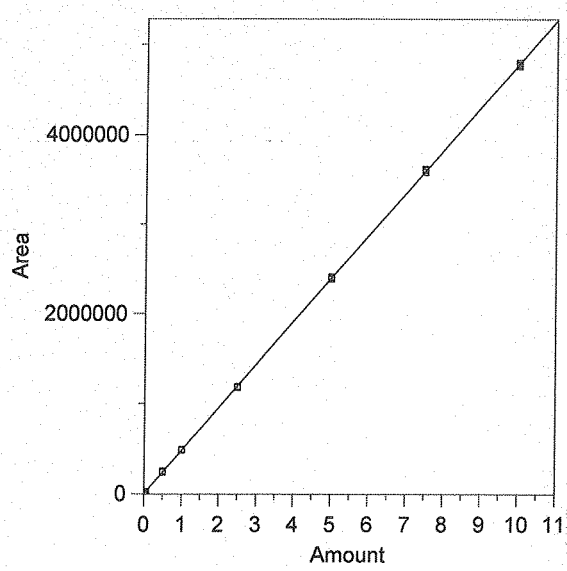
3 Acrolein



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

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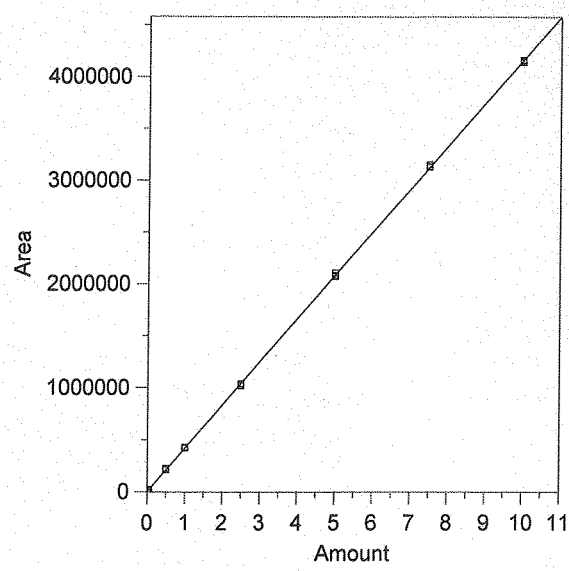
4 Acetone



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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	212278.1	424556.2	1.955	C:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	2.5	1019650	407860	-2.054	C:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	2070625	414125	-0.550	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2103557	420711.4	1.032	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2080934	416186.8	-0.055	C:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	4164627	416462.7	0.011	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	4152960	415296	-0.269	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	4141528	414152.8	-0.543	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

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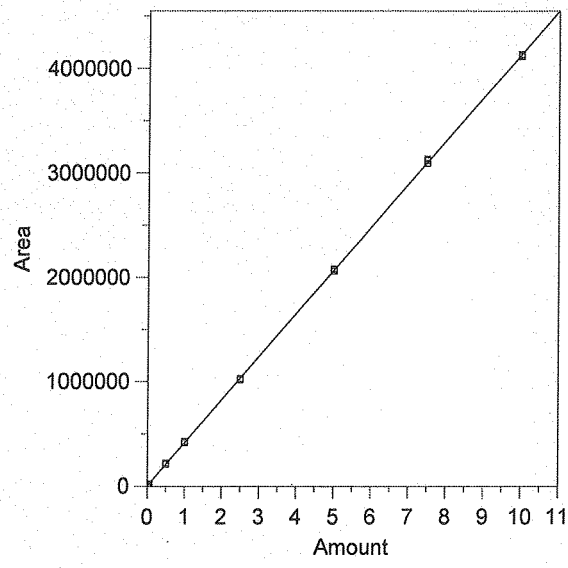
5 Propionaldehyde



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

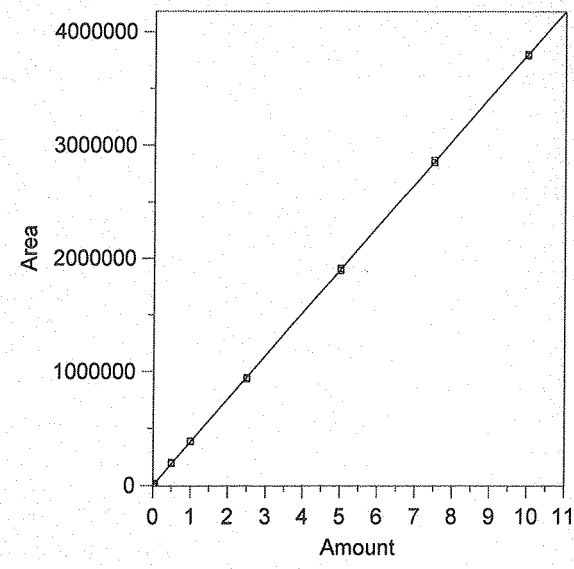
$Y = 413491.1 X + 0$

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

HP
08/29/13

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

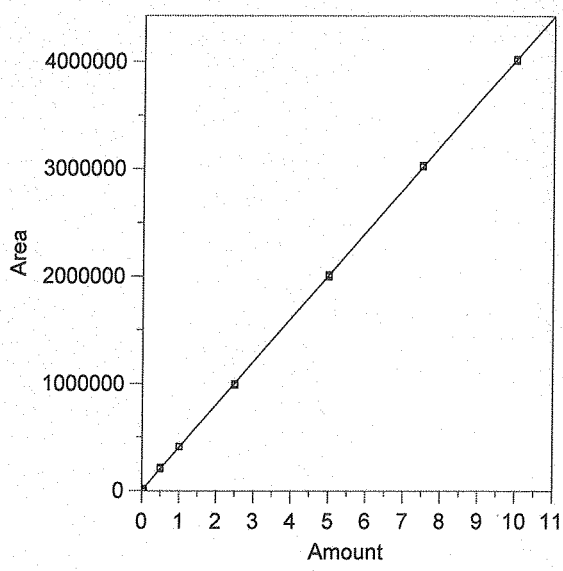
Y = 380159.3 X + 0

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

HP
08/29/13

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

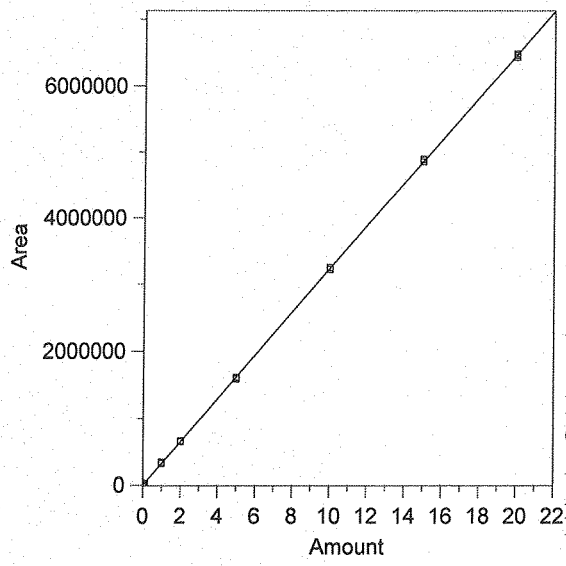
$Y = 402103.5 X + 0$

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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	202696.3	405392.6	0.818	C:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	2.5	1000575	400230	-0.466	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1996175	399235	-0.713	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	2017778	403555.6	0.361	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	2011258	402251.6	0.037	C:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	4025485	402548.5	0.111	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	4010411	401041.1	-0.264	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	4007106	400710.6	-0.346	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

HP
08/29/13

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

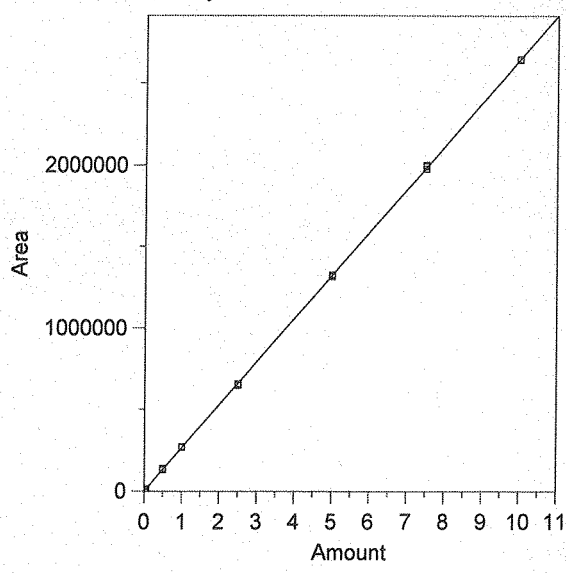
Y = 323725.3 X + 0

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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	1	328309.7	328309.7	1.416	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012	6/13/2013 7:24:58 AM
12	1	331244	331244	2.323	C:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016	6/13/2013 7:25:59 AM
16	5	1594650	318930	-1.481	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017	6/13/2013 7:26:15 AM
17	5	1588729	317745.8	-1.847	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018	6/13/2013 7:26:31 AM
18	5	1611625	322325	-0.433	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	10	3222726	322272.6	-0.449	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	10	3250978	325097.8	0.424	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	10	3247845	324784.5	0.327	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	15	4851557	323437.1	-0.089	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023	6/13/2013 7:28:15 AM
23	15	4886541	325769.4	0.631	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024	6/13/2013 7:28:35 AM
24	15	4893723	326248.2	0.779	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	20	6462091	323104.6	-0.192	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	20	6486439	324321.9	0.184	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	20	6432050	321602.5	-0.656	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

MP
08/29/13

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

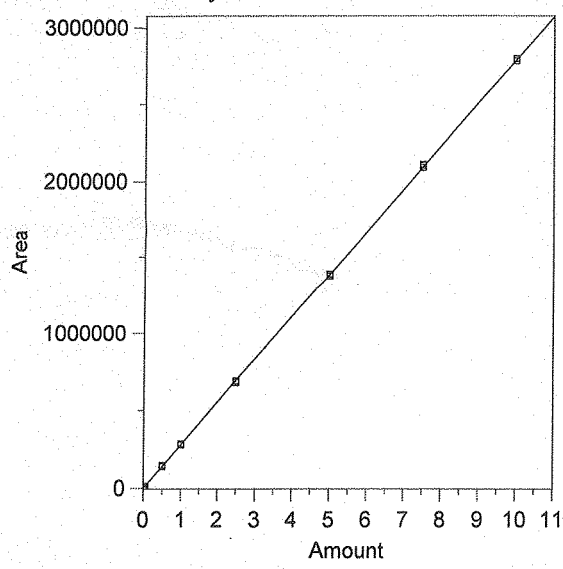
$Y = 264532.8 X + 0$

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

HP
08/29/13

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

HP
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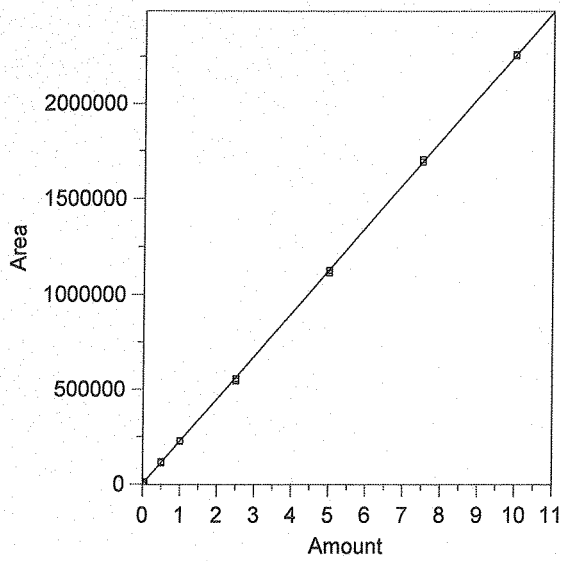
11 m-Tolualdehyde



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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1112742	222548.4	-1.384	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	1127437	225487.4	-0.081	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	1124909	224981.8	-0.305	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022	6/13/2013 7:27:52 AM
22	7.5	1693020	225736	0.029	C:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	2261498	226149.8	0.212	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	2256941	225694.1	0.010	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	2254343	225434.3	-0.105	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

HP
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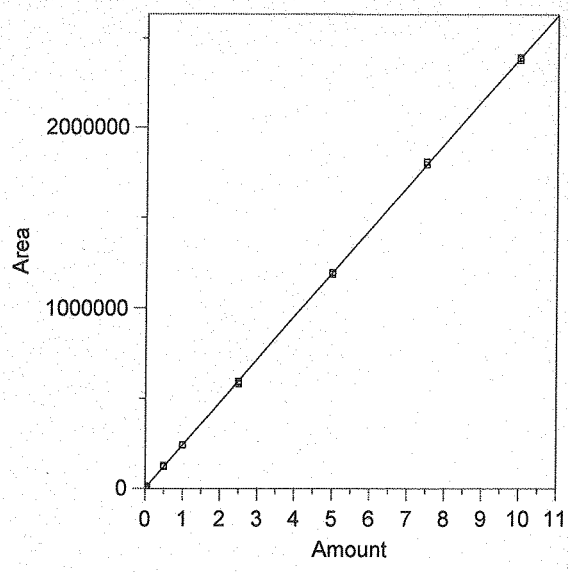
12 Hexaldehyde



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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010	6/13/2013 7:23:49 AM
10	0.5	126196	252392	5.636	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011	6/13/2013 9:25:13 AM
11	0.5	120634.2	241268.4	0.980	C:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019	6/13/2013 7:26:46 AM
19	5	1188236	237647.2	-0.535	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020	6/13/2013 7:27:07 AM
20	5	1187571	237514.2	-0.591	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021	6/13/2013 7:27:30 AM
21	5	1196602	239320.4	0.165	C:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 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:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025	6/13/2013 7:28:58 AM
25	10	2394549	239454.9	0.221	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026	6/13/2013 7:29:18 AM
26	10	2387175	238717.5	-0.087	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027	6/13/2013 7:29:40 AM
27	10	2375749	237574.9	-0.565	C:\Chromeperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028	6/13/2013 7:29:57 AM

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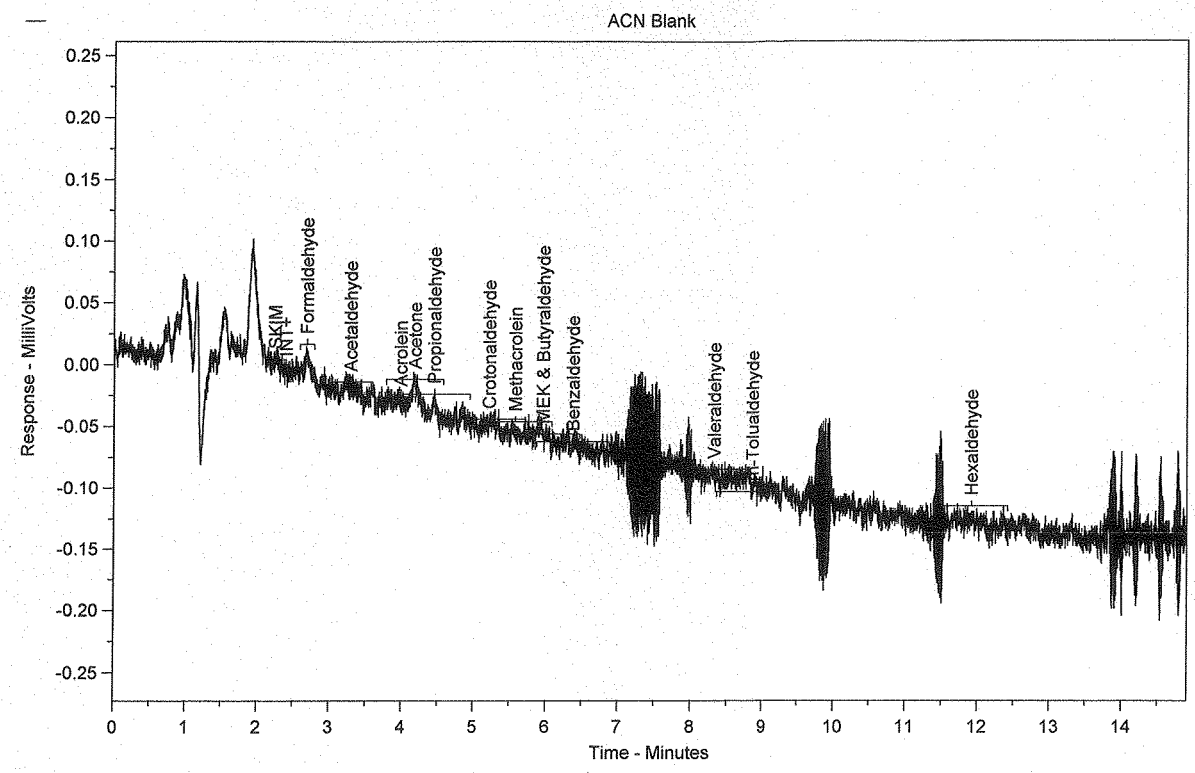
Raw Data



Sample Name = **ACN Blank** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0001.RAW**
Date Taken (end) = 8/28/2013 6:06:33 AM

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

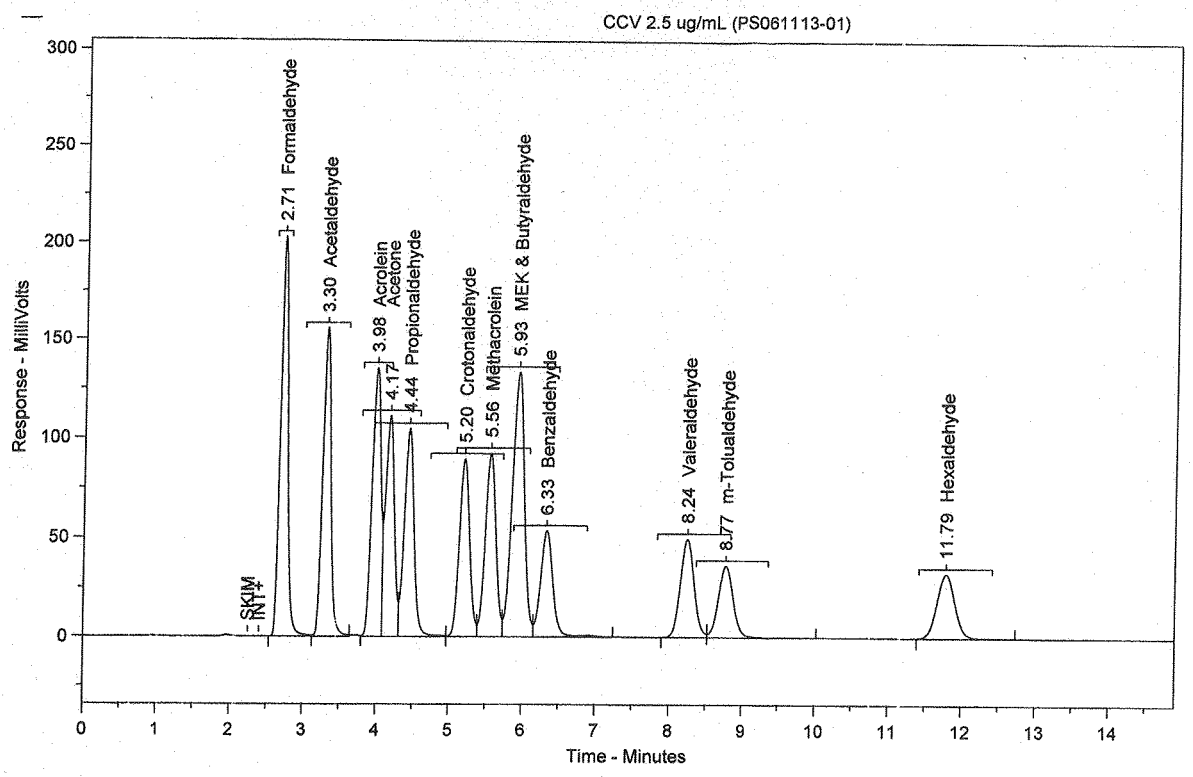
Calibration File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Concentration Units = ug/ml

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

HP
08/29/13



Sample Name = **CCV 2.5 ug/mL (PS061113-01)** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0002.RAW**
Date Taken (end) = 8/28/2013 6:23:12 AM

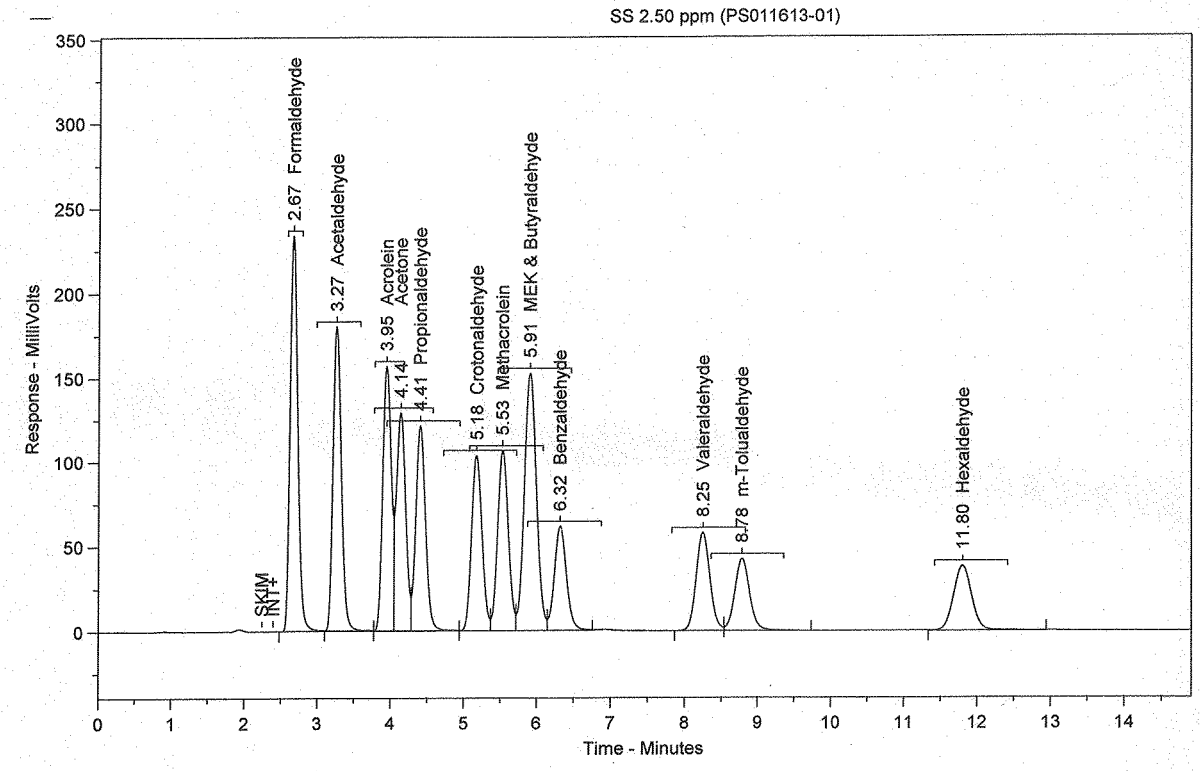
Method File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.MET
Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromeperfect 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	2.71	Formaldehyde	2.3147	7.603	1489467	12.953	SBB	0.11
2	3.30	Acetaldehyde	2.3275	7.645	1229884	10.696	TBB	0.12
3	3.98	Acrolein	2.3144	7.602	1108891	9.644	BV	0.14
4	4.17	Acetone	2.3341	7.666	971936	8.452	VV	0.13
5	4.44	Propionaldehyde	2.3647	7.767	977774	8.503	VV	0.14
6	5.20	Crotonaldehyde	2.3204	7.621	882103	7.671	VV	0.15
7	5.56	Methacrolein	2.3374	7.677	939883	8.174	VV	0.15
8	5.93	MEK & Butyraldehyde	4.6908	15.407	1518524	13.206	VV	0.17
9	6.33	Benzaldehyde	2.3939	7.863	633275	5.507	VB	0.17
10	8.24	Valeraldehyde	2.3380	7.679	652722	5.676	BV	0.20
11	8.77	m-Tolualdehyde	2.3406	7.688	528196	4.593	VB	0.22
12	11.79	Hexaldehyde	2.3697	7.783	566187	4.924	BB	0.26

Total Area = 1.149884E+07 Total Height = 1200121 Total Amount = 30.44613



Sample Name = **SS 2.50 ppm (PS011613-01)** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0003.RAW**
Date Taken (end) = 8/28/2013 6:39:51 AM

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

Calibration File Name = C:\Chromeperfect 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	2.67	Formaldehyde	2.6962	7.690	1734907	13.085	SBB	0.11
2	3.27	Acetaldehyde	2.6933	7.682	1423175	10.734	TBV	0.12
3	3.95	Acrolein	2.6817	7.649	1284893	9.691	TVV	0.14
4	4.14	Acetone	2.6948	7.686	1122161	8.463	TVV	0.13
5	4.41	Propionaldehyde	2.7158	7.746	1122970	8.470	TVB	0.14
6	5.18	Crotonaldehyde	2.6708	7.618	1015334	7.658	TBV	0.15
7	5.53	Methacrolein	2.6895	7.671	1081459	8.156	TVV	0.15
8	5.91	MEK & Butyraldehyde	5.3982	15.397	1747524	13.180	TVV	0.17
9	6.32	Benzaldehyde	2.6572	7.579	702917	5.301	TVB	0.18
10	8.25	Valeraldehyde	2.7103	7.730	756649	5.707	BV	0.20
11	8.78	m-Tolualdehyde	2.7053	7.716	610512	4.605	VB	0.22
12	11.80	Hexaldehyde	2.7477	7.837	656486	4.951	BB	0.26

Total Area = 1.325899E+07 Total Height = 1380870 Total Amount = 35.06076

HP
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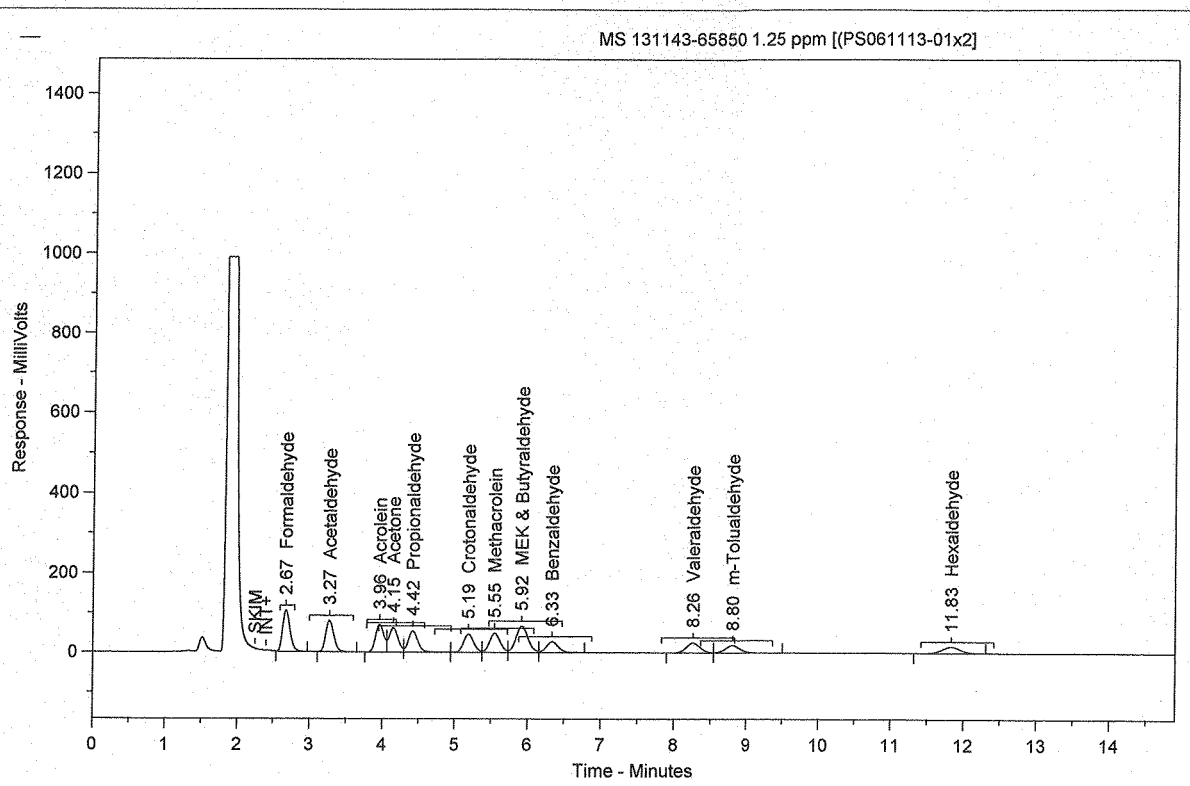


Sample Name = **MS 131143-65850 1.25 ppm [(PS061113-01x2]** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0007.RAW**
Date Taken (end) = 8/28/2013 7:46:27 AM

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

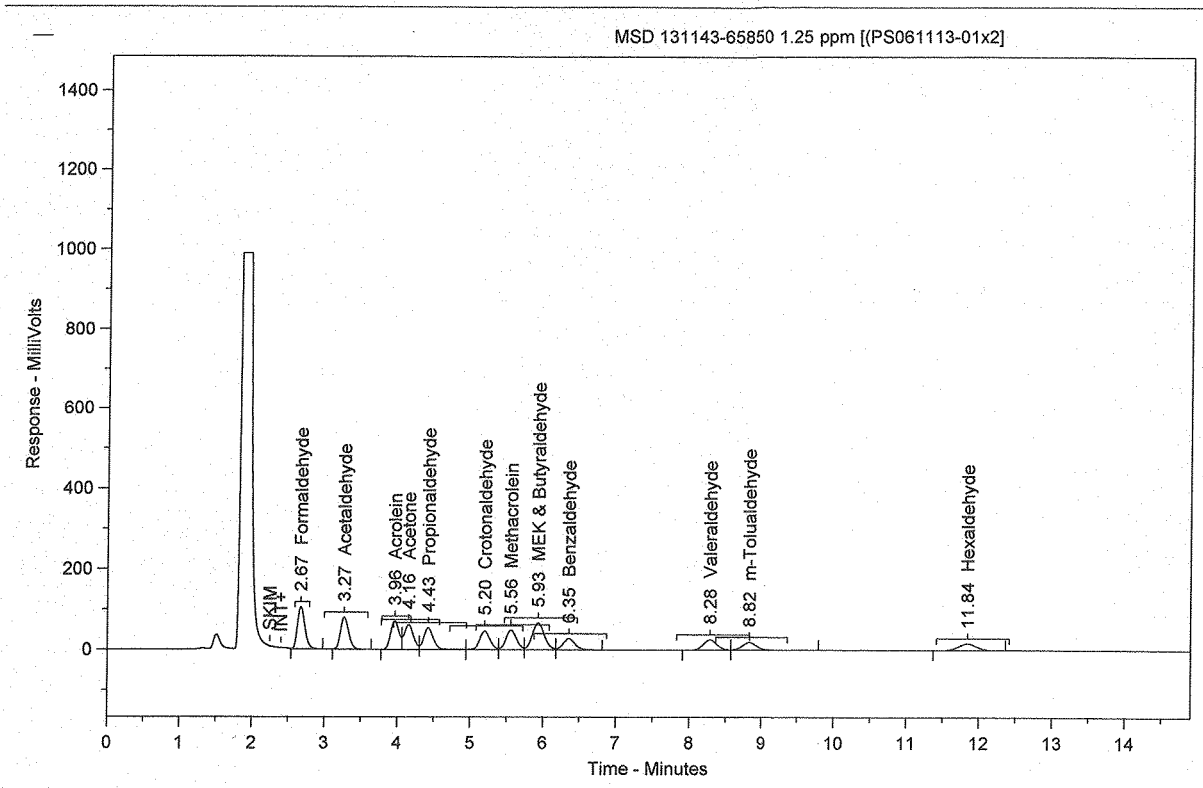
Calibration File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Concentration Units = ug/ml

Run Time = 14.89889 Vial Number = 7
Injection Volume = 10 Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.67	Formaldehyde	1.1527	7.438	741716	12.661	BB	0.11
2	3.27	Acetaldehyde	1.1669	7.530	616611	10.526	BB	0.12
3	3.96	Acrolein	1.1864	7.655	568432	9.703	BV	0.14
4	4.15	Acetone	1.2852	8.293	535167	9.135	VV	0.13
5	4.42	Propionaldehyde	1.1993	7.739	495903	8.465	VV	0.14
6	5.19	Crotonaldehyde	1.1876	7.663	451467	7.707	VV	0.15
7	5.55	Methacrolein	1.2222	7.886	491431	8.389	VV	0.15
8	5.92	MEK & Butyraldehyde	2.3546	15.193	762237	13.011	VV	0.17
9	6.33	Benzaldehyde	1.1683	7.539	309066	5.276	VB	0.17
10	8.26	Valeraldehyde	1.1929	7.697	333032	5.685	BV	0.20
11	8.80	m-Tolualdehyde	1.1978	7.729	270304	4.614	VB	0.22
12	11.83	Hexaldehyde	1.1837	7.638	282824	4.828	BB	0.27

Total Area = 5858191 Total Height = 615510.7 Total Amount = 15.49752

MP
08/29/13



Sample Name = **MSD 131143-65850 1.25 ppm [(PS061113-01x2]** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0008.RAW**
Date Taken (end) = 8/28/2013 8:03:06 AM

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

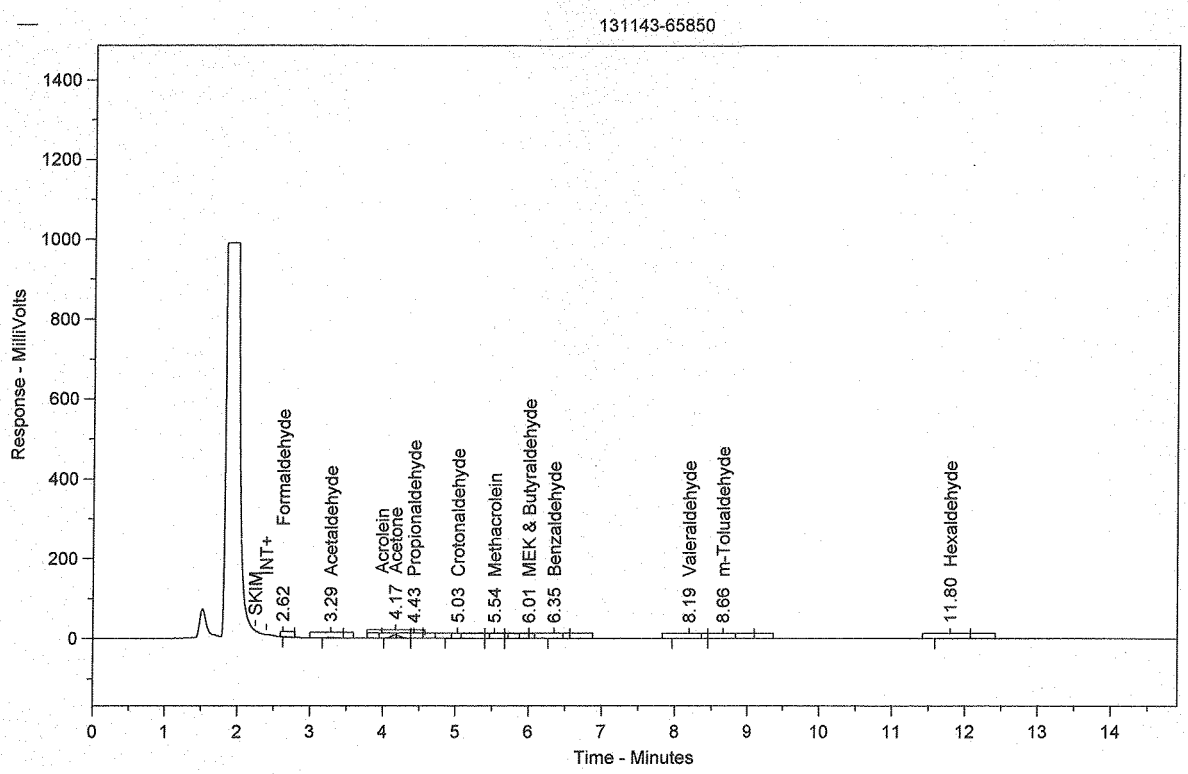
Calibration File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Concentration Units = ug/ml

Run Time = 14.89889 Vial Number = 8
Injection Volume = 10 Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.67	Formaldehyde	1.1494	7.435	739604	12.657	BB	0.11
2	3.27	Acetaldehyde	1.1630	7.523	614516	10.517	BB	0.12
3	3.96	Acrolein	1.1838	7.658	567213	9.707	BV	0.14
4	4.16	Acetone	1.2818	8.292	533763	9.135	VV	0.13
5	4.43	Propionaldehyde	1.1963	7.739	494675	8.466	VV	0.14
6	5.20	Crotonaldehyde	1.1829	7.652	449678	7.696	VV	0.15
7	5.56	Methacrolein	1.2215	7.902	491168	8.406	VV	0.15
8	5.93	MEK & Butyraldehyde	2.3503	15.204	760866	13.021	VV	0.17
9	6.35	Benzaldehyde	1.1689	7.562	309223	5.292	VB	0.18
10	8.28	Valeraldehyde	1.1869	7.678	331356	5.671	BV	0.20
11	8.82	m-Tolualdehyde	1.1952	7.732	269733	4.616	VB	0.22
12	11.84	Hexaldehyde	1.1783	7.622	281517	4.818	BB	0.27

Total Area = 5843313 Total Height = 612586.6 Total Amount = 15.45838

HP
08/29/13



Sample Name = **131143-65850** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0009.RAW**
Date Taken (end) = 8/28/2013 8:19:48 AM

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

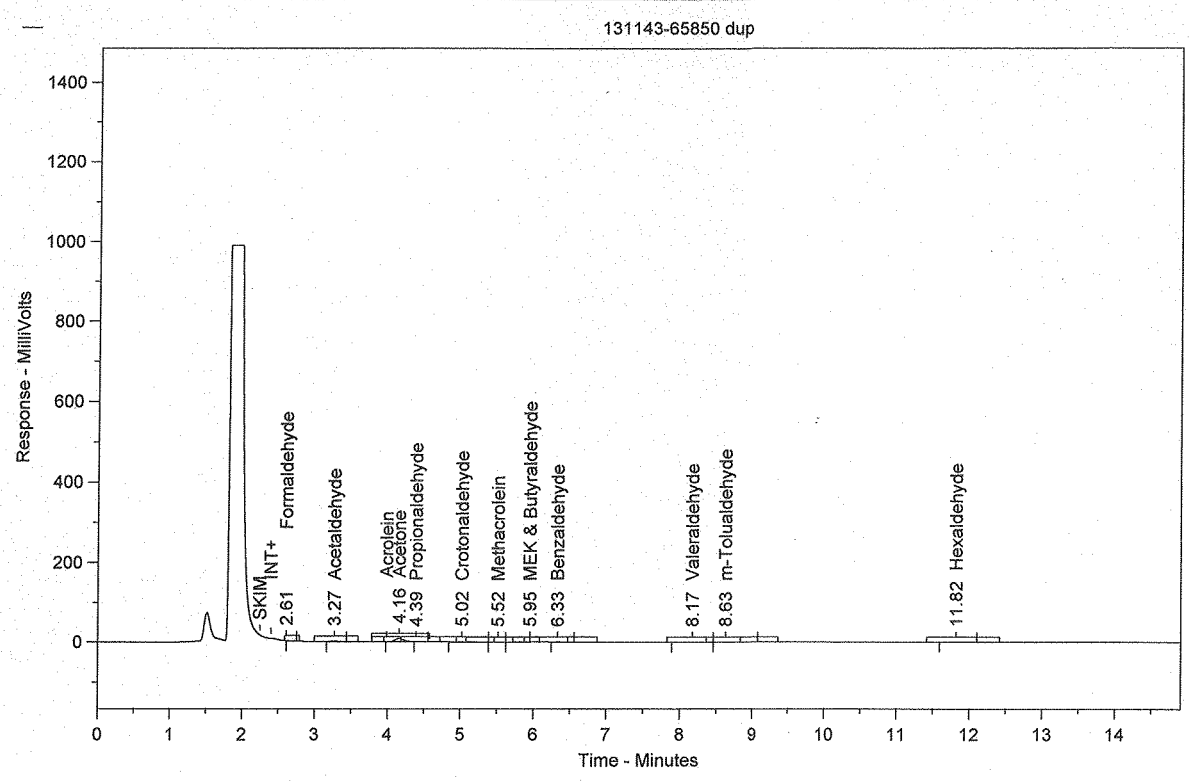
Calibration File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Concentration Units = ug/ml

Run Time = 14.89889 Vial Number = 9
Injection Volume = 10 Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.62	Formaldehyde	0.0023	0.715	1504	1.220	BB	0.11
2	3.29	Acetaldehyde	0.0195	5.966	10310	8.367	BB	0.13
3	4.17	Acetone	0.1717	52.495	71492	58.017	BV	0.13
4	4.43	Propionaldehyde	0.0101	3.093	4182	3.394	VB	0.11
5	5.03	Crotonaldehyde	0.0203	6.218	7731	6.274	BV	0.30
6	5.54	Methacrolein	0.0031	0.959	1261	1.023	VV	0.19
7	6.01	MEK & Butyraldehyde	0.0244	7.459	7897	6.408	VB	0.13
8	6.35	Benzaldehyde	0.0146	4.454	3853	3.127	BB	0.18
9	8.19	Valeraldehyde	0.0205	6.275	5729	4.650	BV	0.25
10	8.66	m-Tolualdehyde	0.0299	9.149	6752	5.479	VB	0.26
11	11.80	Hexaldehyde	0.0105	3.218	2515	2.041	BB	0.30

Total Area = 123226 Total Height = 12882.07 Total Amount = 0.3270461

HP
08/29/13



Sample Name = **131143-65850 dup** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0010.RAW**
Date Taken (end) = 8/28/2013 8:36:28 AM

Method File Name = C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0010.BND
Method Description=TO-11A Carbonyls

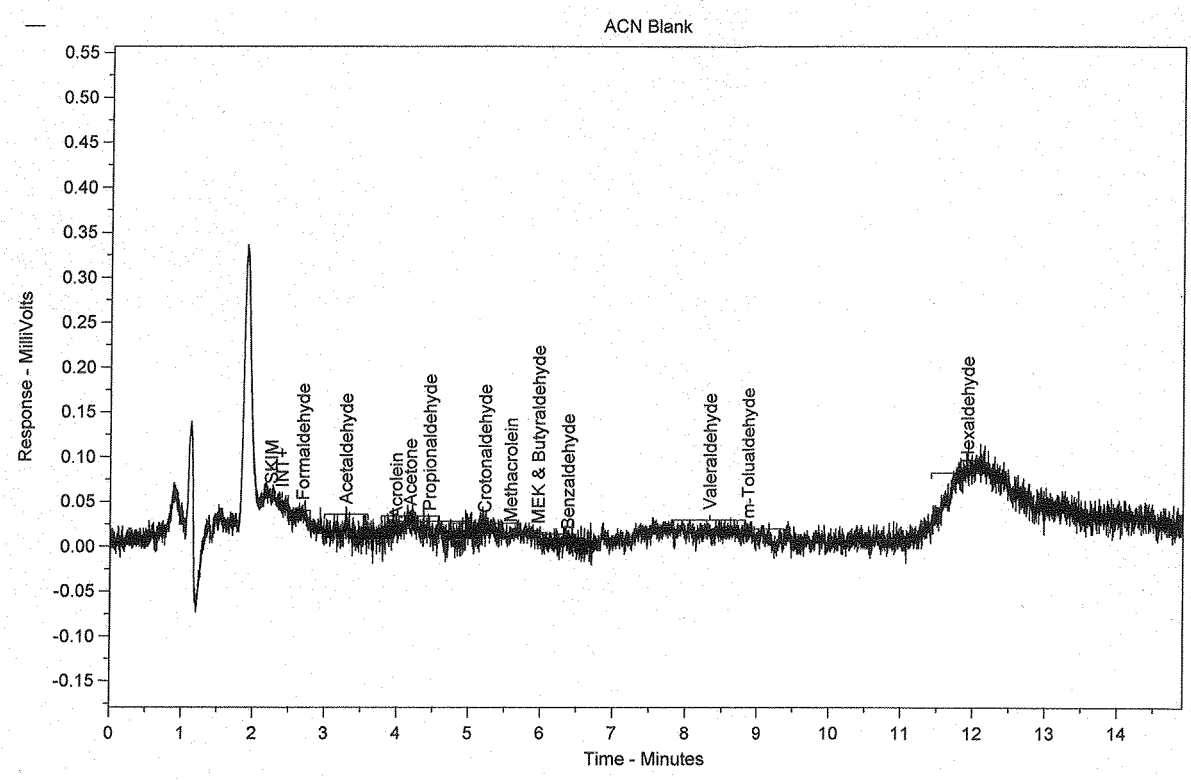
Calibration File Name = C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0010.BND
Concentration Units = ug/ml

Run Time = 14.89889 Vial Number = 10
Injection Volume = 10 Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.61	Formaldehyde	0.0017	0.517	1076	0.886	BB N	0.10
2	3.27	Acetaldehyde	0.0189	5.863	10011	8.246	BB	0.13
3	4.16	Acetone	0.1706	52.783	71028	58.508	SBB	0.13
4	4.39	Propionaldehyde	0.0105	3.261	4357	3.589	TBB	0.11
5	5.02	Crotonaldehyde	0.0188	5.826	7157	5.896	BV	0.30
6	5.52	Methacrolein	0.0026	0.819	1064	0.876	VV	0.18
7	5.95	MEK & Butyraldehyde	0.0238	7.364	7704	6.346	VB	0.14
8	6.33	Benzaldehyde	0.0143	4.427	3785	3.118	BB	0.19
9	8.17	Valeraldehyde	0.0208	6.431	5802	4.779	BV	0.26
10	8.63	m-Tolualdehyde	0.0300	9.287	6773	5.579	VB	0.27
11	11.82	Hexaldehyde	0.0111	3.422	2642	2.177	BB	0.31

Total Area = 121398.2 Total Height = 12672.33 Total Amount = 0.3231536

HP
08/29/13



Sample Name = **ACN Blank** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0012.RAW**
Date Taken (end) = 8/28/2013 9:19:11 AM

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

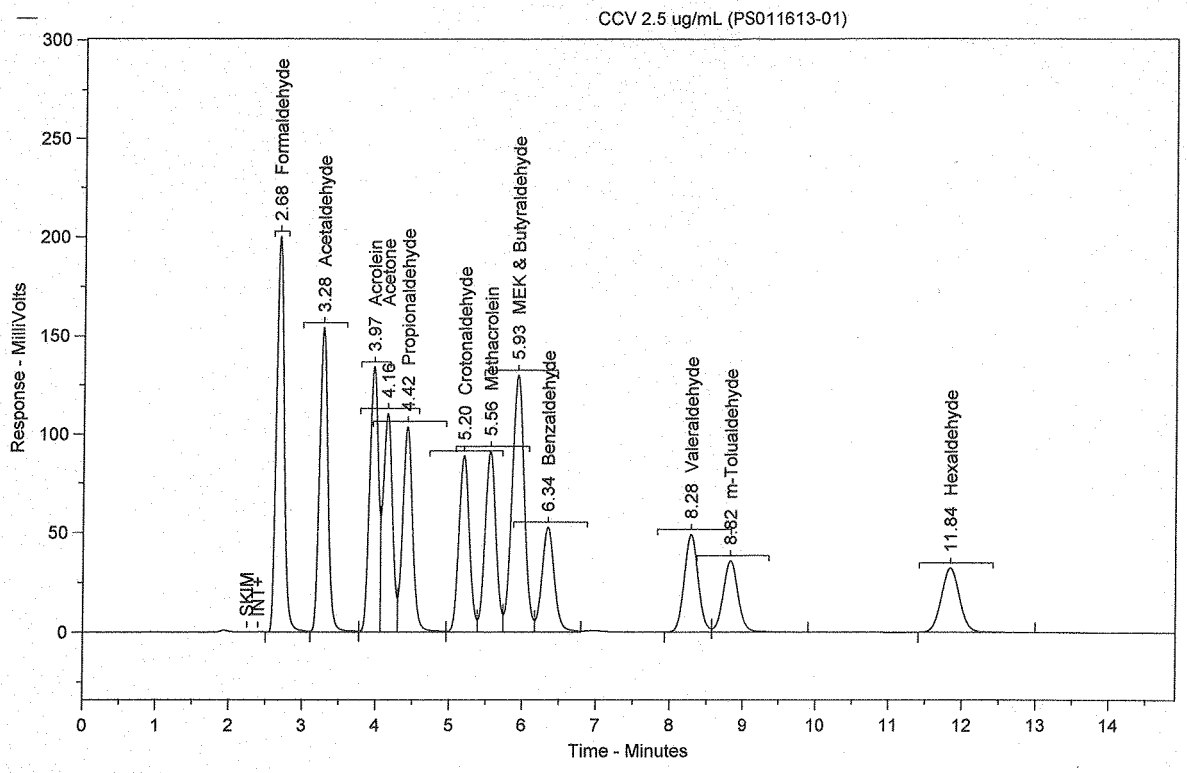
Calibration File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Concentration Units = ug/ml

Run Time = 14.89889 Vial Number = 12
Injection Volume = 10 Dilution Factor = 1

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

Total Area = 0 Total Height = 0 Total Amount = 0

HP
08/29/13



Sample Name = **CCV 2.5 ug/mL (PS011613-01)** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0013.RAW**
Date Taken (end) = 8/28/2013 9:35:50 AM

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

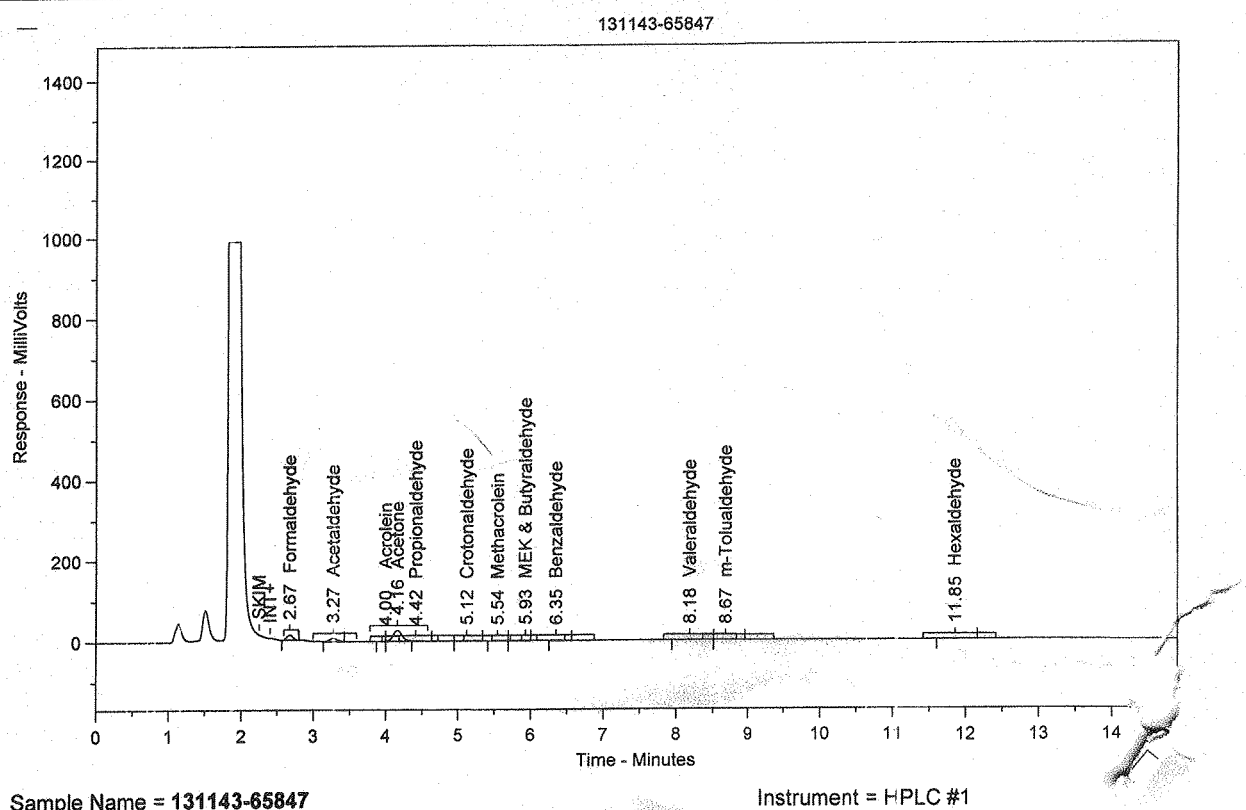
Calibration File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Concentration Units = ug/ml

Run Time = 14.89889 Vial Number = 13
Injection Volume = 10 Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	2.2791	7.539	1466527	12.842	SBB	0.11
2	3.28	Acetaldehyde	2.3232	7.685	1227630	10.750	TBV	0.12
3	3.97	Acrolein	2.3085	7.637	1106074	9.685	TVV	0.14
4	4.16	Acetone	2.3242	7.689	967827	8.475	TVV	0.14
5	4.42	Propionaldehyde	2.3511	7.778	972169	8.513	TVV	0.14
6	5.20	Crotonaldehyde	2.3133	7.652	879408	7.701	TVV	0.15
7	5.56	Methacrolein	2.3274	7.699	935853	8.195	TVV	0.15
8	5.93	MEK & Butyraldehyde	4.6704	15.450	1511929	13.239	TVV	0.18
9	6.34	Benzaldehyde	2.3467	7.763	620771	5.436	TVB	0.18
10	8.28	Valeraldehyde	2.3195	7.673	647563	5.670	BV	0.20
11	8.82	m-Tolualdehyde	2.3111	7.645	521548	4.567	VB	0.22
12	11.84	Hexaldehyde	2.3547	7.790	562603	4.927	BB	0.27

Total Area = 1.14199E+07 Total Height = 1181396 Total Amount = 30.22923

08/29/13



Sample Name = **131143-65847**

Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0014.RAW**
Date Taken (end) = 8/28/2013 9:52:29 AM

Method File Name = C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0014.BND
Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0014.BND
Concentration Units = ug/ml

Run Time = 14.89889
Injection Volume = 10

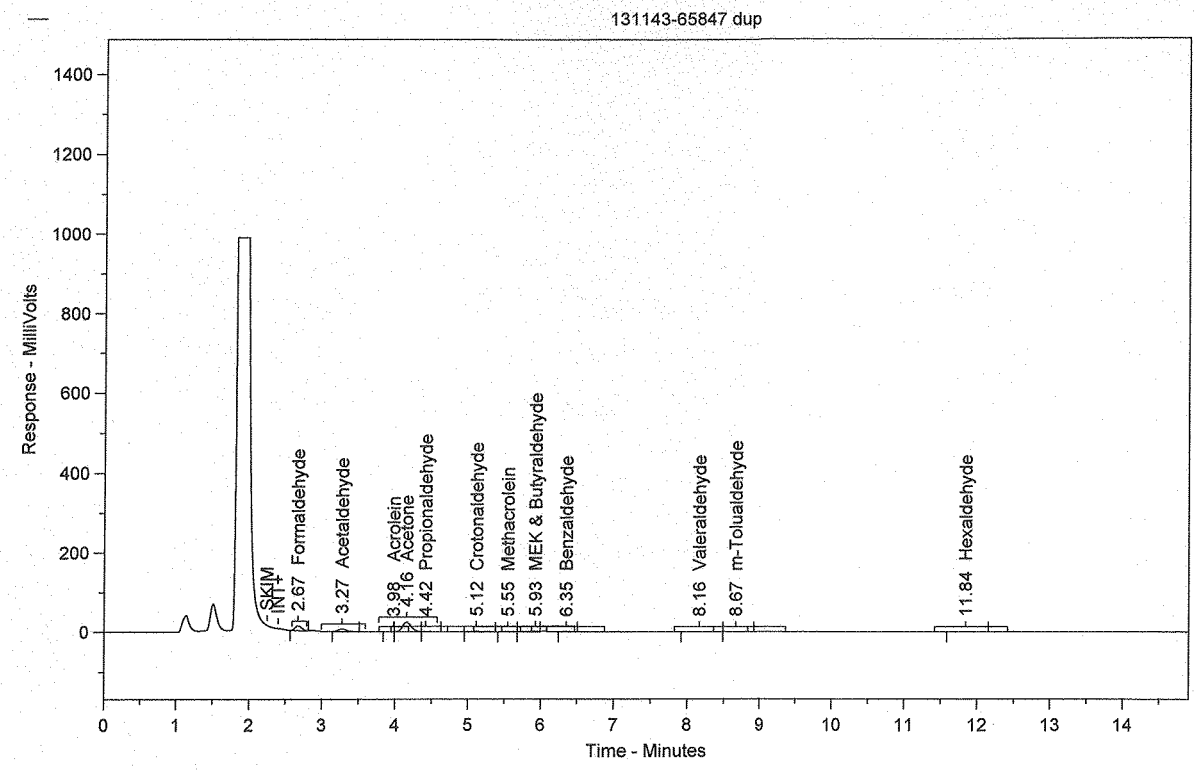
Vial Number = 14
Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.67	Formaldehyde	0.1226	12.080	78909	18.007	BB	0.10
2	3.27	Acetaldehyde	0.1049	10.328	55405	12.643	BB	0.12
3	4.00	Acrolein	0.0032	0.314	1528	0.349	BV	0.08
4	4.16	Acetone	0.5490	54.079	228609	52.169	SBB	0.13
5	4.42	Propionaldehyde	0.0297	2.928	12291	2.805	TBB	0.13
6	5.12	Crotonaldehyde	0.0338	3.325	12833	2.928	BB	0.21
7	5.54	Methacrolein	0.0075	0.738	3011	0.687	BV	0.14
8	5.93	MEK & Butyraldehyde	0.0529	5.207	17113	3.905	VB	0.16
9	6.35	Benzaldehyde	0.0188	1.855	4981	1.137	BB	0.19
10	8.18	Valeraldehyde	0.0430	4.233	11996	2.738	BV	0.27
11	8.67	m-Tolualdehyde	0.0290	2.858	6546	1.494	VB	0.28
12	11.85	Hexaldehyde	0.0209	2.056	4987	1.138	BB	0.29

Total Area = 438209.5

Total Height = 53239.73

Total Amount = 1.015176



Sample Name = **131143-65847 dup** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0015.RAW**
Date Taken (end) = 8/28/2013 10:09:07 AM

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

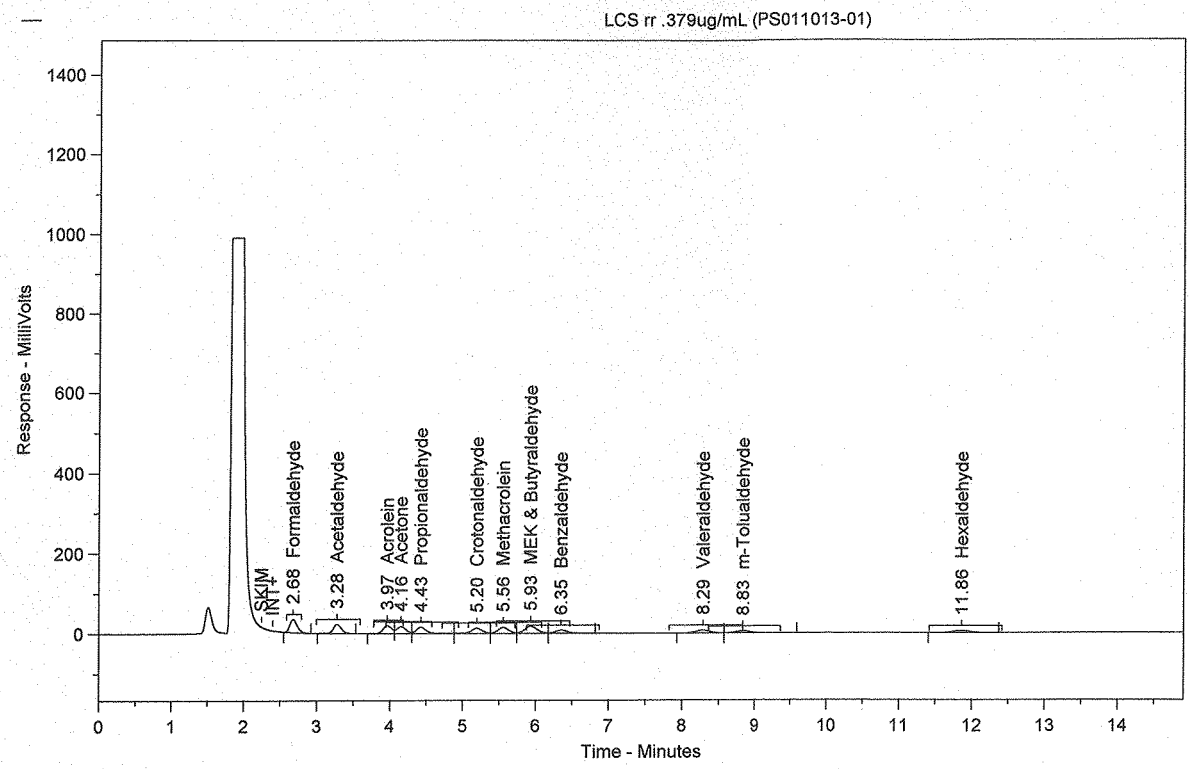
Calibration File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Concentration Units = ug/ml

Run Time = 14.89889 Vial Number = 15
Injection Volume = 10 Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.67	Formaldehyde	0.1219	12.863	78420	19.154	BB	0.10
2	3.27	Acetaldehyde	0.0977	10.311	51619	12.607	BB	0.12
3	3.98	Acrolein	0.0032	0.340	1542	0.377	BV	0.08
4	4.16	Acetone	0.4944	52.178	205856	50.279	VV	0.13
5	4.42	Propionaldehyde	0.0292	3.086	12091	2.953	VB	0.13
6	5.12	Crotonaldehyde	0.0326	3.444	12403	3.029	BB	0.22
7	5.55	Methacrolein	0.0074	0.776	2956	0.722	BV	0.15
8	5.93	MEK & Butyraldehyde	0.0509	5.371	16475	4.024	VB	0.15
9	6.35	Benzaldehyde	0.0198	2.089	5236	1.279	BB	0.19
10	8.16	Valeraldehyde	0.0407	4.293	11356	2.774	BV	0.27
11	8.67	m-Tolualdehyde	0.0305	3.216	6876	1.679	VB	0.28
12	11.84	Hexaldehyde	0.0193	2.032	4600	1.123	BB	0.30

Total Area = 409429.3 Total Height = 48639.11 Total Amount = 0.9474283

HP
08/29/13



Sample Name = **LCS rr .379ug/mL (PS011013-01)** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0022.RAW**
Date Taken (end) = 8/28/2013 12:05:44 PM

Method File Name = C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0022.BND
Method Description=TO-11A Carbonyls

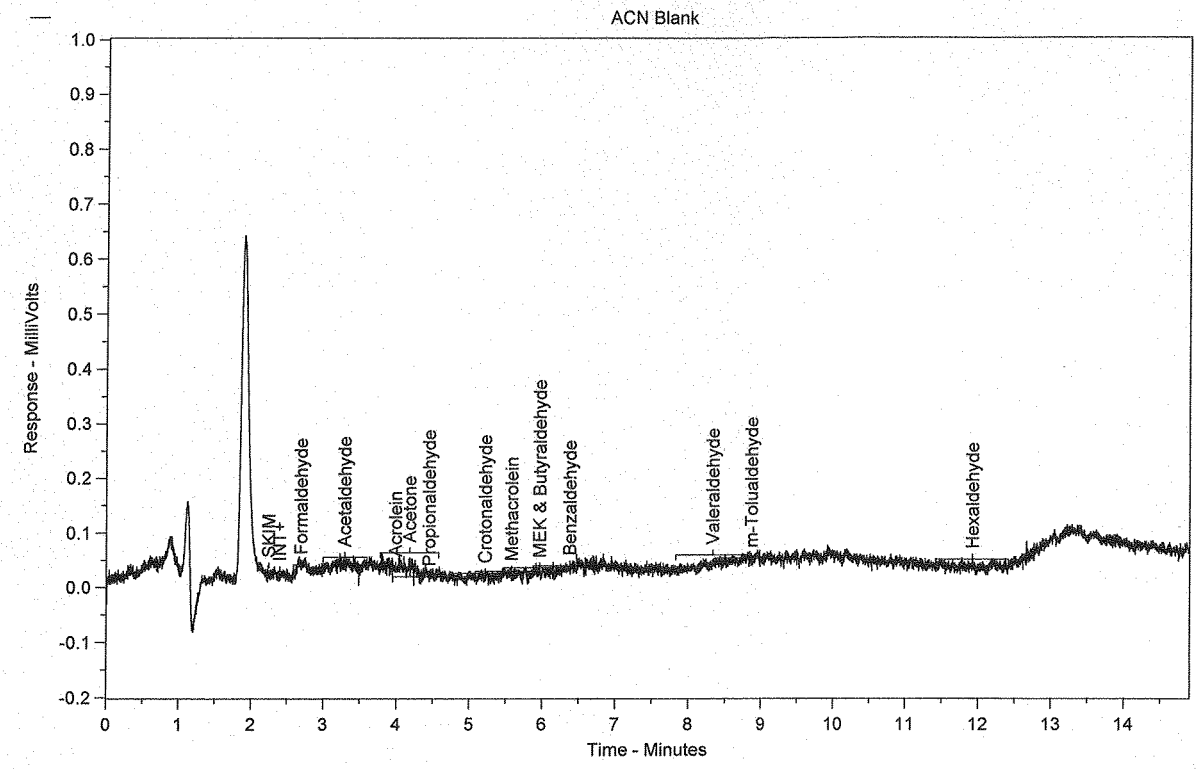
Calibration File Name = C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0022.BND
Concentration Units = ug/ml

Run Time = 14.89889 Vial Number = 22
Injection Volume = 10 Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	0.3591	7.995	231072	13.549	BB	0.12
2	3.28	Acetaldehyde	0.3333	7.421	176117	10.327	BB	0.12
3	3.97	Acrolein	0.3374	7.513	161668	9.480	BV	0.14
4	4.16	Acetone	0.3611	8.040	150376	8.817	VV	0.13
5	4.43	Propionaldehyde	0.3529	7.857	145913	8.556	VV	0.14
6	5.20	Crotonaldehyde	0.3455	7.693	131358	7.702	VV	0.15
7	5.56	Methacrolein	0.3742	8.332	150471	8.823	VV	0.15
8	5.93	MEK & Butyraldehyde	0.6549	14.580	211994	12.431	VV	0.17
9	6.35	Benzaldehyde	0.3364	7.489	88981	5.218	VB	0.18
10	8.29	Valeraldehyde	0.3560	7.925	99374	5.827	BV	0.21
11	8.83	m-Tolualdehyde	0.3397	7.564	76667	4.495	VB	0.22
12	11.86	Hexaldehyde	0.3409	7.589	81441	4.775	BB	0.27

Total Area = 1705434 Total Height = 178795.5 Total Amount = 4.491341

HP
08/29/13



Sample Name = **ACN Blank** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0023.RAW**
Date Taken (end) = 8/28/2013 12:30:41 PM

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

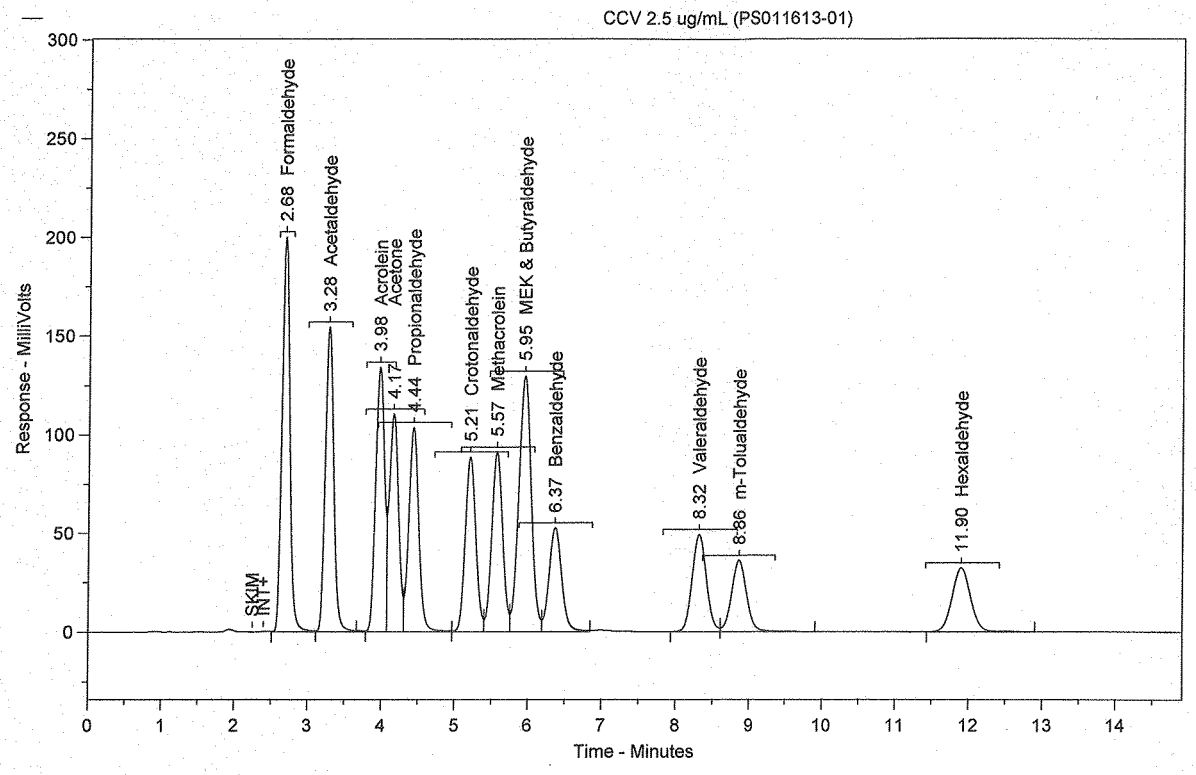
Calibration File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Concentration Units = ug/ml

Run Time = 14.89889 Vial Number = 23
Injection Volume = 10 Dilution Factor = 1

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

Total Area = 0 Total Height = 0 Total Amount = 0

HP
08/29/13



Sample Name = **CCV 2.5 ug/mL (PS011613-01)** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0024.RAW**
Date Taken (end) = 8/28/2013 12:47:20 PM

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

Calibration File Name = C:\Chromeperfect 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	2.68	Formaldehyde	2.3044	7.566	1482831	12.885	SBB	0.11
2	3.28	Acetaldehyde	2.3386	7.678	1235721	10.738	TBV	0.12
3	3.98	Acrolein	2.3251	7.634	1114022	9.681	TVV	0.14
4	4.17	Acetone	2.3465	7.704	977124	8.491	TVV	0.14
5	4.44	Propionaldehyde	2.3642	7.762	977589	8.495	TVV	0.14
6	5.21	Crotonaldehyde	2.3309	7.653	886116	7.700	TVV	0.16
7	5.57	Methacrolein	2.3437	7.695	942427	8.189	TVV	0.15
8	5.95	MEK & Butyraldehyde	4.7003	15.432	1521613	13.222	TVV	0.18
9	6.37	Benzaldehyde	2.3661	7.769	625923	5.439	TVB	0.18
10	8.32	Valeraldehyde	2.3334	7.661	651440	5.661	BV	0.21
11	8.86	m-Tolualdehyde	2.3357	7.669	527097	4.580	VB	0.22
12	11.90	Hexaldehyde	2.3685	7.776	565901	4.918	BB	0.27

Total Area = 1.150781E+07 Total Height = 1182388 Total Amount = 30.45756

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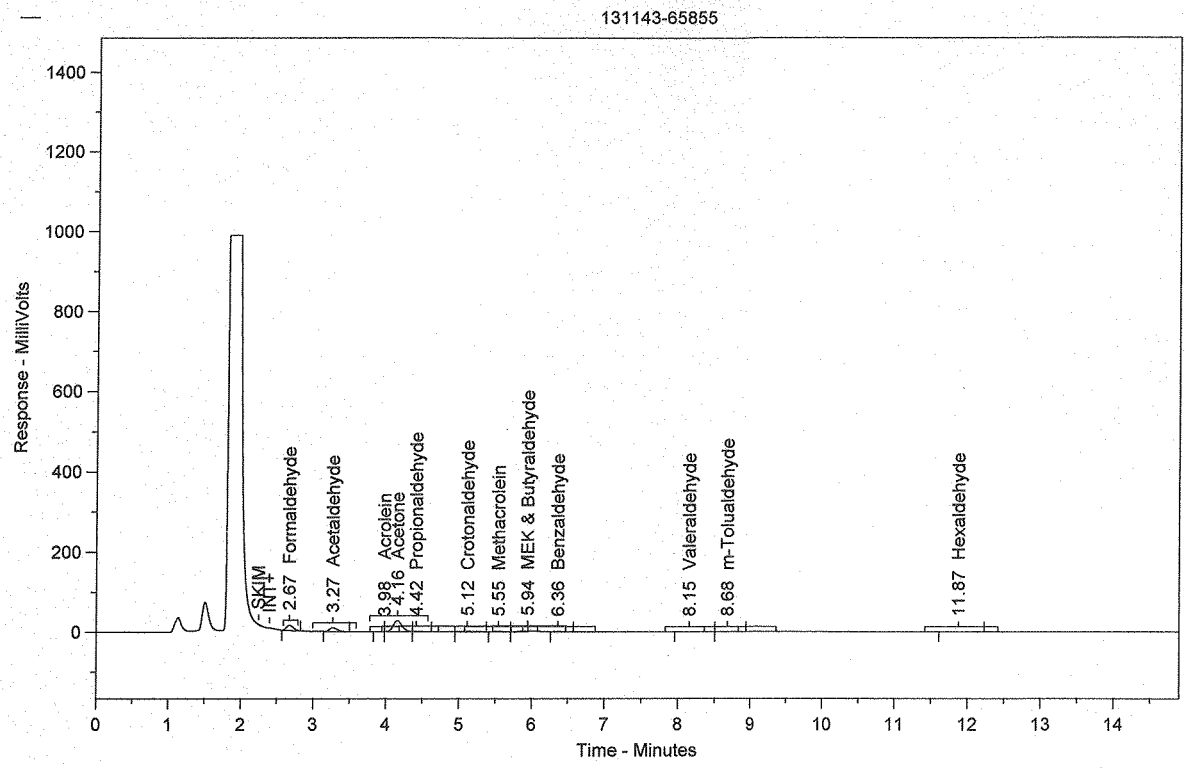

Sample Name = **131143-65855** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0025.RAW**
Date Taken (end) = 8/28/2013 1:03:58 PM

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

Calibration File Name = C:\Chromeperfect 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	2.67	Formaldehyde	0.1316	12.351	84688	18.207	BB	0.11
2	3.27	Acetaldehyde	0.1306	12.251	68985	14.831	BB	0.12
3	3.98	Acrolein	0.0046	0.433	2209	0.475	BV	0.08
4	4.16	Acetone	0.5695	53.440	237137	50.982	VV	0.13
5	4.42	Propionaldehyde	0.0310	2.907	12809	2.754	VB	0.13
6	5.12	Crotonaldehyde	0.0378	3.549	14377	3.091	BB	0.27
7	5.55	Methacrolein	0.0093	0.874	3744	0.805	BV	0.14
8	5.94	MEK & Butyraldehyde	0.0385	3.613	12465	2.680	VB	0.10
9	6.36	Benzaldehyde	0.0183	1.716	4836	1.040	BB	0.18
10	8.15	Valeraldehyde	0.0427	4.006	11918	2.562	BV	0.26
11	8.68	m-Tolualdehyde	0.0309	2.899	6972	1.499	VB	0.28
12	11.87	Hexaldehyde	0.0209	1.962	4995	1.074	BB	0.30

Total Area = 465134.6 Total Height = 56100.52 Total Amount = 1.065627

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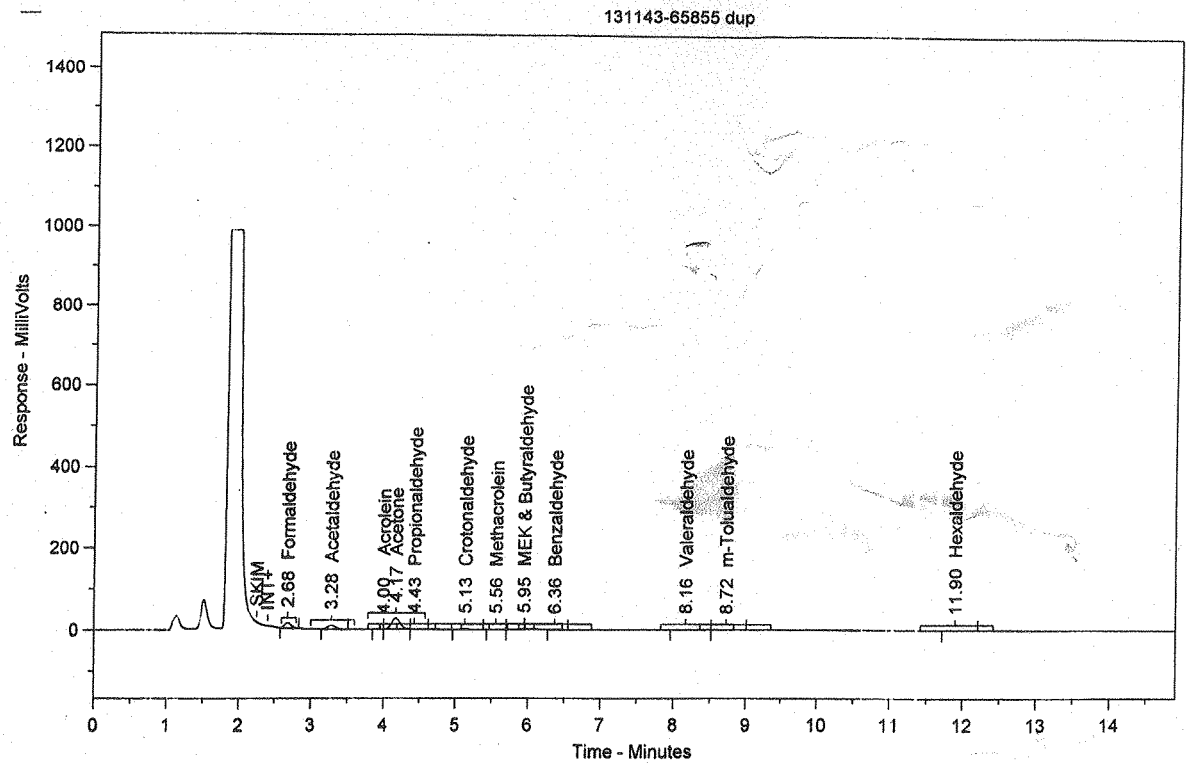
08/29/13



Sample Name = **131143-65855 dup** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0026.RAW**
Date Taken (end) = 8/28/2013 1:20:36 PM

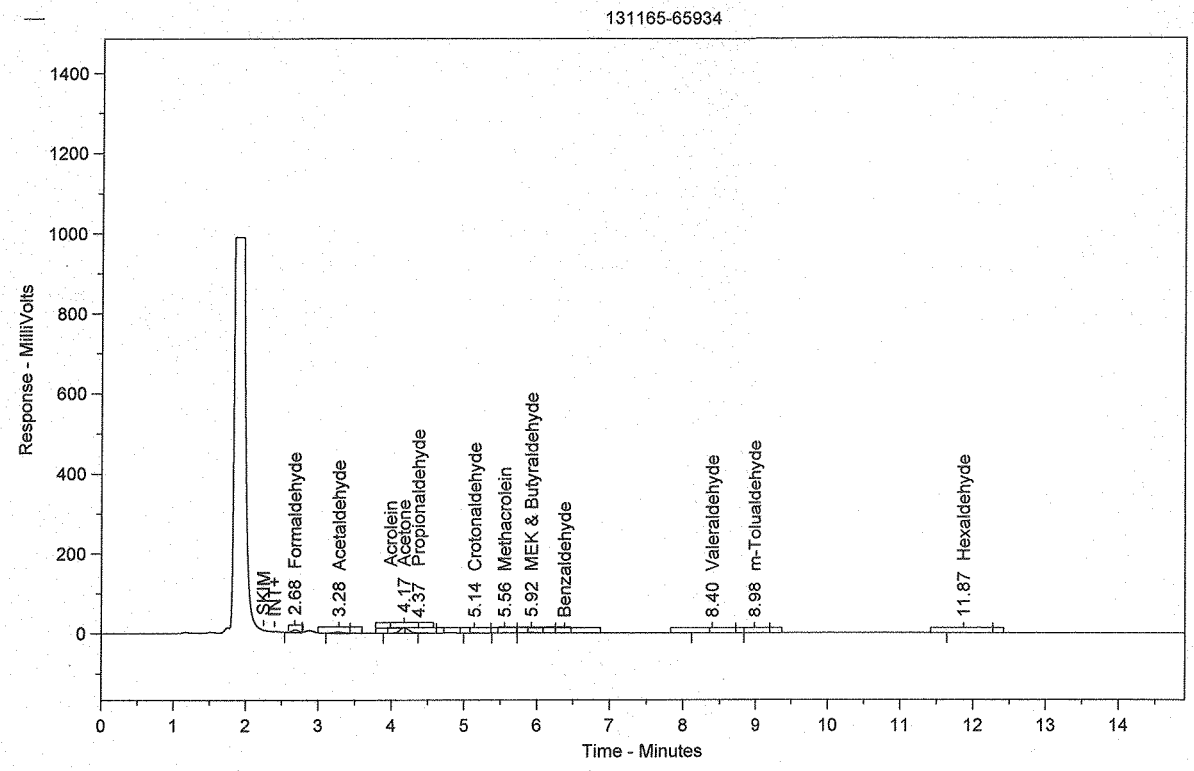
Method File Name = C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0026.BND
Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0026.BND
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	2.68	Formaldehyde	0.1286	12.297	82734	18.122	BB	0.11
2	3.28	Acetaldehyde	0.1286	12.295	67929	14.879	BB	0.12
3	4.00	Acrolein	0.0047	0.448	2244	0.492	BV	0.09
4	4.17	Acetone	0.5600	53.558	233190	51.078	VV	0.13
5	4.43	Propionaldehyde	0.0309	2.957	12784	2.800	VB	0.14
6	5.13	Crotonaldehyde	0.0352	3.365	13376	2.930	BB	0.25
7	5.56	Methacrolein	0.0085	0.812	3416	0.748	BV	0.14
8	5.95	MEK & Butyraldehyde	0.0411	3.932	13310	2.915	VB	0.10
9	6.36	Benzaldehyde	0.0199	1.908	5277	1.156	BB	0.18
10	8.16	Valeraldehyde	0.0411	3.930	11472	2.513	BV	0.22
11	8.72	m-Tolualdehyde	0.0320	3.065	7231	1.584	VB	0.32
12	11.90	Hexaldehyde	0.0150	1.432	3578	0.784	BB	0.32

Total Area = 456541.3 Total Height = 55152.64 Total Amount = 1.045576



Sample Name = **131165-65934** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0030.RAW**
Date Taken (end) = 8/28/2013 2:41:13 PM

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

Calibration File Name = C:\Chromeperfect 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	2.68	Formaldehyde	0.0627	12.066	40335	18.089	BB	0.10
2	3.28	Acetaldehyde	0.0410	7.891	21661	9.714	BB	0.12
3	4.17	Acetone	0.2809	54.065	116952	52.449	SBB	0.13
4	4.37	Propionaldehyde	0.0146	2.807	6030	2.704	TBB	0.11
5	5.14	Crotonaldehyde	0.0152	2.929	5784	2.594	BB	0.18
6	5.56	Methacrolein	0.0132	2.550	5327	2.389	BV	0.15
7	5.92	MEK & Butyraldehyde	0.0497	9.569	16092	7.217	VB	0.17
8	8.40	Valeraldehyde	0.0203	3.901	5657	2.537	BB	0.31
9	8.98	m-Tolualdehyde	0.0072	1.379	1616	0.725	BB	0.21
10	11.87	Hexaldehyde	0.0148	2.843	3529	1.582	BB	0.28

Total Area = 222982.4 Total Height = 26198.32 Total Amount = 0.5194777

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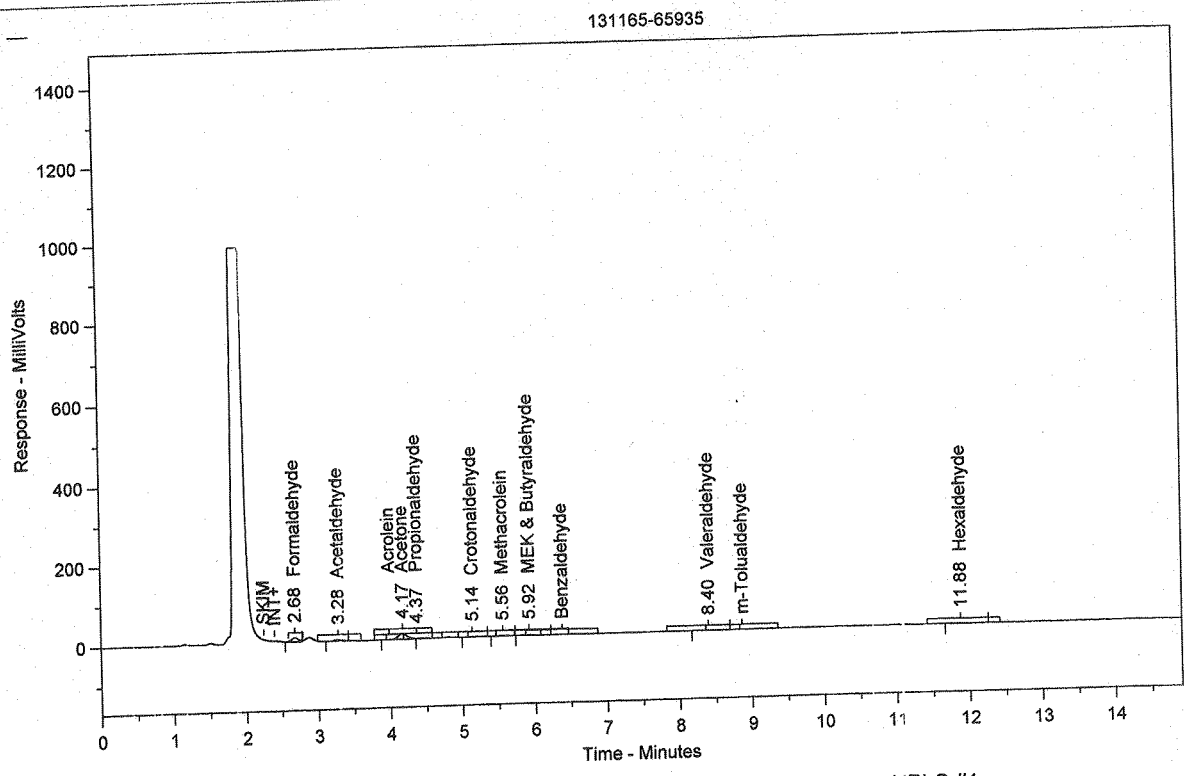


Sample Name = **131165-65935**

Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0031.RAW**
Date Taken (end) = 8/28/2013 2:57:52 PM

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

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

Run Time = 14.89889
Injection Volume = 10

Vial Number = 31
Dilution Factor = 1

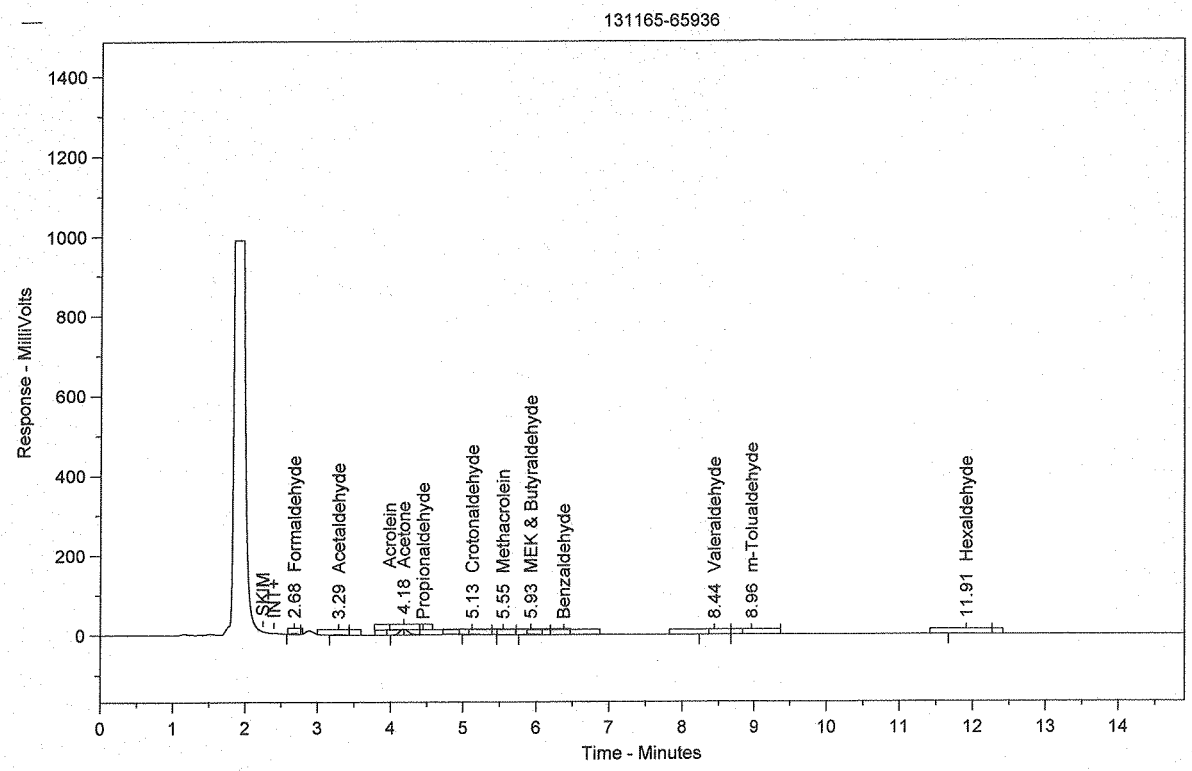
Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	0.0936	16.804	60213	24.357	BB	0.10
2	3.28	Acetaldehyde	0.0515	9.243	27198	11.002	BB	0.12
3	4.17	Acetone	0.2714	48.741	113023	45.720	SBB	0.13
4	4.37	Propionaldehyde	0.0172	3.089	7113	2.877	TBB	0.12
5	5.14	Crotonaldehyde	0.0186	3.342	7076	2.862	BB	0.19
6	5.56	Methacrolein	0.0166	2.973	6657	2.693	BV	0.16
7	5.92	MEK & Butyraldehyde	0.0463	8.321	15001	6.068	VB	0.18
8	8.40	Valeraldehyde	0.0240	4.309	6699	2.710	BB	0.26
9	11.88	Hexaldehyde	0.0177	3.178	4228	1.711	BB	0.32

Total Area = 247206.9

Total Height = 29906.9

Total Amount = 0.5568646

HP



Sample Name = **131165-65936** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0032.RAW**
Date Taken (end) = 8/28/2013 3:14:31 PM

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

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

Run Time = 14.89889 Vial Number = 32
Injection Volume = 10 Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	0.0216	4.945	13914	7.865	BB	0.10
2	3.29	Acetaldehyde	0.0198	4.523	10450	5.907	BB	0.12
3	4.18	Acetone	0.2804	64.141	116782	66.010	BB	0.13
4	5.13	Crotonaldehyde	0.0140	3.196	5312	3.003	BB	0.27
5	5.55	Methacrolein	0.0128	2.916	5127	2.898	BB	0.18
6	5.93	MEK & Butyraldehyde	0.0479	10.954	15505	8.764	BB	0.17
7	8.44	Valeraldehyde	0.0088	2.011	2455	1.388	BV	0.24
8	8.96	m-Tolualdehyde	0.0203	4.653	4591	2.595	VB	0.55
9	11.91	Hexaldehyde	0.0116	2.661	2780	1.571	BB	0.34

Total Area = 176915.5 Total Height = 21061 Total Amount = 0.4372359

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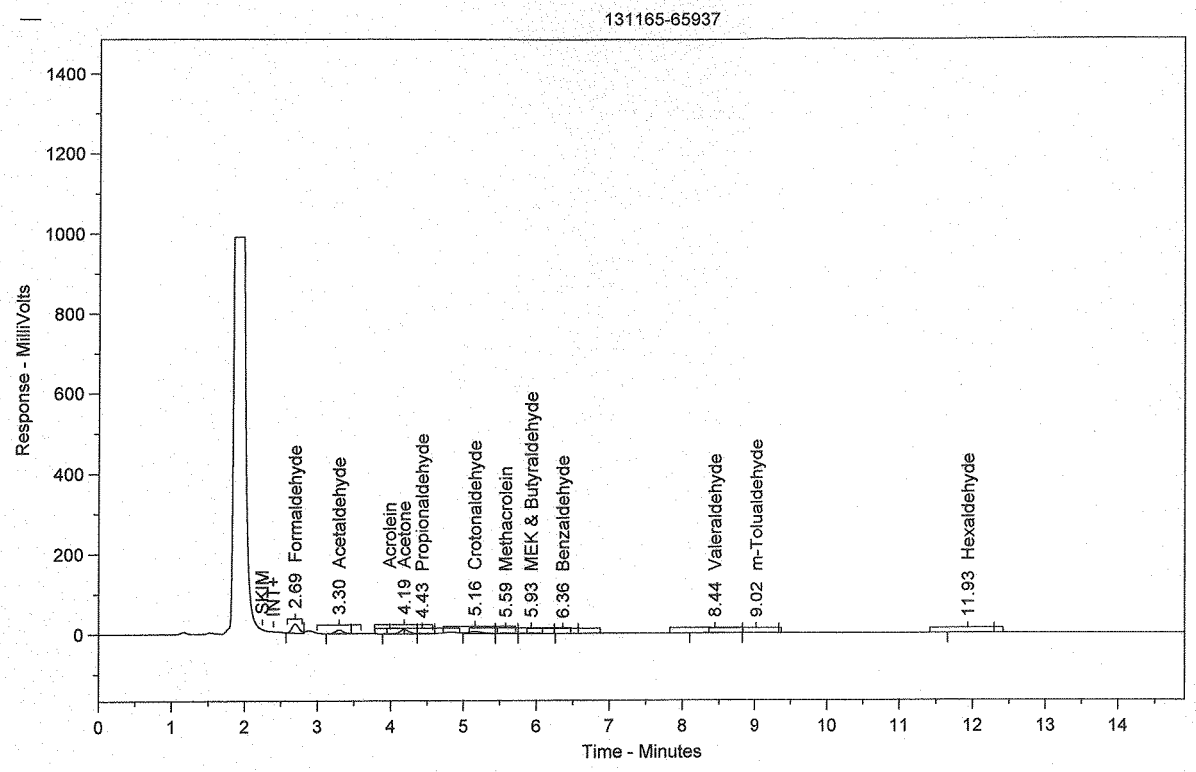

Sample Name = **131165-65937** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0033.RAW**
Date Taken (end) = 8/28/2013 3:31:10 PM

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

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

Run Time = 14.89889 Vial Number = 33
Injection Volume = 10 Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.69	Formaldehyde	0.2340	22.209	150575	31.750	BB	0.10
2	3.30	Acetaldehyde	0.1405	13.332	74225	15.651	BB	0.12
3	4.19	Acetone	0.2260	21.451	94116	19.845	BV	0.13
4	4.43	Propionaldehyde	0.0409	3.885	16925	3.569	VB	0.14
5	5.16	Crotonaldehyde	0.1832	17.388	69650	14.686	BV	0.18
6	5.59	Methacrolein	0.0409	3.883	16453	3.469	VB	0.15
7	5.93	MEK & Butyraldehyde	0.0519	4.927	16806	3.544	BB	0.23
8	6.36	Benzaldehyde	0.0072	0.685	1909	0.403	BB	0.22
9	8.44	Valeraldehyde	0.0779	7.395	21752	4.587	BV	0.26
10	9.02	m-Tolualdehyde	0.0272	2.584	6144	1.295	VB	0.24
11	11.93	Hexaldehyde	0.0238	2.262	5693	1.200	BB	0.28

Total Area = 474247.5 Total Height = 53712.88 Total Amount = 1.053645

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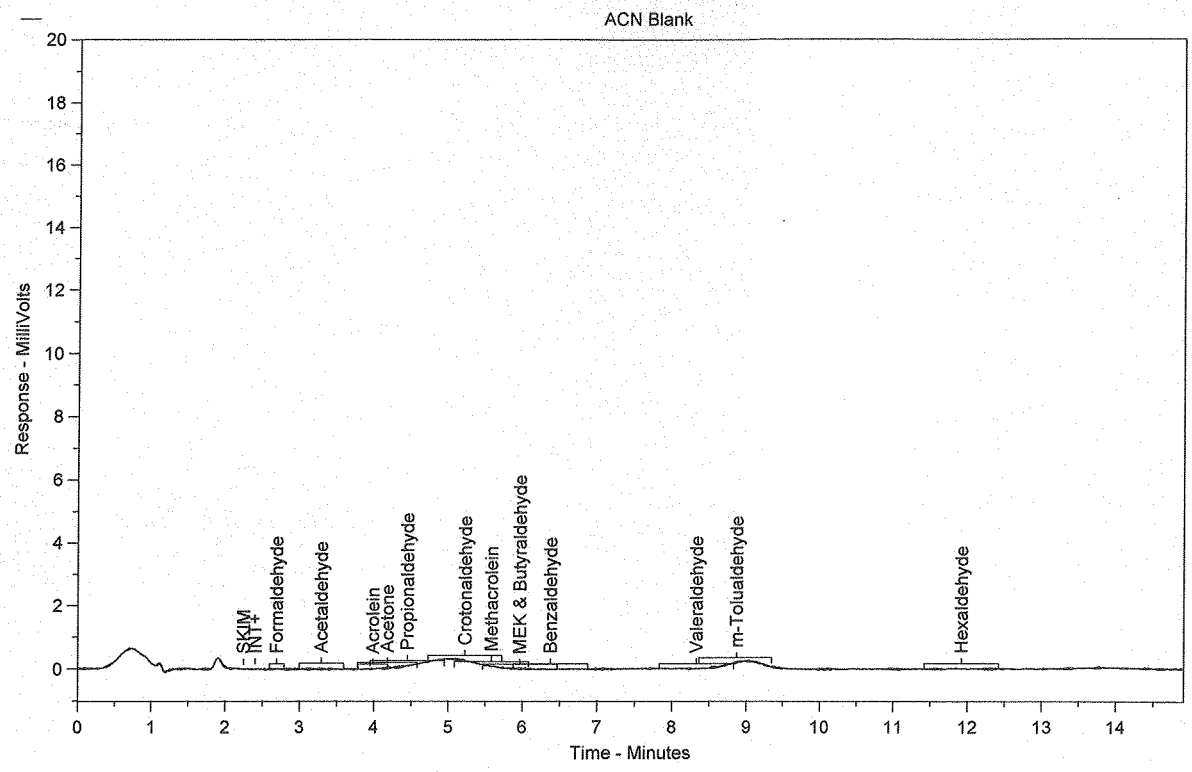


Sample Name = **ACN Blank** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0034.RAW**
Date Taken (end) = 8/28/2013 3:47:48 PM

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

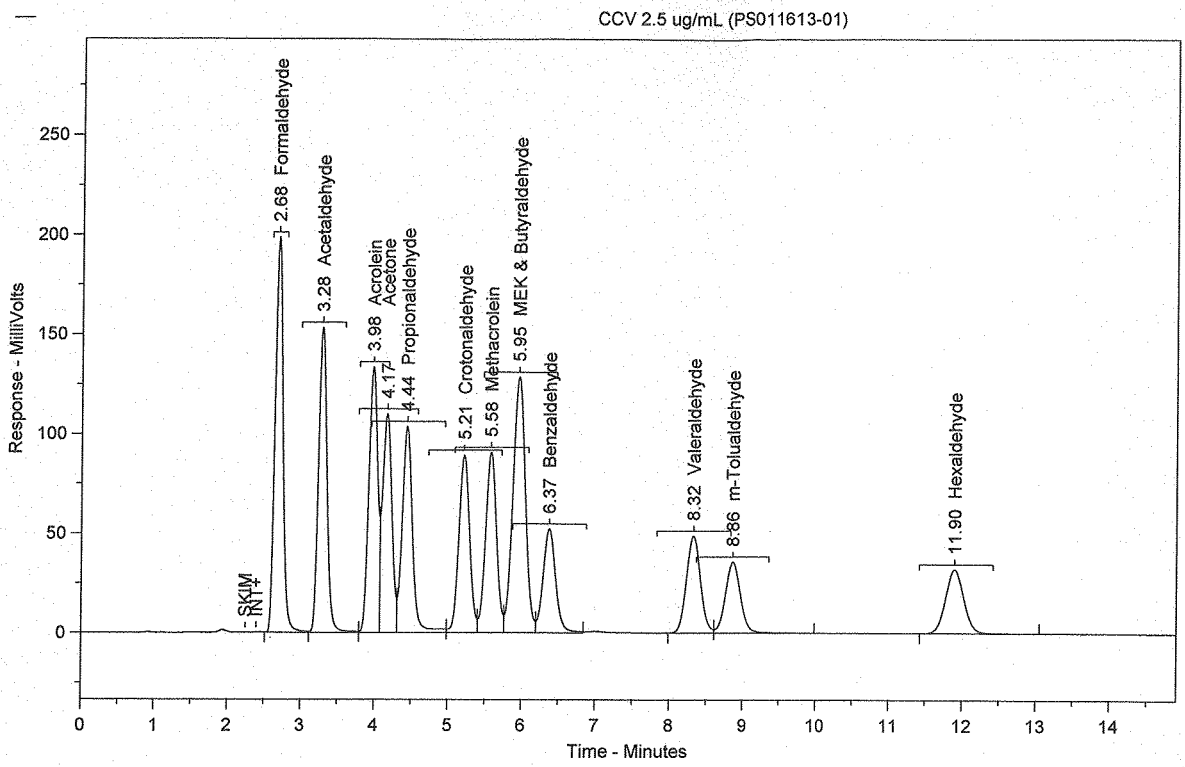
Calibration File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Concentration Units = ug/ml

Run Time = 14.89889 Vial Number = 34
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

HP
08/29/13



Sample Name = **CCV 2.5 ug/mL (PS011613-01)** Instrument = HPLC #1

Raw File Name = **C:\Chromeperfect 2\Data\HPLC #1\2013\082813TO-11\082813.0035.RAW**
Date Taken (end) = 8/28/2013 4:04:26 PM

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

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

Run Time = 14.89889 Vial Number = 35
Injection Volume = 10 Dilution Factor = 1

Peak #	Ret. Time	Name	Amount	Amt %	Area	Area %	Type	Width
1	2.68	Formaldehyde	2.2803	7.495	1467322	12.760	SBB	0.11
2	3.28	Acetaldehyde	2.3270	7.648	1229594	10.692	TBV	0.12
3	3.98	Acrolein	2.3088	7.588	1106224	9.620	TVV	0.14
4	4.17	Acetone	2.3408	7.693	974737	8.476	TVV	0.14
5	4.44	Propionaldehyde	2.4334	7.998	1006200	8.750	TVV	0.14
6	5.21	Crotonaldehyde	2.3866	7.844	907299	7.890	TVV	0.16
7	5.58	Methacrolein	2.3493	7.721	944655	8.215	TVV	0.15
8	5.95	MEK & Butyraldehyde	4.6739	15.361	1513070	13.157	TVV	0.18
9	6.37	Benzaldehyde	2.3446	7.706	620212	5.393	TVB	0.18
10	8.32	Valeraldehyde	2.3103	7.593	644981	5.609	BV	0.20
11	8.86	m-Tolualdehyde	2.3145	7.607	522307	4.542	VB	0.22
12	11.90	Hexaldehyde	2.3569	7.746	563134	4.897	BB	0.27

Total Area = 1.149973E+07 Total Height = 1175726 Total Amount = 30.42639

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File Name = C:\Chromeperfect 2\Methods and Sequences\#1 HPLC #1\2013\082813 (TO-11).SEQ
File Date = 8/28/2013 1:40:53 PM
Analyst=

Entry #	Raw File Name	Method File Name	Sample Name	Vial #	DF
1	082813.0001.raw	061113 TO-11A.MET	ACN Blank	1	1
2	082813.0002.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS061113-01)	2	1
3	082813.0003.raw	061113 TO-11A.MET	SS 2.50 ppm (PS011613-01)	3	1
4	082813.0004.raw	061113 TO-11A.MET	TO-11 Method Blank	4	1
5	082813.0005.raw	061113 TO-11A.MET	LCS Blank	5	1
6	082813.0006.raw	061113 TO-11A.MET	LCS .379ug/mL (PS011013-01)	6	1
7	082813.0007.raw	061113 TO-11A.MET	MS 131143-65850 1.25 ppm [(PS061113-01x2]	7	1
8	082813.0008.raw	061113 TO-11A.MET	MSD 131143-65850 1.25 ppm [(PS061113-01x2]	8	1
9	082813.0009.raw	061113 TO-11A.MET	131143-65850	9	1
10	082813.0010.raw	061113 TO-11A.MET	131143-65850 dup	10	1
11	082813.0011.raw	061113 TO-11A.MET	131143-65846	11	1
12	082813.0012.raw	061113 TO-11A.MET	ACN Blank	12	1
13	082813.0013.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS011613-01)	13	1
14	082813.0014.raw	061113 TO-11A.MET	131143-65847	14	1
15	082813.0015.raw	061113 TO-11A.MET	131143-65847 dup	15	1
16	082813.0016.raw	061113 TO-11A.MET	131143-65848	16	1
17	082813.0017.raw	061113 TO-11A.MET	131143-65849	17	1
18	082813.0018.raw	061113 TO-11A.MET	131143-65851	18	1
19	082813.0019.raw	061113 TO-11A.MET	131143-65852	19	1
20	082813.0020.raw	061113 TO-11A.MET	131143-65853	20	1
21	082813.0021.raw	061113 TO-11A.MET	131143-65854	21	1
22	082813.0022.raw	061113 TO-11A.MET	LCS rr .379ug/mL (PS011013-01)	22	1
23	082813.0023.raw	061113 TO-11A.MET	ACN Blank	23	1
24	082813.0024.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS011613-01)	24	1
25	082813.0025.raw	061113 TO-11A.MET	131143-65855	25	1
26	082813.0026.raw	061113 TO-11A.MET	131143-65855 dup	26	1
27	082813.0027.raw	061113 TO-11A.MET	131143-65856	27	1
28	082813.0028.raw	061113 TO-11A.MET	131143-65857	28	1
29	082813.0029.raw	061113 TO-11A.MET	131143-65858	29	1
30	082813.0030.raw	061113 TO-11A.MET	131165-65934	30	1
31	082813.0031.raw	061113 TO-11A.MET	131165-65935	31	1
32	082813.0032.raw	061113 TO-11A.MET	131165-65936	32	1
33	082813.0033.raw	061113 TO-11A.MET	131165-65937	33	1
34	082813.0034.raw	061113 TO-11A.MET	ACN Blank	34	1
35	082813.0035.raw	061113 TO-11A.MET	CCV 2.5 ug/mL (PS011613-01)	35	1