

Atmospheric Analysis & Consulting, Inc.

Client : SWAPE
Client Project Name : Bridgeton Sanitary Landfill Air Quality Assessment
Client Project No. : NA
AAC Project No. : 130809
Reporting Date : 07/01/2013

On June 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 V DNPH | 130809-63998 |
| U-2 W1 DNPH | 130809-63999 |
| D-1 IN DNPH | 130809-64000 |
| D-2 W5 DNPH | 130809-64001 |

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

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

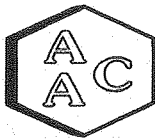
I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy data package.

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

Marcus Hueppe
Laboratory Director

This report consists of 49 pages.





SAMPLE RECEIPT / LOG-IN REPORT

AAC Project 130809

Received By: J. Zachman

| <u>Sample Receipt Date</u> | <u>Project Desc</u> | <u>Clients ID</u> | <u>Matrix</u> | <u>Sampling Date/Time</u> | <u>Sampled By</u> | <u>Sample #</u> | <u>Analysis Requested</u> |
|--------------------------------|--|-------------------|---------------|-------------------------------|-------------------|-----------------|-------------------------------|
| 6/28/2013 0945 | Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment | U-1 V DNPH | Tube | 6/27/2013 | Client | 63998 | TO-11A |
| 6/28/2013 0945 | Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment | U-2 W1 DNPH | Tube | 6/27/2013 | Client | 63999 | TO-11A |
| 6/28/2013 0945 | Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment | D-1 IN DNPH | Tube | 6/27/2013 | Client | 64000 | TO-11A |
| 6/28/2013 0945 | Soil Water Air Protection Enterprise (SWAPE) Bridgeton Sanitary Landfill Air Quality Assessment | D-2 W5 DNPH | Tube | 6/27/2013 | Client | 64001 | TO-11A |

TURN AROUND TIME: Normal (10days)

Lab Due Date: 7/5/2013

Total Samples: 4

REMARKS:

Samples were received at 5.8°C. "Standard TAT for all analyses. If possible deliver report within 2 weeks. Provide Level IV QC package for all analyses."

AIR SAMPLING PUMP CALIBRATION LOG

Bridgeton Sanitary Landfill Air Quality Assessment

COMPLETED BY: John Blank

PERSONNEL: John Blank

DATE: **June 27th, 2013**

PAGE: 1 of 1

CALIBRATION

INSTRUMENT : Biose Defender510 Serial #131756

INITIAL PUMP SETUP (PRE-SAMPLING FLOW CHECK)

| Sample ID e.g. acetaldehyde | Analyte e.g. acetaldehyde | SKC Tube ID e.g. 226-120 | Air Pump Serial No. e.g. 123456 | START | | END | | Total Volume Liters |
|--------------------------------|------------------------------|-----------------------------|---------------------------------------|----------------------|-------------------------|----------------------|------------------------|------------------------|
| | | | | Flow Rate (L/min) | Start Time (24 Hour) | Flow Rate (L/min) | Stop Time (24 Hour) | |
| <u>U-1 V</u> | Aldehydes | 226-120 | 67385 | 1.054 | 13:05:00 | 1.011 | 17:05:00 | 247.8 |
| <u>U-2 W1</u> | Aldehydes | 226-120 | 67835 | 1.024 | 13:20:00 | 1.06 | 17:20:00 | 250.08 |
| <u>D-1 IN</u> | Aldehydes | 226-120 | 59912 | 1.024 | 12:30:00 | 1.072 | 16:30:00 | 251.52 |
| <u>D-2 W5</u> | Aldehydes | 226-120 | 67992 | 1.003 | 12:45:00 | 1.102 | 16:45:00 | 252.6 |
| | | | | | | | | 0 |
| | | | | | | | | 0 |
| | | | | | | | | 0 |
| | | | | | | | | 0 |

NOTES / LOCATION REFERENCES

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

AAC# 130809

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: 27-Jun 2013 Page 1 of 1

Project Manager: PAUL ROSENFELD, PH.D. REQUESTED TESTS / ANALYSES

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* Special Instructions / Conditions of Receipt

| LAB ID | SAMPLE ID NUMBER | Type | Date | Time | VOCS - EPA TO-15 | Reduced Sulfur Compounds - ASTM D5504 | Carbonyls - EPA TO-11A | Carboxylic Acids - Tube GC-MS | HCL - NIOSH 7903 | Ammonia - OSHA ID-188 | SO2 - OSHA ID-200 | HCN - NIOSH 6010 | Amines - NIOSH 2010M | Fixed Gases - EPA 3C | PAHs / Dioxins EPA TO-13A / 9A | Mercury - NIOSH 6009 | Odor Evaluation | Tube # | Volume | |
|--------|------------------|------|--------|------|------------------|---------------------------------------|------------------------|-------------------------------|------------------|-----------------------|-------------------|------------------|----------------------|----------------------|--------------------------------|----------------------|-----------------|--------|------------|----------|
| 63998 | U1V | Tube | 27-Jun | 4 Hr | | | X | | | | | | | | | | | Tube # | 4440601544 | 247.8 L |
| 63999 | U2W1 | Tube | 27-Jun | 4 Hr | | | X | | | | | | | | | | | Tube # | 4440601539 | 250.08 L |
| 64000 | D1IN | Tube | 27-Jun | 4 Hr | | | X | | | | | | | | | | | Tube # | 4440601456 | 251.52 L |
| 64001 | D2W5 | Tube | 27-Jun | 4 Hr | | | X | | | | | | | | | | | Tube # | 4440601542 | 252.6 L |
| | | | | | | | | | | | | | | | | | | | | |

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

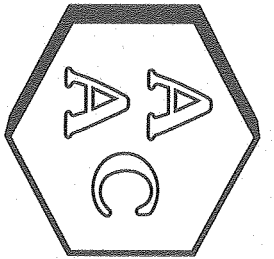
Relinquished By: John Blank Date: June 27th Time: 12 Noon Received By: Date: Time:

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

Relinquished By: Date: Time: Received By: Date: Time: 6/28/13 0945

580C - F2dEX

Results



Atmospheric Analysis & Consulting, Inc.

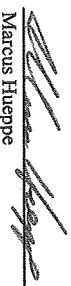
LABORATORY ANALYSIS REPORT Analysis of Carbonyls by EPA Method TO-11A

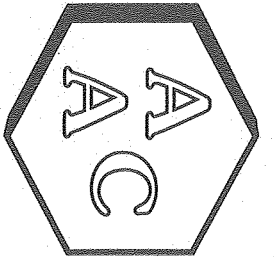
Client : SWAPE
 Client Project Name : Bridgetown Sanitary Landfill Air Quality Assessment
 AAC Project No. : 130809
 Analyst : HP/EG
 Units : ppbv

Sampling Date (s) : 06/27/2013
 Receiving Date : 06/28/2013
 Analysis Date : 07/01/2013
 Reporting Date : 07/01/2013

| Client ID | AAC Sample ID | Formaldehyde | Acetaldehyde | Acrolein | Acetone | Propionaldehyde | Crotonaldehyde | Methacrolein | MEK & Butyraldehyde | Benzaldehyde | Valeraldehyde | m-Tolualdehyde | Hexaldehyde |
|-------------|---------------|--------------|--------------|----------|---------|-----------------|----------------|--------------|---------------------|--------------|---------------|----------------|-------------|
| U-1 V DNPH | 130809-63998 | 0.491 | 0.248 | <SRL | 2.01 | <SRL | 0.114 | <SRL | 0.238 | <SRL | 0.097 | <SRL | <SRL |
| SRL | | 0.246 | 0.168 | 0.132 | 0.127 | 0.127 | 0.106 | 0.106 | 0.103 | 0.070 | 0.086 | 0.062 | 0.074 |
| U-2 W1 DNPH | 130809-63999 | 0.606 | 0.228 | <SRL | 1.40 | <SRL | 0.231 | <SRL | 0.200 | <SRL | <SRL | <SRL | <SRL |
| SRL | | 0.244 | 0.166 | 0.131 | 0.126 | 0.126 | 0.105 | 0.105 | 0.102 | 0.069 | 0.085 | 0.061 | 0.073 |
| D-1 IN DNPH | 130809-64000 | 2.01 | 0.847 | <SRL | 1.51 | <SRL | 0.543 | <SRL | 0.378 | <SRL | 0.292 | 0.208 | <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-2 W5 DNPH | 130809-64001 | 2.45 | 0.646 | <SRL | 2.65 | 0.191 | 0.810 | 0.225 | 0.765 | <SRL | 0.109 | <SRL | <SRL |
| SRL | | 0.242 | 0.165 | 0.129 | 0.125 | 0.125 | 0.104 | 0.104 | 0.101 | 0.068 | 0.084 | 0.060 | 0.072 |

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


 Marcus Hueppe
 Laboratory Director



Atmospheric Analysis & Consulting, Inc.


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

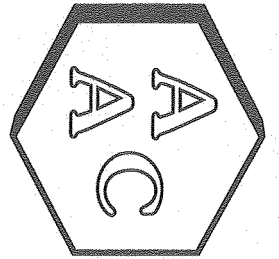
Client : SWAPE
 Client Project Name : Bridgetown Sanitary Landfill Air Quality Assessment
 AAC Project No. : 130809
 Analyst : HP/EG
 Units : ug/m³

Sampling Date (s) : 06/27/2013
 Receiving Date : 06/28/2013
 Analysis Date : 07/01/2013
 Reporting Date : 07/01/2013

| Client ID | AAC Sample ID | Formaldehyde | Acetaldehyde | Acrolein | Acetone | Propionaldehyde | Crotonaldehyde | Methacrolein | MEK & Butyraldehyde | Benzaldehyde | Valeraldehyde | m-Tolaldehyde | Hexaldehyde |
|-------------|---------------|--------------|--------------|----------|---------|-----------------|----------------|--------------|---------------------|--------------|---------------|---------------|-------------|
| U-1 V DNPH | 130809-63998 | 0.603 | 0.447 | <SRL | 4.77 | <SRL | 0.326 | <SRL | 0.701 | <SRL | 0.340 | <SRL | <SRL |
| SRL | | 0.303 | 0.303 | 0.303 | 0.303 | 0.303 | 0.303 | 0.303 | 0.303 | 0.303 | 0.303 | 0.303 | 0.303 |
| U-2 W1 DNPH | 130809-63999 | 0.744 | 0.411 | <SRL | 3.33 | <SRL | 0.663 | <SRL | 0.589 | <SRL | <SRL | <SRL | <SRL |
| SRL | | 0.300 | 0.300 | 0.300 | 0.300 | 0.300 | 0.300 | 0.300 | 0.300 | 0.300 | 0.300 | 0.300 | 0.300 |
| D-1 IN DNPH | 130809-64000 | 2.47 | 1.53 | <SRL | 3.59 | <SRL | 1.56 | <SRL | 1.12 | <SRL | 1.03 | 1.02 | <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-2 W5 DNPH | 130809-64001 | 3.01 | 1.16 | <SRL | 6.30 | <SRL | 2.32 | <SRL | 2.26 | <SRL | 0.382 | <SRL | <SRL |
| SRL | | 0.297 | 0.297 | 0.297 | 0.297 | 0.297 | 0.297 | 0.297 | 0.297 | 0.297 | 0.297 | 0.297 | 0.297 |

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


 Marcus Hueppe
 Laboratory Director



Atmospheric Analysis & Consulting, Inc.

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

Client : SWAPE
 Client Project Name : Bridgetown Sanitary Landfill Air Quality Assessment
 AAC Project No. : 130809
 Analyst : HP/EG
 Units : ug/sample

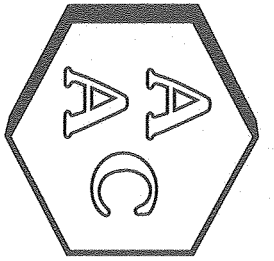
Sampling Date (s) : 06/27/2013
 Receiving Date : 06/28/2013
 Analysis Date : 07/01/2013
 Reporting Date : 07/01/2013

| Client ID | AAC Sample ID | Formaldehyde | Acetaldehyde | Acrolein | Acetone | Propionaldehyde | Crotonaldehyde | Methacrolein | MEK & Butyraldehyde | Benzaldehyde | Valeraldehyde | m-Tolaldehyde | Hexaldehyde |
|-------------|---------------|--------------|--------------|----------|---------|-----------------|----------------|--------------|---------------------|--------------|---------------|---------------|-------------|
| U-1 V DNPH | 130809-63998 | 0.149 | 0.111 | <SRL | 1.18 | <SRL | 0.081 | <SRL | 0.174 | <SRL | 0.084 | <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 W1 DNPH | 130809-63999 | 0.186 | 0.103 | <SRL | 0.832 | <SRL | 0.166 | <SRL | 0.147 | <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 IN DNPH | 130809-64000 | 0.621 | 0.384 | <SRL | 0.904 | <SRL | 0.391 | <SRL | 0.281 | <SRL | 0.259 | 0.257 | <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 W4 DNPH | 130809-64001 | 0.760 | 0.294 | <SRL | 1.59 | 0.115 | 0.586 | 0.163 | 0.570 | <SRL | 0.097 | <SRL | <SRL |
| SRL | | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 | 0.075 |

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


 Marcus Hueppe
 Laboratory Director

QA/QC Summary



Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

TO-11A

HPLC Calibration Verification of the 06/11/2013 Calibration

Analysis Date : 07/01/2013
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 | 2.57 | 2.58 | 2.60 | 2.59 | 2.59 | 2.59 | 2.59 | 5.17 | 2.58 | 2.57 | 2.54 | 2.59 |
| Accuracy (%)* | 103 | 103 | 104 | 104 | 104 | 104 | 104 | 103 | 103 | 103 | 102 | 104 |

Closing CCV

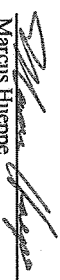
| Standard Concentration (ug/mL) | Formaldehyde (ug/mL) | Acetaldehyde (ug/mL) | Acrolein (ug/mL) | Acetone (ug/mL) | Propionaldehyde (ug/mL) | Crotonaldehyde (ug/mL) | Methacrolein (ug/mL) | MEK & Butyraldehyde (ug/mL) | Benzaldehyde (ug/mL) | Valeraldehyde (ug/mL) | m-Tolualdehyde (ug/mL) | Hexaldehyde (ug/mL) |
|--------------------------------|----------------------|----------------------|------------------|-----------------|-------------------------|------------------------|----------------------|-----------------------------|----------------------|-----------------------|------------------------|---------------------|
| 2.50 | 2.58 | 2.58 | 2.59 | 2.59 | 2.65 | 2.61 | 2.60 | 5.13 | 2.54 | 2.57 | 2.55 | 2.56 |
| Accuracy (%)* | 103 | 103 | 104 | 104 | 106 | 104 | 104 | 103 | 102 | 103 | 102 | 102 |

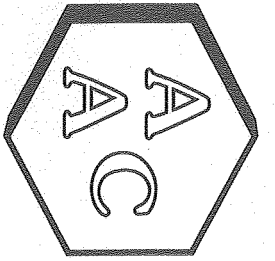
| Standard Concentration (ug/mL) | Formaldehyde (ug/mL) | Acetaldehyde (ug/mL) | Acrolein (ug/mL) | Acetone (ug/mL) | Propionaldehyde (ug/mL) | Crotonaldehyde (ug/mL) | Methacrolein (ug/mL) | MEK & Butyraldehyde (ug/mL) | Benzaldehyde (ug/mL) | Valeraldehyde (ug/mL) | m-Tolualdehyde (ug/mL) | Hexaldehyde (ug/mL) |
|--------------------------------|----------------------|----------------------|------------------|-----------------|-------------------------|------------------------|----------------------|-----------------------------|----------------------|-----------------------|------------------------|---------------------|
| 2.50 | 2.57 | 2.57 | 2.57 | 2.58 | 2.69 | 2.63 | 2.58 | 5.13 | 2.57 | 2.56 | 2.55 | 2.57 |
| Accuracy (%)* | 103 | 103 | 103 | 103 | 108 | 105 | 103 | 103 | 103 | 102 | 102 | 103 |

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 | 2.59 | 2.59 | 2.61 | 2.58 | 2.59 | 2.59 | 2.59 | 5.20 | 2.59 | 2.59 | 2.57 | 2.60 |
| Accuracy (%)* | 104 | 104 | 104 | 103 | 104 | 104 | 104 | 104 | 104 | 104 | 103 | 104 |

*Must be 100 ± 10%


 Marcus Hueppe
 Laboratory Director



Atmospheric Analysis & Consulting, Inc.

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


Analysis Date : 07/01/2013

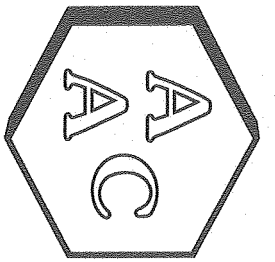
Analyst : HPE/G

Instrument ID : HPLC 01

| Analyses | 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) | 0.372 | 0.373 | 0.386 | 0.386 | 0.376 | 0.357 | 0.419 | 0.725 | 0.374 | 0.376 | 0.382 | 0.377 |
| Spike Recovery (%)* | 98.1 | 98.4 | 102 | 102 | 99.2 | 94.4 | 111 | 95.6 | 98.7 | 99.3 | 101 | 99.6 |

*Must be 100 ± 15%


Marcus Hueppe
Laboratory Director



Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report

TO-11A

Matrix Spike Analysis

Analysis Date : 07/01/2013

Analyst : HP/EG

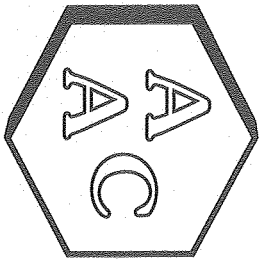
Instrument ID : HPLC 01

| Sample ID | 130809-63998 | | | | | | | | | | | |
|---|----------------------|----------------------|------------------|-----------------|-------------------------|------------------------|----------------------|-----------------------------|----------------------|-----------------------|------------------------|---------------------|
| Sample 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) |
| 0.025 | 0.018 | 0.001 | 0.197 | 0.008 | 0.013 | 0.008 | 0.029 | 0.002 | 0.014 | 0.005 | 0.005 | 0.005 |
| 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 2.50 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| Spiked Sample Concentration (ug/mL) | 1.31 | 1.31 | 1.33 | 1.51 | 1.31 | 1.33 | 2.59 | 1.31 | 1.32 | 1.31 | 1.31 | 1.31 |
| Duplicate Spiked Sample Concentration (ug/mL) | 1.29 | 1.29 | 1.30 | 1.48 | 1.28 | 1.31 | 2.52 | 1.29 | 1.30 | 1.30 | 1.30 | 1.29 |
| Spike Recovery (%)* | 103 | 103 | 106 | 105 | 104 | 105 | 102 | 105 | 104 | 104 | 104 | 104 |
| Duplicate Spike Recovery (%)* | 101 | 102 | 104 | 103 | 102 | 104 | 99.6 | 103 | 103 | 104 | 104 | 103 |
| RPD** | 1.5 | 1.5 | 2.3 | 2.0 | 2.3 | 1.5 | 2.7 | 1.5 | 1.5 | 0.8 | 1.5 | 1.5 |

*Must be 100± 25%

** Must be ≤ 25%


 Marcus Hueppe
 Laboratory Director



Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report TO-11A Duplicate Analysis

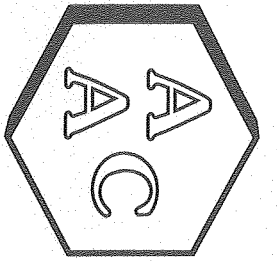
Analysis Date : 07/01/2013
 Analyst : HP/EG

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-Toluene (ug/ml) | Hexaldehyde (ug/ml) |
|--|----------------------|----------------------|------------------|-----------------|-------------------------|------------------------|----------------------|-----------------------------|----------------------|-----------------------|-------------------|---------------------|
| Sample ID | 130809-63998 | | | | | | | | | | | |
| Sample Concentration (ug/ml) | 0.050 | 0.037 | <RL | 0.394 | <RL | 0.027 | <RL | 0.058 | <RL | 0.028 | <RL | <RL |
| Duplicate Sample Concentration (ug/ml) | 0.049 | 0.036 | ND | 0.392 | <RL | 0.026 | <RL | 0.060 | <RL | 0.029 | <RL | <RL |
| RPD** | 0.8 | 2.5 | NA | 0.6 | NA | 2.3 | NA | 3.9 | NA | 2.5 | NA | NA |
| Sample ID | 130809-64000 | | | | | | | | | | | |
| Sample Concentration (ug/ml) | 0.207 | 0.128 | <RL | 0.301 | <RL | 0.130 | <RL | 0.094 | <RL | 0.086 | 0.086 | <RL |
| Duplicate Sample Concentration (ug/ml) | 0.213 | 0.128 | <RL | 0.313 | <RL | 0.131 | <RL | 0.100 | <RL | 0.083 | 0.085 | <RL |
| RPD** | 3.0 | 0.3 | NA | 3.8 | NA | 0.5 | NA | 6.7 | NA | 3.9 | 0.7 | NA |

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


 Marcus Hueppe
 Laboratory Director



Atmospheric Analysis & Consulting, Inc.


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

Analysis Date : 07/01/2013
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) | MEX & Butyraldehyde (ug/ml) | Benzaldehyde (ug/ml) | Valeraldehyde (ug/ml) | m-Tolualdehyde (ug/ml) | Hexaldehyde (ug/ml) |
|-------------------------------|----------------------|----------------------|------------------|-----------------|-------------------------|------------------------|----------------------|-----------------------------|----------------------|-----------------------|------------------------|---------------------|
| Opening Acetonitrile Blank | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL |
| Method Blank | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL |
| Continuing Acetonitrile Blank | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL |
| Closing Acetonitrile Blank | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL | <RL |
| Reporting Limit | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 | 0.025 |

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


 Marcus Hueppe
 Laboratory Director

Calibration Summary

File Name: C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113 TO-11A.CAL
Version: 6

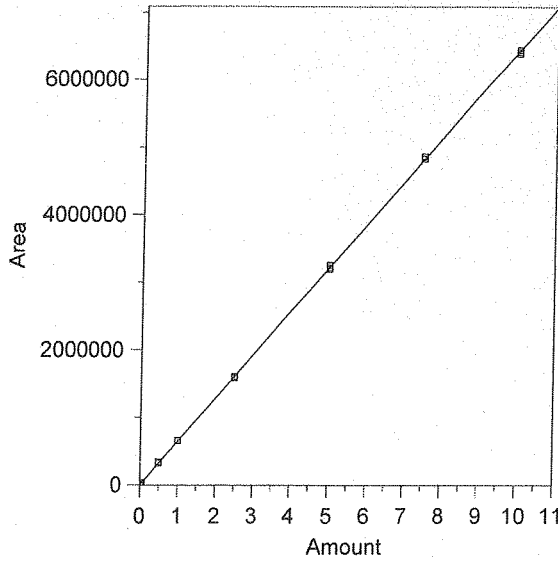
Creator: EG/HP
Description: EPA TO-11

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

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

All levels are normal data points.

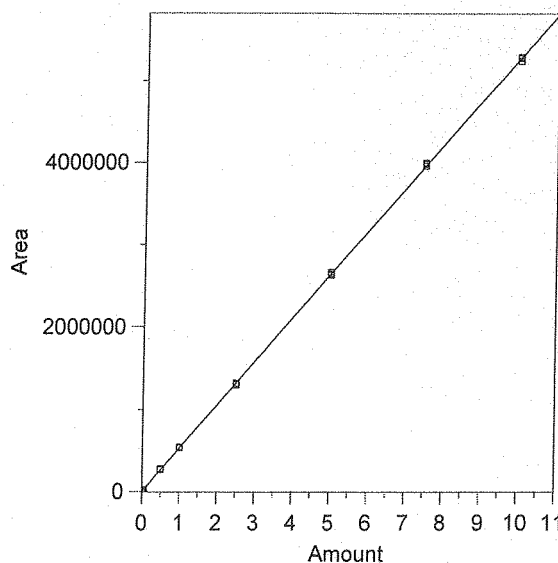
1 Formaldehyde



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

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

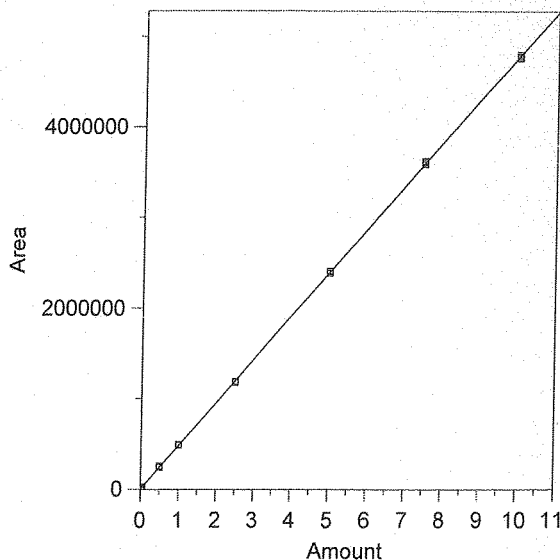
2 Acetaldehyde



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

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

3 Acrolein

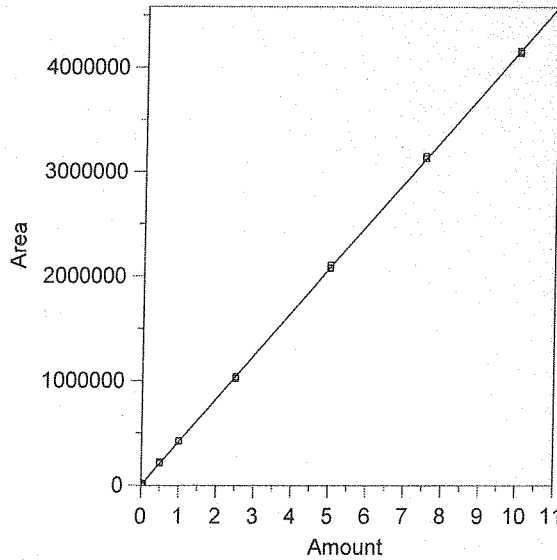


Expected retention time: 3.986 minutes
 Search window: 0.2 minutes
 No retention time reference component
 Group number: 0
 High alarm limit: 0
 Low alarm limit: 0
 Component constant: 0
 Single peak quantification by area
 Y = 479129.3 X + 0
 Linear fit with equal weighting, forced to origin
 Coefficient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

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

4

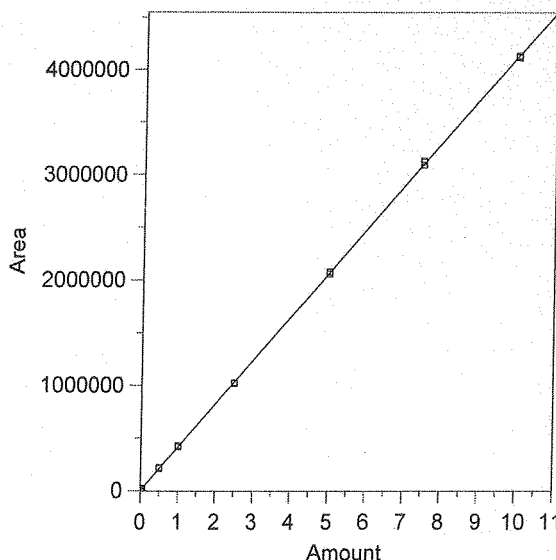
Acetone



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

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

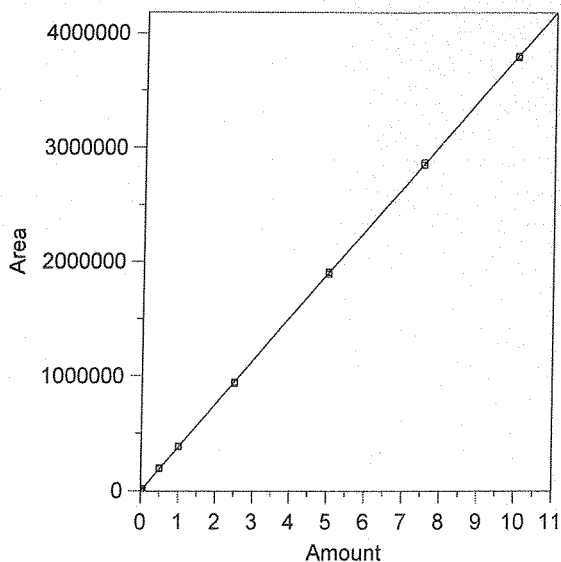
5 Propionaldehyde



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

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

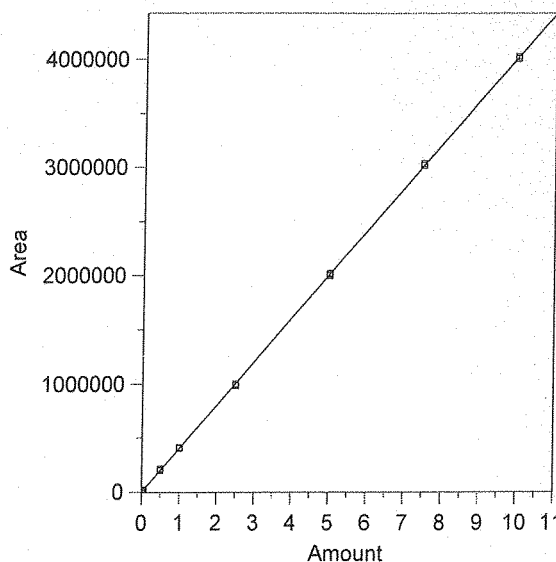
6 Crotonaldehyde



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

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

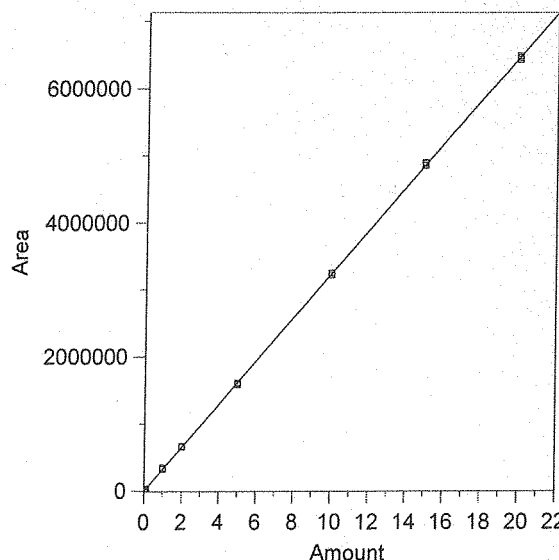
7 Methacrolein



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

| Level | Amount | Response | Cal Factor | Error, % | Source | Date and time |
|-------|--------|----------|------------|----------|---|----------------------|
| 1 | 0.005 | 2046.606 | 409321.2 | 1.795 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0002 | 6/13/2013 9:05:08 AM |
| 2 | 0.005 | 1941.76 | 388332 | -3.420 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0003 | 6/13/2013 9:05:23 AM |
| 3 | 0.005 | 2152.434 | 430486.8 | 7.059 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0004 | 6/13/2013 7:21:34 AM |
| 4 | 0.025 | 10133.4 | 405336 | 0.804 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0033 | 6/13/2013 7:22:04 AM |
| 5 | 0.025 | 10129.37 | 405174.8 | 0.764 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0006 | 6/13/2013 7:22:28 AM |
| 6 | 0.025 | 10215.62 | 408624.8 | 1.622 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0007 | 6/13/2013 7:22:52 AM |
| 7 | 0.05 | 20786.57 | 415731.4 | 3.389 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0008 | 6/13/2013 7:23:11 AM |
| 8 | 0.05 | 20543.71 | 410874.2 | 2.181 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0009 | 6/13/2013 7:23:32 AM |
| 9 | 0.05 | 20057.09 | 401141.8 | -0.239 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0010 | 6/13/2013 7:23:49 AM |
| 10 | 0.5 | 215228.8 | 430457.6 | 7.051 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0011.BND | 6/13/2013 9:25:13 AM |
| 11 | 0.5 | 202696.3 | 405392.6 | 0.818 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0012 | 6/13/2013 7:24:58 AM |
| 12 | 0.5 | 205546.4 | 411092.8 | 2.236 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0013 | 6/13/2013 7:25:12 AM |
| 13 | 1 | 411542.4 | 411542.4 | 2.347 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0014 | 6/13/2013 7:25:25 AM |
| 14 | 1 | 406241.6 | 406241.6 | 1.029 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0015 | 6/13/2013 7:25:42 AM |
| 15 | 1 | 405954.8 | 405954.8 | 0.958 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0016 | 6/13/2013 7:25:59 AM |
| 16 | 2.5 | 988074.2 | 395229.7 | -1.709 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0017 | 6/13/2013 7:26:15 AM |
| 17 | 2.5 | 985936.9 | 394374.8 | -1.922 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0018 | 6/13/2013 7:26:31 AM |
| 18 | 2.5 | 1000575 | 400230 | -0.466 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0019 | 6/13/2013 7:26:46 AM |
| 19 | 5 | 1996175 | 399235 | -0.713 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0020 | 6/13/2013 7:27:07 AM |
| 20 | 5 | 2017778 | 403555.6 | 0.361 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0021 | 6/13/2013 7:27:30 AM |
| 21 | 5 | 2011258 | 402251.6 | 0.037 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0022 | 6/13/2013 7:27:52 AM |
| 22 | 7.5 | 3018119 | 402415.9 | 0.078 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0023 | 6/13/2013 7:28:15 AM |
| 23 | 7.5 | 3035201 | 404693.5 | 0.644 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0024 | 6/13/2013 7:28:35 AM |
| 24 | 7.5 | 3035088 | 404678.4 | 0.640 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0025 | 6/13/2013 7:28:58 AM |
| 25 | 10 | 4025485 | 402548.5 | 0.111 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0026 | 6/13/2013 7:29:18 AM |
| 26 | 10 | 4010411 | 401041.1 | -0.264 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0027 | 6/13/2013 7:29:40 AM |
| 27 | 10 | 4007106 | 400710.6 | -0.346 | C:\Chromperfect 2\Data\HPLC #1\2013\061113(cal)\061113.0028 | 6/13/2013 7:29:57 AM |

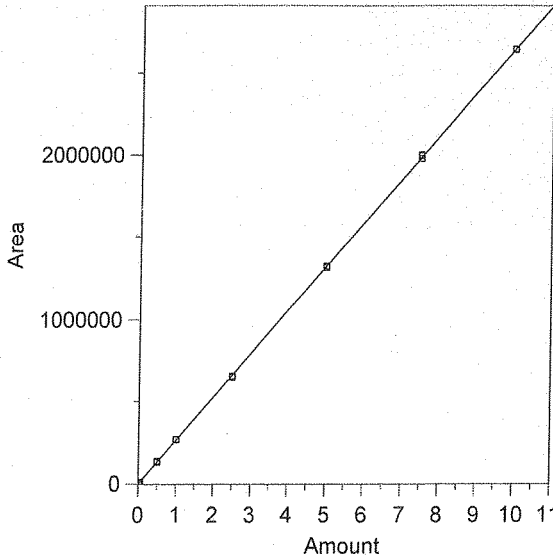
8 MEK & Butyraldehyde



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

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

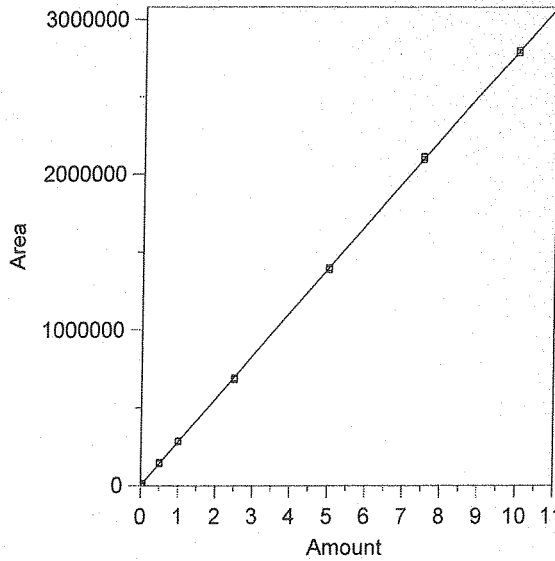
9 Benzaldehyde



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

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

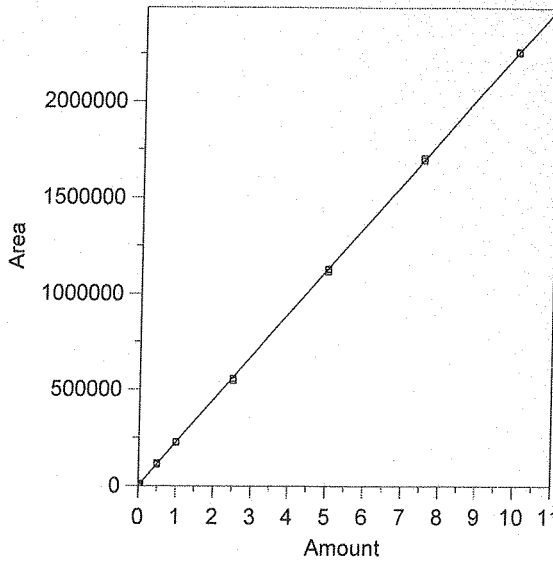
10 Valeraldehyde



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

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

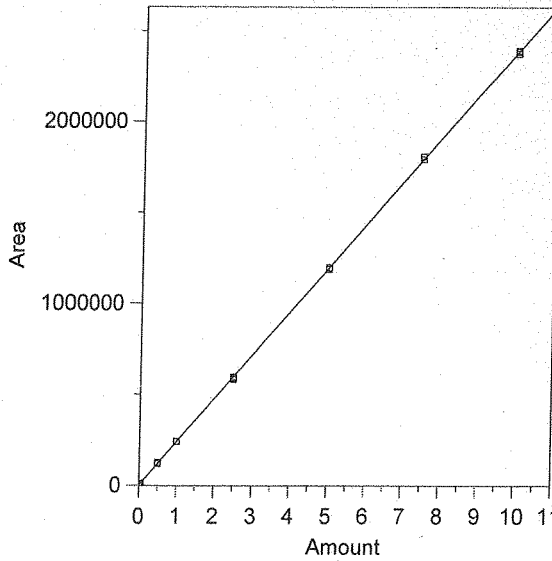
11 m-Tolualdehyde



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

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

12 Hexaldehyde



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

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

Chrom Perfect Sequence File

File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\061113(cal).SEQ

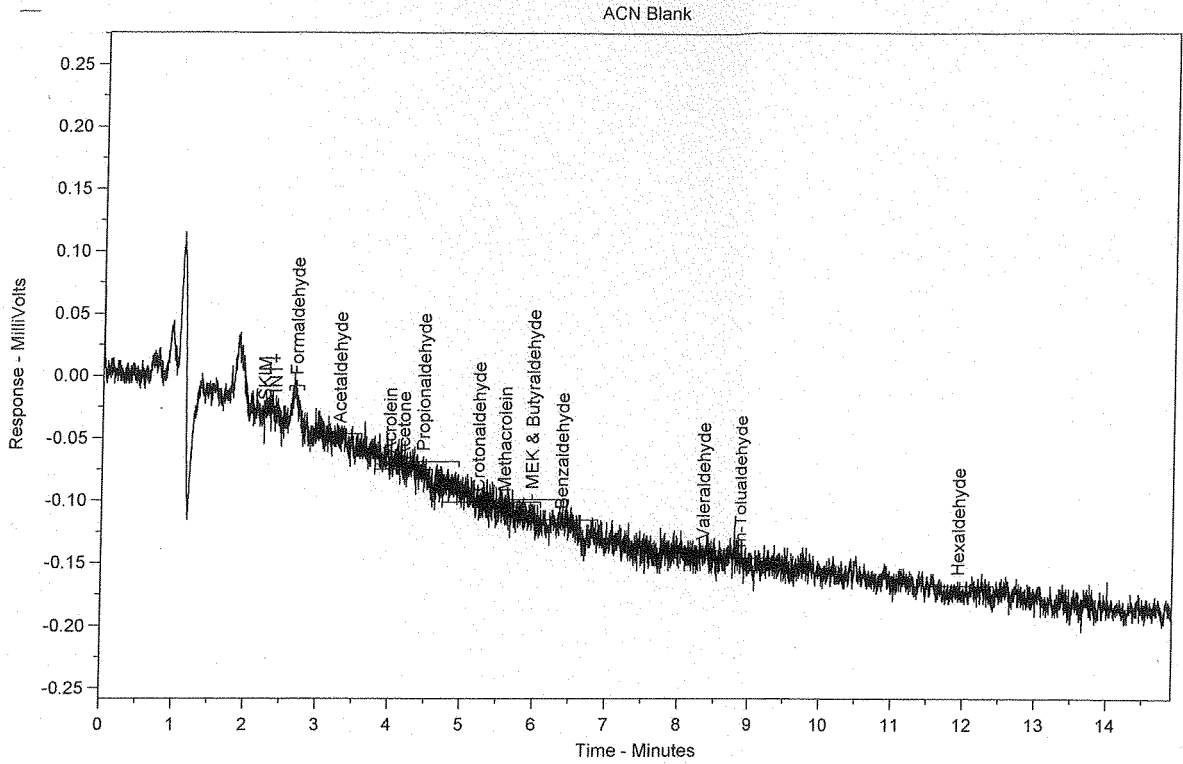
File Date = 6/12/2013 11:26:01 AM

Analyst=

| Entry # | Raw File Name | Method File Name | Sample Name | Vial # | DF |
|---------|-----------------|-------------------|--|--------|----|
| 1 | 061113.0001.raw | 061113 TO-11A.MET | ACN Blank | 1 | 1 |
| 2 | 061113.0002.raw | 061113 TO-11A.MET | STD 1-1 (.005ug/ml [PS061113-01]x2000) | 2 | 1 |
| 3 | 061113.0003.raw | 061113 TO-11A.MET | STD 1-2 (.005ug/ml [PS061113-01]x2000) | 2 | 1 |
| 4 | 061113.0004.raw | 061113 TO-11A.MET | STD 1-3 (.005ug/ml [PS061113-01]x2000) | 2 | 1 |
| 5 | 061113.0005.raw | 061113 TO-11A.MET | STD 2-1 (.025ug/ml [PS061113-01]x400) | 3 | 1 |
| 6 | 061113.0006.raw | 061113 TO-11A.MET | STD 2-2 (.025ug/ml [PS061113-01]x400) | 3 | 1 |
| 7 | 061113.0007.raw | 061113 TO-11A.MET | STD 2-3 (.025ug/ml [PS061113-01]x400) | 3 | 1 |
| 8 | 061113.0008.raw | 061113 TO-11A.MET | STD 3-1 (.050ug/ml [PS061113-01]x200) | 4 | 1 |
| 9 | 061113.0009.raw | 061113 TO-11A.MET | STD 3-2 (.050ug/ml [PS061113-01]x200) | 4 | 1 |
| 10 | 061113.0010.raw | 061113 TO-11A.MET | STD 3-3 (.050ug/ml [PS061113-01]x200) | 4 | 1 |
| 11 | 061113.0011.raw | 061113 TO-11A.MET | STD 4-1 (.5ug/ml [PS061113-01]x20) | 5 | 1 |
| 12 | 061113.0012.raw | 061113 TO-11A.MET | STD 4-2 (.5ug/ml [PS061113-01]x20) | 5 | 1 |
| 13 | 061113.0013.raw | 061113 TO-11A.MET | STD 4-3 (.5ug/ml [PS061113-01]x20) | 5 | 1 |
| 14 | 061113.0014.raw | 061113 TO-11A.MET | STD 5-1 (1.0ug/ml [PS061113-01]x10) | 6 | 1 |
| 15 | 061113.0015.raw | 061113 TO-11A.MET | STD 5-2 (1.0ug/ml [PS061113-01]x10) | 6 | 1 |
| 16 | 061113.0016.raw | 061113 TO-11A.MET | STD 5-3 (1.0ug/ml [PS061113-01]x10) | 6 | 1 |
| 17 | 061113.0017.raw | 061113 TO-11A.MET | STD 6-1 (2.5ug/ml [PS061113-01]x4) | 7 | 1 |
| 18 | 061113.0018.raw | 061113 TO-11A.MET | STD 6-2 (2.5ug/ml [PS061113-01]x4) | 7 | 1 |
| 19 | 061113.0019.raw | 061113 TO-11A.MET | STD 6-3 (2.5ug/ml [PS061113-01]x4) | 7 | 1 |
| 20 | 061113.0020.raw | 061113 TO-11A.MET | STD 7-1 (5.0ug/ml [PS061113-01]x2) | 8 | 1 |
| 21 | 061113.0021.raw | 061113 TO-11A.MET | STD 7-2 (5.0ug/ml [PS061113-01]x2) | 8 | 1 |
| 22 | 061113.0022.raw | 061113 TO-11A.MET | STD 7-3 (5.0ug/ml [PS061113-01]x2) | 8 | 1 |
| 23 | 061113.0023.raw | 061113 TO-11A.MET | STD 8-1 (7.5ug/ml [PS061113-01]x1.3) | 9 | 1 |
| 24 | 061113.0024.raw | 061113 TO-11A.MET | STD 8-2 (7.5ug/ml [PS061113-01]x1.3) | 9 | 1 |
| 25 | 061113.0025.raw | 061113 TO-11A.MET | STD 8-3 (7.5ug/ml [PS061113-01]x1.3) | 9 | 1 |
| 26 | 061113.0026.raw | 061113 TO-11A.MET | STD 9-1 (10.0ug/ml [PS061113-01]x1) | 10 | 1 |
| 27 | 061113.0027.raw | 061113 TO-11A.MET | STD 9-2 (10.0ug/ml [PS061113-01]x1) | 10 | 1 |
| 28 | 061113.0028.raw | 061113 TO-11A.MET | STD 9-3 (10.0ug/ml [PS061113-01]x1) | 10 | 1 |
| 29 | 061113.0029.raw | 061113 TO-11A.MET | ACN Blank | 11 | 1 |
| 30 | 061113.0030.raw | 061113 TO-11A.MET | CCV (2.5ug/ml [PS061113-01]x4) | 12 | 1 |
| 31 | 061113.0031.raw | 061113 TO-11A.MET | CCV (2.5ug/ml [PS061113-01]x4) | 13 | 1 |
| 32 | 061113.0032.raw | 061113 TO-11A.MET | ACN Blank | 14 | 1 |
| 33 | 061113.0033.raw | 061113 TO-11A.MET | STD 2-1 (.025ug/ml [PS061113-01]x400) | 15 | 1 |

Raw Data

Chrom Perfect Chromatogram Report



Sample Name = ACN Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0001.RAW

Date Taken (end) = 7/1/2013 10:20:35 AM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 1

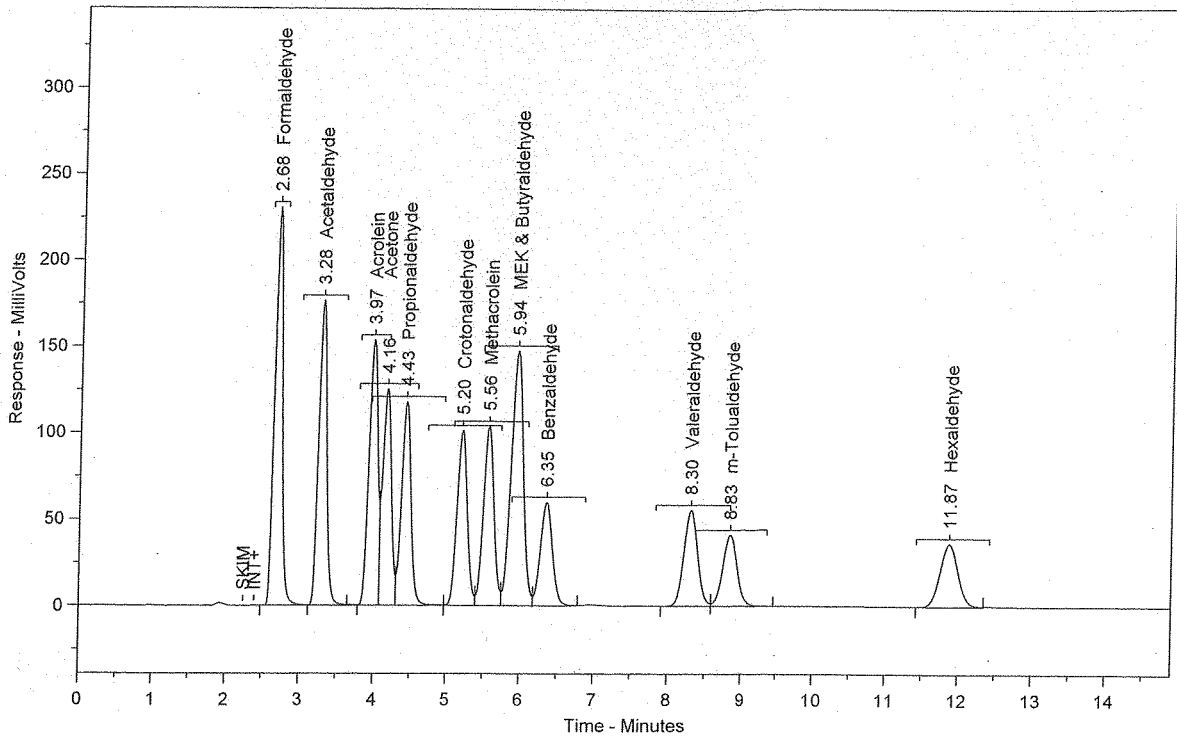
Injection Volume = 10

Dilution Factor = 1

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

Chrom Perfect Chromatogram Report

CCV 2.5 ug/mL (PS061113-01)



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

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0002.RAW

Date Taken (end) = 7/1/2013 10:37:11 AM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 2

Injection Volume = 10

Dilution Factor = 1

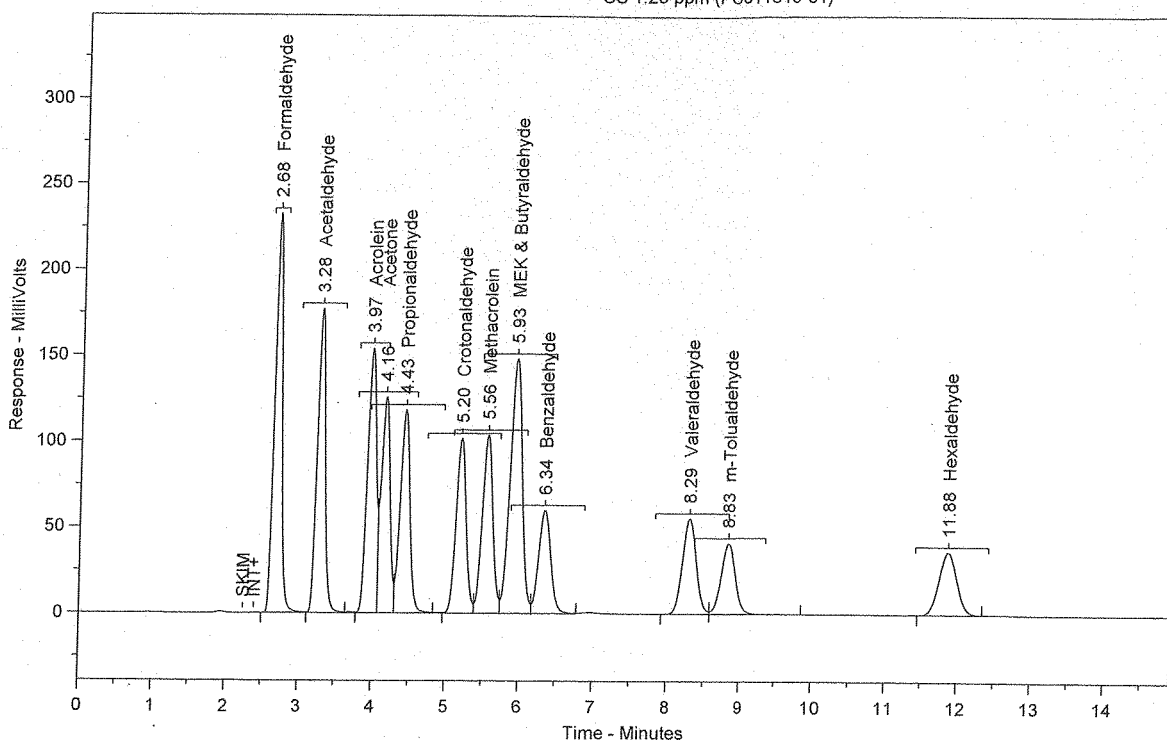
| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|---------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 2.5676 | 7.651 | 1652209 | 13.006 | SBB | 0.11 |
| 2 | 3.28 | Acetaldehyde | 2.5830 | 7.697 | 1364901 | 10.745 | TBV | 0.12 |
| 3 | 3.97 | Acrolein | 2.5963 | 7.736 | 1243966 | 9.793 | TVV | 0.14 |
| 4 | 4.16 | Acetone | 2.5862 | 7.706 | 1076916 | 8.478 | TVV | 0.13 |
| 5 | 4.43 | Propionaldehyde | 2.5918 | 7.723 | 1071685 | 8.436 | TVV | 0.14 |
| 6 | 5.20 | Crotonaldehyde | 2.5874 | 7.710 | 983629 | 7.743 | TVV | 0.15 |
| 7 | 5.56 | Methacrolein | 2.5934 | 7.728 | 1042805 | 8.209 | TVV | 0.15 |
| 8 | 5.94 | MEK & Butyraldehyde | 5.1724 | 15.412 | 1674436 | 13.181 | TVV | 0.17 |
| 9 | 6.35 | Benzaldehyde | 2.5771 | 7.679 | 681723 | 5.367 | TVB | 0.17 |
| 10 | 8.30 | Valeraldehyde | 2.5712 | 7.661 | 717828 | 5.651 | BV | 0.20 |
| 11 | 8.83 | m-Tolualdehyde | 2.5435 | 7.579 | 573992 | 4.519 | VB | 0.21 |
| 12 | 11.87 | Hexaldehyde | 2.5904 | 7.719 | 618910 | 4.872 | BB | 0.26 |

Total Area = 1.2703E+07

Total Height = 1350844

Total Amount = 33.56029

SS 1.25 ppm (PS011613-01)



Sample Name = SS 1.25 ppm (PS011613-01)

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0003.RAW

Date Taken (end) = 7/1/2013 10:53:46 AM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 3

Injection Volume = 10

Dilution Factor = 1

| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|---------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 2.5899 | 7.687 | 1666530 | 13.069 | SBB | 0.11 |
| 2 | 3.28 | Acetaldehyde | 2.5898 | 7.687 | 1368487 | 10.732 | TBV | 0.12 |
| 3 | 3.97 | Acrolein | 2.6073 | 7.738 | 1249224 | 9.797 | TVV | 0.14 |
| 4 | 4.16 | Acetone | 2.5835 | 7.668 | 1075807 | 8.437 | TVV | 0.13 |
| 5 | 4.43 | Propionaldehyde | 2.5944 | 7.700 | 1072749 | 8.413 | TVV | 0.14 |
| 6 | 5.20 | Crotonaldehyde | 2.5944 | 7.700 | 986299 | 7.735 | TVV | 0.15 |
| 7 | 5.56 | Methacrolein | 2.5898 | 7.686 | 1041365 | 8.167 | TVV | 0.15 |
| 8 | 5.93 | MEK & Butyraldehyde | 5.2008 | 15.436 | 1683623 | 13.203 | TVV | 0.17 |
| 9 | 6.34 | Benzaldehyde | 2.5902 | 7.688 | 685205 | 5.373 | TVB | 0.17 |
| 10 | 8.29 | Valeraldehyde | 2.5854 | 7.673 | 721777 | 5.660 | BV | 0.20 |
| 11 | 8.83 | m-Tolualdehyde | 2.5689 | 7.624 | 579718 | 4.546 | VB | 0.21 |
| 12 | 11.88 | Hexaldehyde | 2.5985 | 7.712 | 620853 | 4.869 | BB | 0.26 |

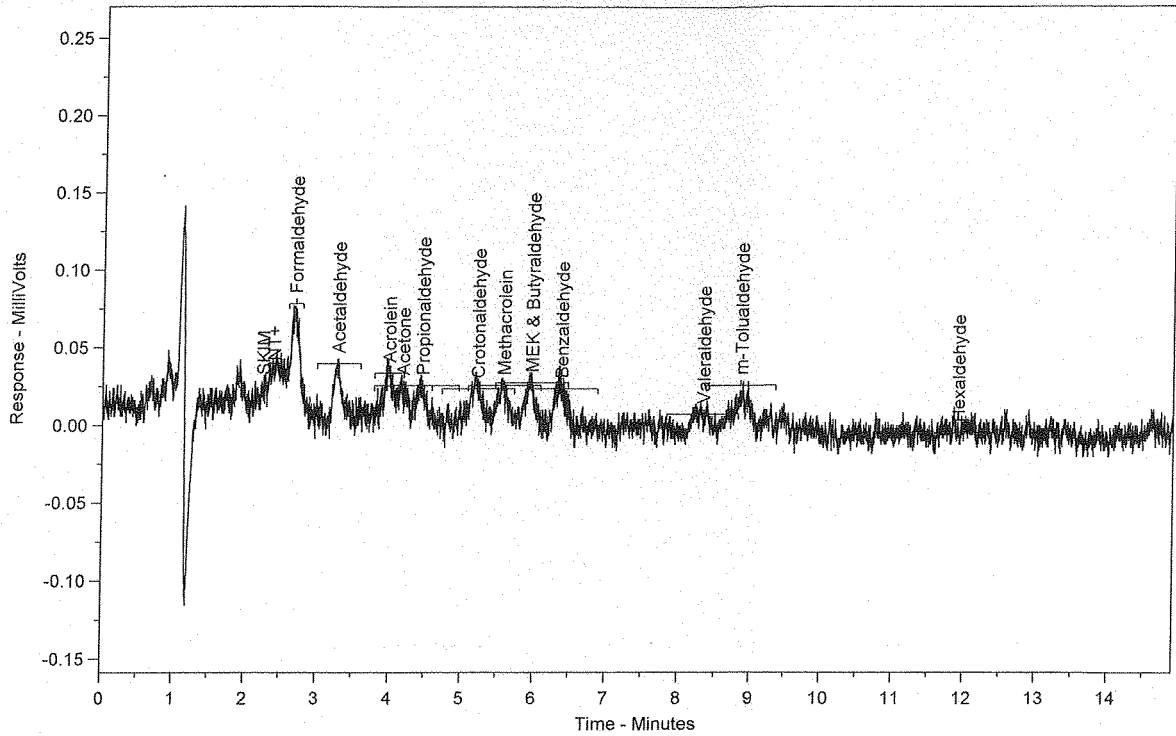
Total Area = 1.275164E+07

Total Height = 1355902

Total Amount = 33.69285

Chrom Perfect Chromatogram Report

TO-11 Method Blank



Sample Name = TO-11 Method Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113\TO-11\070113.0004.RAW

Date Taken (end) = 7/1/2013 11:10:22 AM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

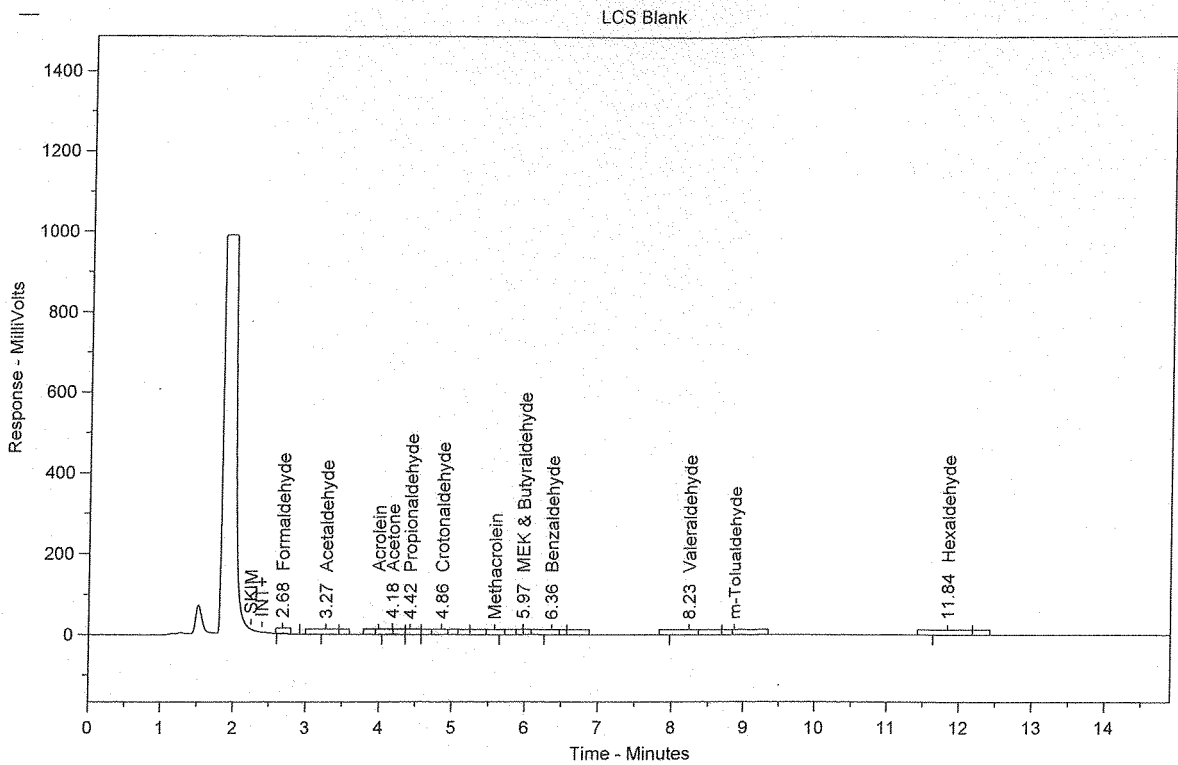
Vial Number = 4

Injection Volume = 10

Dilution Factor = 1

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

06
07/01/13



Sample Name = LCS Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0005.RAW

Date Taken (end) = 7/1/2013 11:26:57 AM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 5

Injection Volume = 10

Dilution Factor = 1

| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|-------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 0.0136 | 10.559 | 8773 | 17.516 | BB | 0.17 |
| 2 | 3.27 | Acetaldehyde | 0.0106 | 8.228 | 5614 | 11.208 | BB | 0.13 |
| 3 | 4.18 | Acetone | 0.0334 | 25.859 | 13904 | 27.761 | BV | 0.13 |
| 4 | 4.42 | Propionaldehyde | 0.0025 | 1.922 | 1026 | 2.049 | VV | 0.14 |
| 5 | 4.86 | Crotonaldehyde | 0.0138 | 10.663 | 5235 | 10.451 | VB | 0.44 |
| 6 | 5.97 | MEK & Butyraldehyde | 0.0125 | 9.643 | 4031 | 8.048 | BB | 0.14 |
| 7 | 6.36 | Benzaldehyde | 0.0108 | 8.340 | 2849 | 5.688 | BB | 0.19 |
| 8 | 8.23 | Valeraldehyde | 0.0250 | 19.378 | 6985 | 13.947 | BB | 0.25 |
| 9 | 11.84 | Hexaldehyde | 0.0070 | 5.409 | 1669 | 3.332 | BB | 0.33 |

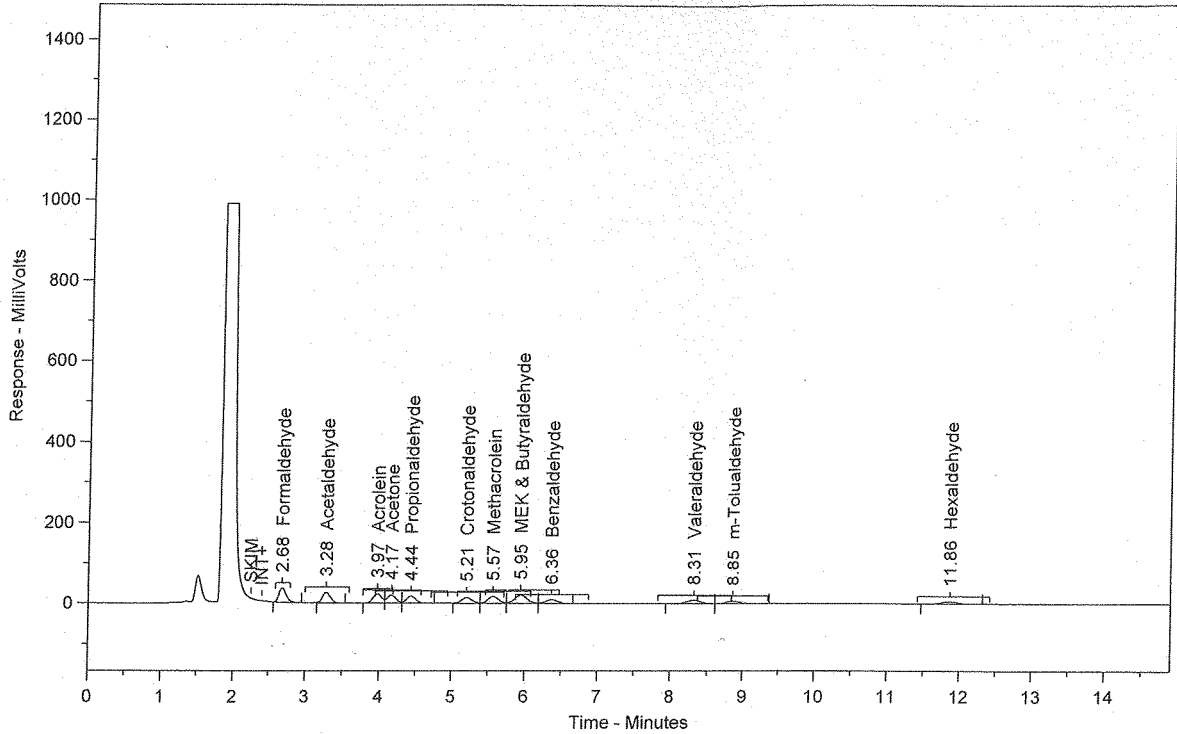
Total Area = 50086.01

Total Height = 5333.985

Total Amount = 0.1291266

Chrom Perfect Chromatogram Report

LCS 1.25ug/mL (PS011013-01)



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

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0006.RAW

Date Taken (end) = 7/1/2013 11:43:32 AM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 6

Injection Volume = 10

Dilution Factor = 1

| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|--------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 0.3853 | 7.657 | 247915 | 13.003 | BB | 0.11 |
| 2 | 3.28 | Acetaldehyde | 0.3835 | 7.621 | 202626 | 10.628 | BB | 0.12 |
| 3 | 3.97 | Acrolein | 0.3863 | 7.678 | 185099 | 9.708 | BV | 0.14 |
| 4 | 4.17 | Acetone | 0.4194 | 8.335 | 174649 | 9.160 | VV | 0.13 |
| 5 | 4.44 | Propionaldehyde | 0.3784 | 7.520 | 156461 | 8.206 | VB | 0.14 |
| 6 | 5.21 | Crotonaldehyde | 0.3712 | 7.377 | 141104 | 7.401 | BV | 0.15 |
| 7 | 5.57 | Methacrolein | 0.4187 | 8.322 | 168378 | 8.831 | VV | 0.15 |
| 8 | 5.95 | MEK & Butyraldehyde | 0.7370 | 14.646 | 238570 | 12.513 | VV | 0.17 |
| 9 | 6.36 | Benzaldehyde | 0.3848 | 7.648 | 101804 | 5.340 | VB | 0.17 |
| 10 | 8.31 | Valeraldehyde | 0.4012 | 7.972 | 111993 | 5.874 | BV | 0.20 |
| 11 | 8.85 | m-Tolualdehyde | 0.3817 | 7.585 | 86130 | 4.518 | VB | 0.21 |
| 12 | 11.86 | Hexaldehyde | 0.3844 | 7.639 | 91839 | 4.817 | BB | 0.26 |

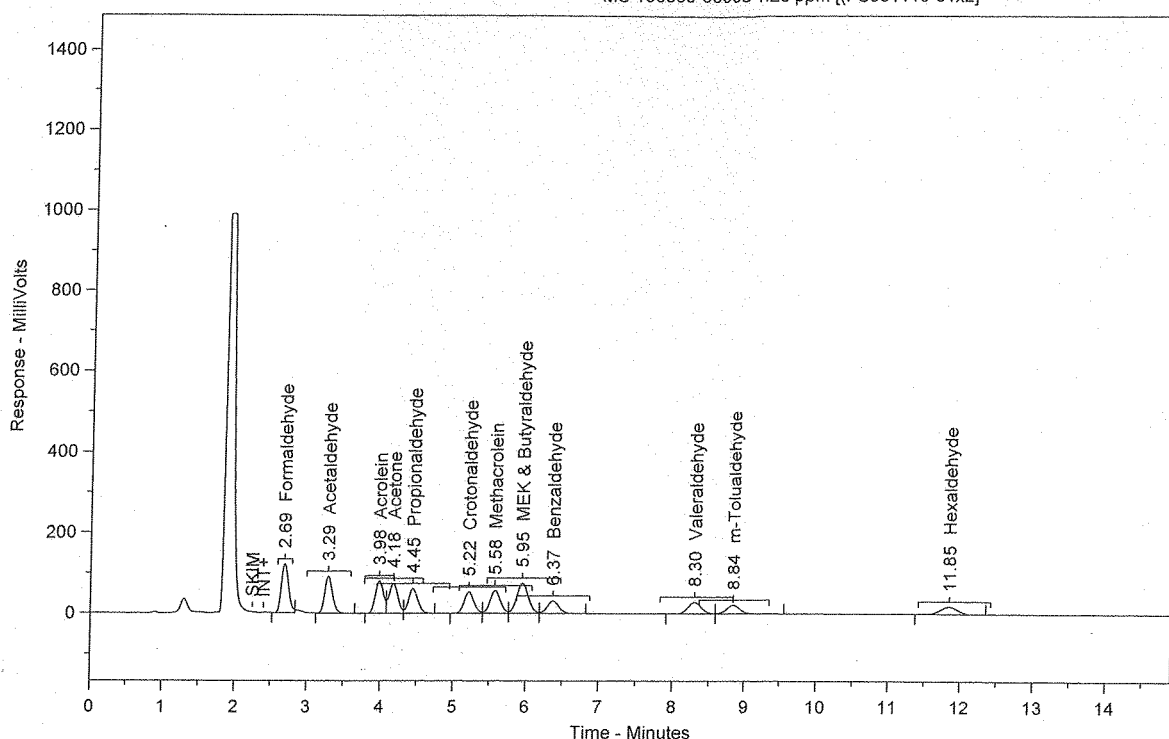
Total Area = 1906568

Total Height = 204645.2

Total Amount = 5.03177

Chrom Perfect Chromatogram Report

MS 130809-63998 1.25 ppm [(PS061113-01x2)]



Sample Name = MS 130809-63998 1.25 ppm [(PS061113-01x2)]

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0007.RAW

Date Taken (end) = 7/1/2013 12:00:08 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 7

Injection Volume = 10

Dilution Factor = 1

| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|--------|--------|------|-------|
| 1 | 2.69 | Formaldehyde | 1.3107 | 7.559 | 843375 | 12.830 | BB | 0.11 |
| 2 | 3.29 | Acetaldehyde | 1.3143 | 7.580 | 694511 | 10.566 | BB | 0.12 |
| 3 | 3.98 | Acrolein | 1.3317 | 7.680 | 638044 | 9.706 | BV | 0.13 |
| 4 | 4.18 | Acetone | 1.5053 | 8.681 | 626812 | 9.536 | VV | 0.13 |
| 5 | 4.45 | Propionaldehyde | 1.3106 | 7.558 | 541909 | 8.244 | VV | 0.14 |
| 6 | 5.22 | Crotonaldehyde | 1.3327 | 7.686 | 506631 | 7.707 | VV | 0.15 |
| 7 | 5.58 | Methacrolein | 1.3907 | 8.020 | 559195 | 8.507 | VV | 0.15 |
| 8 | 5.95 | MEK & Butyraldehyde | 2.5876 | 14.923 | 837660 | 12.743 | VV | 0.17 |
| 9 | 6.37 | Benzaldehyde | 1.3141 | 7.579 | 347619 | 5.288 | VB | 0.17 |
| 10 | 8.30 | Valeraldehyde | 1.3197 | 7.611 | 368436 | 5.605 | BV | 0.20 |
| 11 | 8.84 | m-Tolualdehyde | 1.3095 | 7.552 | 295522 | 4.496 | VB | 0.21 |
| 12 | 11.85 | Hexaldehyde | 1.3128 | 7.571 | 313652 | 4.772 | BB | 0.26 |

Total Area = 6573367

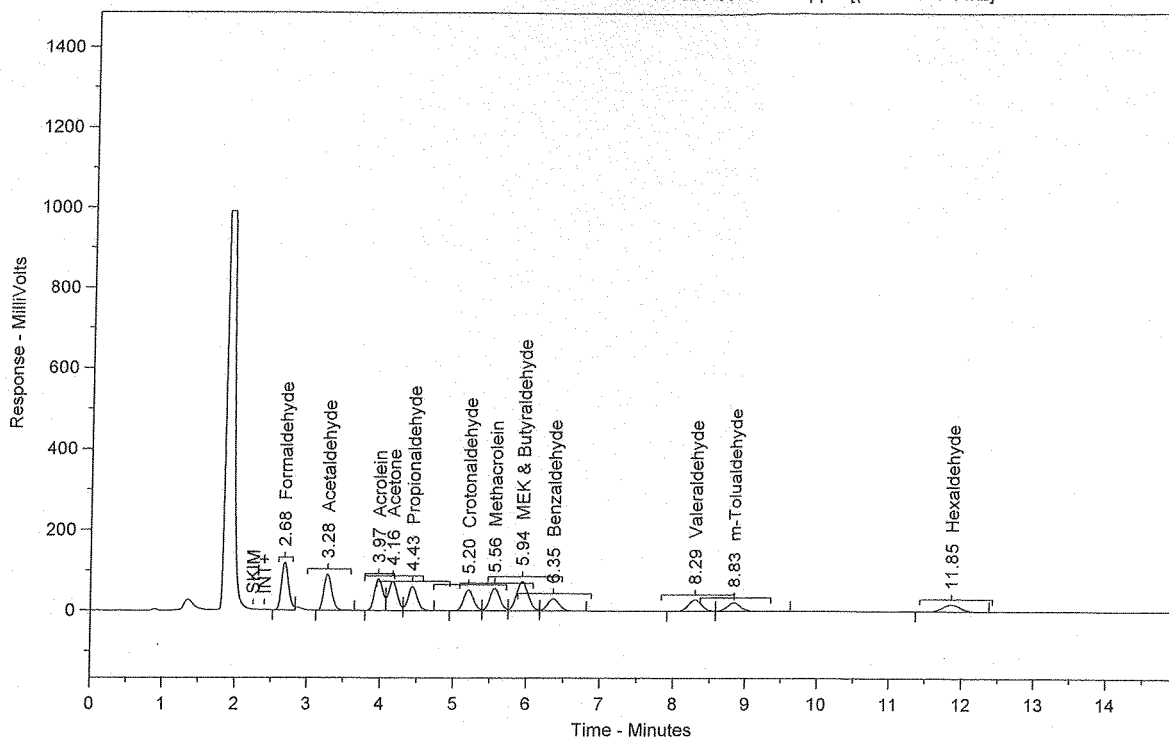
Total Height = 711952.9

Total Amount = 17.33951

HP
07/01/13

Chrom Perfect Chromatogram Report

MSD 130809-63998 1.25 ppm [(PS061113-01x2)]



Sample Name = MSD 130809-63998 1.25 ppm [(PS061113-01x2)]

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0008.RAW

Date Taken (end) = 7/1/2013 12:16:43 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 8

Injection Volume = 10

Dilution Factor = 1

| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|--------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 1.2907 | 7.587 | 830536 | 12.877 | BB | 0.11 |
| 2 | 3.28 | Acetaldehyde | 1.2908 | 7.587 | 682090 | 10.576 | BB | 0.12 |
| 3 | 3.97 | Acrolein | 1.3022 | 7.654 | 623923 | 9.674 | BV | 0.13 |
| 4 | 4.16 | Acetone | 1.4842 | 8.724 | 618042 | 9.582 | VV | 0.13 |
| 5 | 4.43 | Propionaldehyde | 1.2790 | 7.518 | 528856 | 8.200 | VV | 0.14 |
| 6 | 5.20 | Crotonaldehyde | 1.3050 | 7.671 | 496102 | 7.692 | VV | 0.15 |
| 7 | 5.56 | Methacrolein | 1.3711 | 8.059 | 551320 | 8.548 | VV | 0.15 |
| 8 | 5.94 | MEK & Butyraldehyde | 2.5194 | 14.809 | 815580 | 12.645 | VV | 0.17 |
| 9 | 6.35 | Benzaldehyde | 1.2855 | 7.556 | 340056 | 5.272 | VB | 0.17 |
| 10 | 8.29 | Valeraldehyde | 1.2972 | 7.625 | 362163 | 5.615 | BV | 0.20 |
| 11 | 8.83 | m-Tolualdehyde | 1.2994 | 7.638 | 293245 | 4.547 | VB | 0.21 |
| 12 | 11.85 | Hexaldehyde | 1.2883 | 7.572 | 307797 | 4.772 | BB | 0.27 |

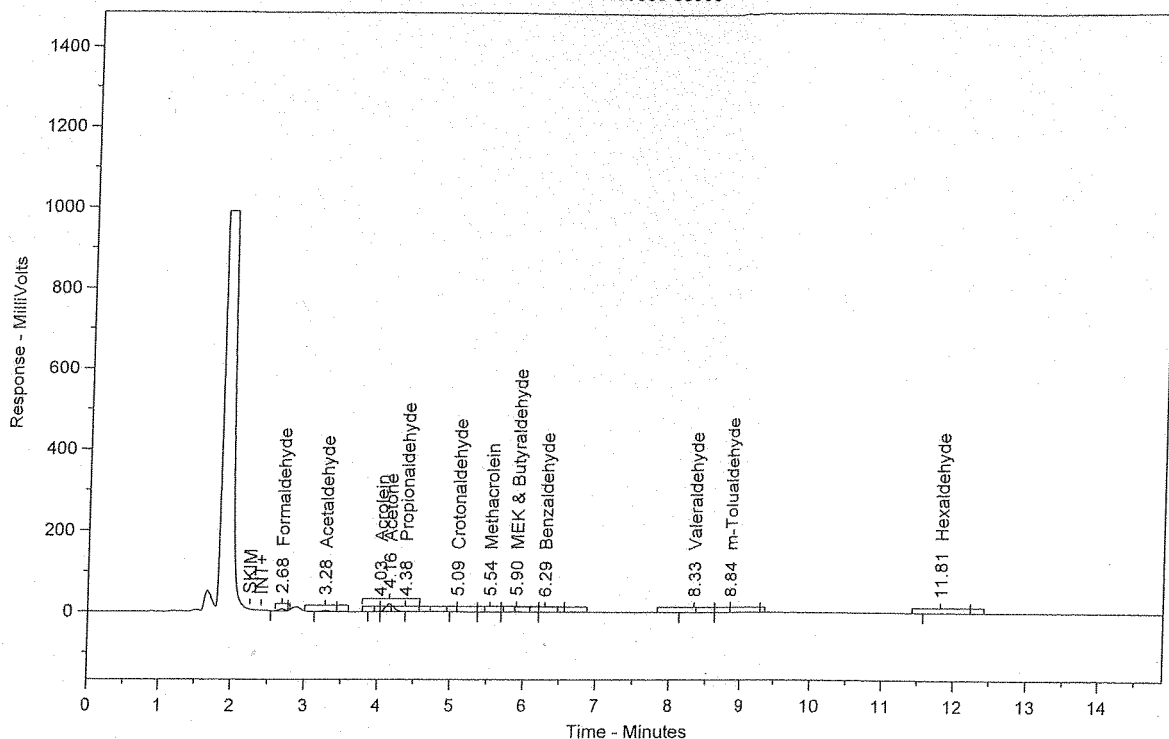
Total Area = 6449711

Total Height = 696288.4

Total Amount = 17.0128

Chrom Perfect Chromatogram Report

130809-63998



Sample Name = 130809-63998

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0009.RAW

Date Taken (end) = 7/1/2013 12:33:22 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 9

Injection Volume = 10

Dilution Factor = 1

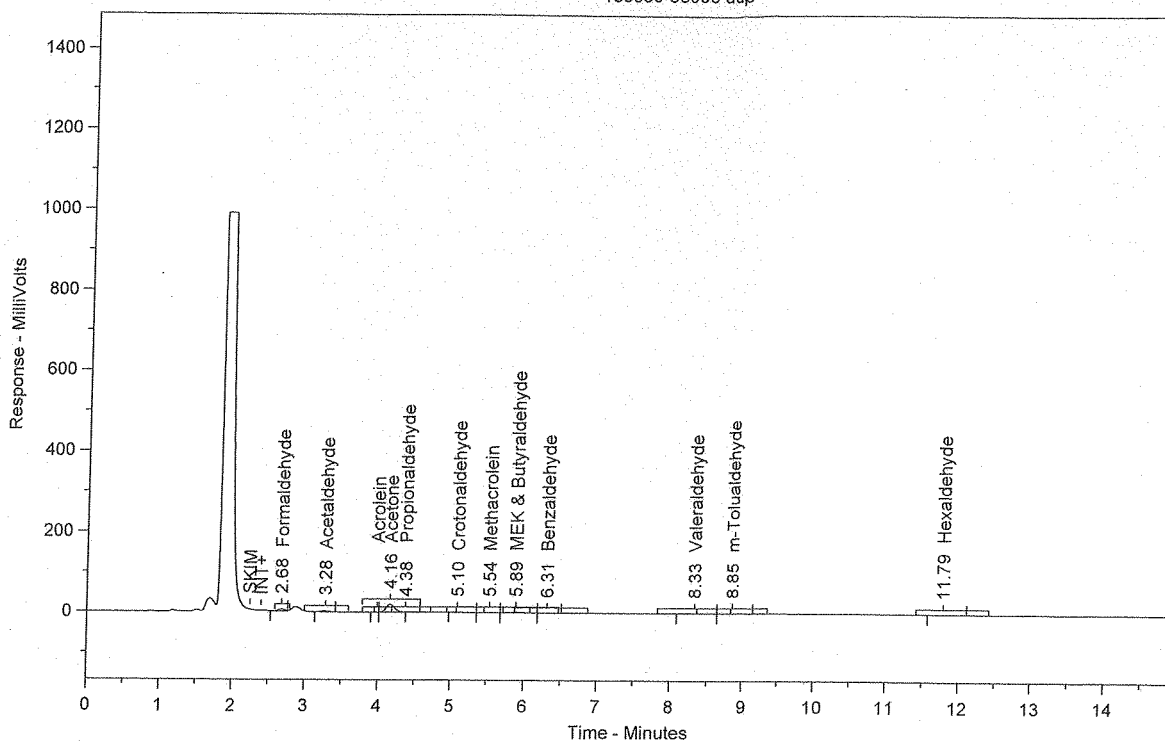
| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|--------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 0.0498 | 7.599 | 32028 | 11.724 | BB | 0.09 |
| 2 | 3.28 | Acetaldehyde | 0.0369 | 5.629 | 19482 | 7.132 | BB | 0.11 |
| 3 | 4.03 | Acrolein | 0.0027 | 0.413 | 1295 | 0.474 | BV | 0.01 |
| 4 | 4.16 | Acetone | 0.3937 | 60.102 | 163923 | 60.006 | SBB | 0.13 |
| 5 | 4.38 | Propionaldehyde | 0.0161 | 2.457 | 6653 | 2.435 | TBB | 0.09 |
| 6 | 5.09 | Crotonaldehyde | 0.0269 | 4.114 | 10244 | 3.750 | BV | 0.21 |
| 7 | 5.54 | Methacrolein | 0.0168 | 2.558 | 6736 | 2.466 | VV | 0.14 |
| 8 | 5.90 | MEK & Butyraldehyde | 0.0579 | 8.842 | 18747 | 6.863 | VV | 0.17 |
| 9 | 6.29 | Benzaldehyde | 0.0045 | 0.688 | 1193 | 0.437 | VB | 0.22 |
| 10 | 8.33 | Valeraldehyde | 0.0281 | 4.284 | 7833 | 2.867 | BV | 0.25 |
| 11 | 8.84 | m-Tolualdehyde | 0.0109 | 1.666 | 2463 | 0.902 | VB | 0.46 |
| 12 | 11.81 | Hexaldehyde | 0.0108 | 1.648 | 2580 | 0.944 | BB | 0.29 |

Total Area = 273177.7

Total Height = 32126.55

Total Amount = 0.6549771

130809-63998 dup



Sample Name = 130809-63998 dup

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0010.RAW

Date Taken (end) = 7/1/2013 12:49:58 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 10

Injection Volume = 10

Dilution Factor = 1

| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|--------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 0.0494 | 7.609 | 31771 | 11.754 | BB | 0.09 |
| 2 | 3.28 | Acetaldehyde | 0.0360 | 5.546 | 19017 | 7.036 | BB | 0.11 |
| 4 | 4.16 | Acetone | 0.3915 | 60.336 | 163039 | 60.317 | SBB | 0.13 |
| 5 | 4.38 | Propionaldehyde | 0.0166 | 2.563 | 6878 | 2.545 | TBB | 0.10 |
| 6 | 5.10 | Crotonaldehyde | 0.0263 | 4.049 | 9988 | 3.695 | BV | 0.23 |
| 7 | 5.54 | Methacrolein | 0.0156 | 2.405 | 6276 | 2.322 | VV | 0.14 |
| 8 | 5.89 | MEK & Butyraldehyde | 0.0602 | 9.276 | 19485 | 7.209 | VV | 0.17 |
| 9 | 6.31 | Benzaldehyde | 0.0039 | 0.599 | 1029 | 0.381 | VB | 0.21 |
| 10 | 8.33 | Valeraldehyde | 0.0288 | 4.436 | 8036 | 2.973 | BV | 0.24 |
| 11 | 8.85 | m-Tolualdehyde | 0.0112 | 1.724 | 2524 | 0.934 | VB | 0.40 |
| 12 | 11.79 | Hexaldehyde | 0.0095 | 1.457 | 2258 | 0.836 | BB | 0.28 |

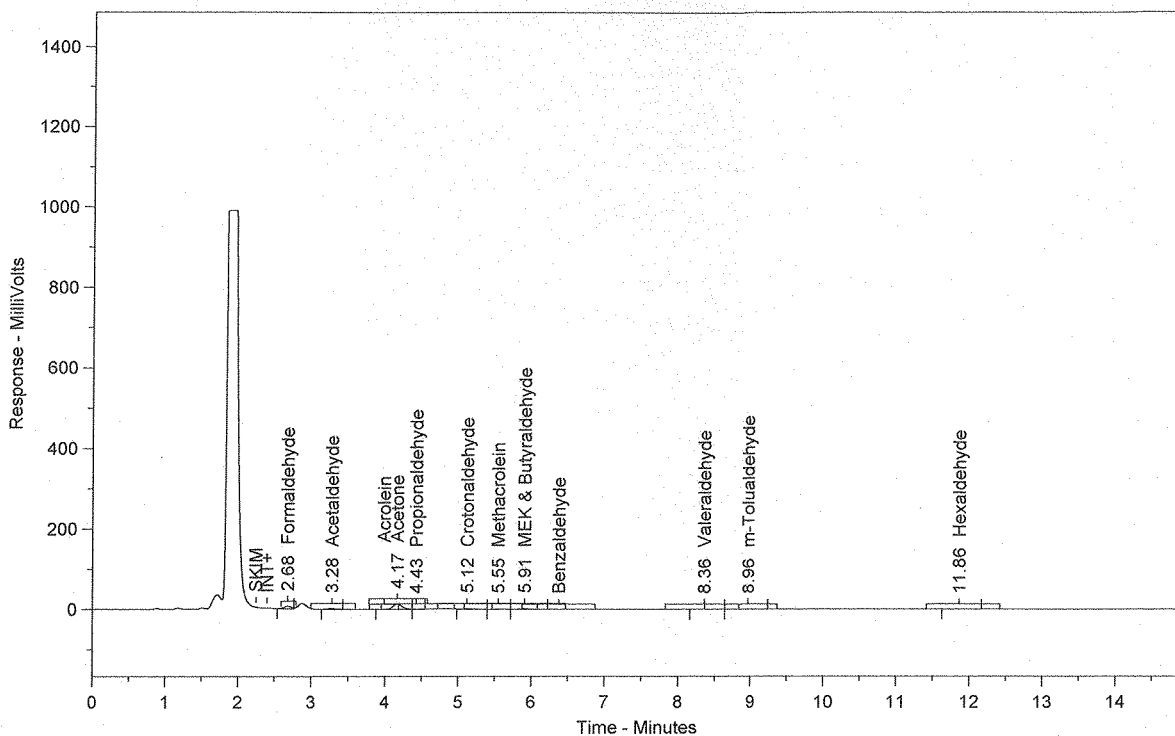
Total Area = 270302

Total Height = 31468.77

Total Amount = 0.6489122

Chrom Perfect Chromatogram Report

130809-63999



Sample Name = 130809-63999

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0011.RAW

Date Taken (end) = 7/1/2013 1:06:34 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 11

Injection Volume = 10

Dilution Factor = 1

| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|--------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 0.0620 | 11.010 | 39918 | 16.784 | BB | 0.10 |
| 2 | 3.28 | Acetaldehyde | 0.0343 | 6.079 | 18098 | 7.610 | BB | 0.11 |
| 3 | 4.17 | Acetone | 0.2774 | 49.224 | 115495 | 48.561 | BV | 0.13 |
| 4 | 4.43 | Propionaldehyde | 0.0219 | 3.878 | 9035 | 3.799 | VB | 0.12 |
| 5 | 5.12 | Crotonaldehyde | 0.0553 | 9.817 | 21027 | 8.841 | BV | 0.24 |
| 6 | 5.55 | Methacrolein | 0.0162 | 2.879 | 6523 | 2.743 | VV | 0.14 |
| 7 | 5.91 | MEK & Butyraldehyde | 0.0491 | 8.719 | 15903 | 6.687 | VB | 0.17 |
| 8 | 8.36 | Valeraldehyde | 0.0186 | 3.295 | 5184 | 2.179 | BV | 0.24 |
| 9 | 8.96 | m-Tolualdehyde | 0.0160 | 2.833 | 3603 | 1.515 | VB | 0.39 |
| 10 | 11.86 | Hexaldehyde | 0.0128 | 2.266 | 3050 | 1.282 | BB | 0.27 |

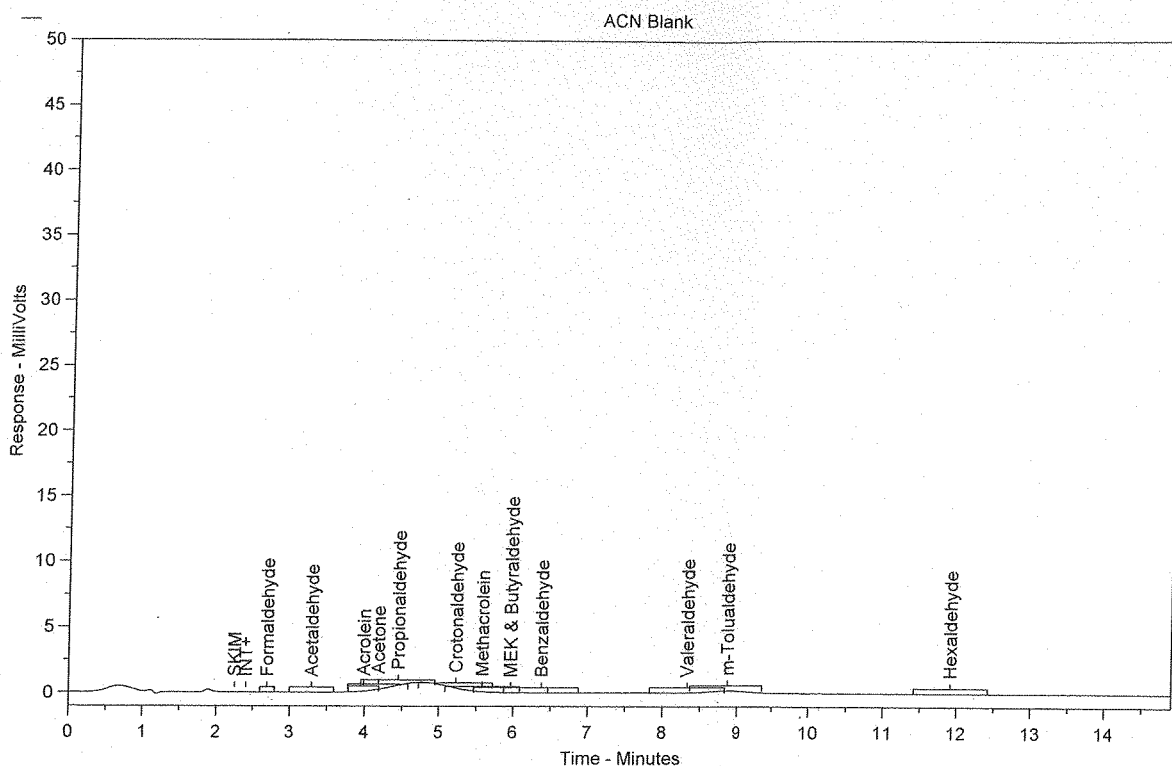
Total Area = 237835.9

Total Height = 27416.36

Total Amount = 0.5634478

HP
07/07/13

Chrom Perfect Chromatogram Report



Sample Name = ACN Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0012.RAW

Date Taken (end) = 7/1/2013 1:23:08 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 12

Injection Volume = 10

Dilution Factor = 1

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

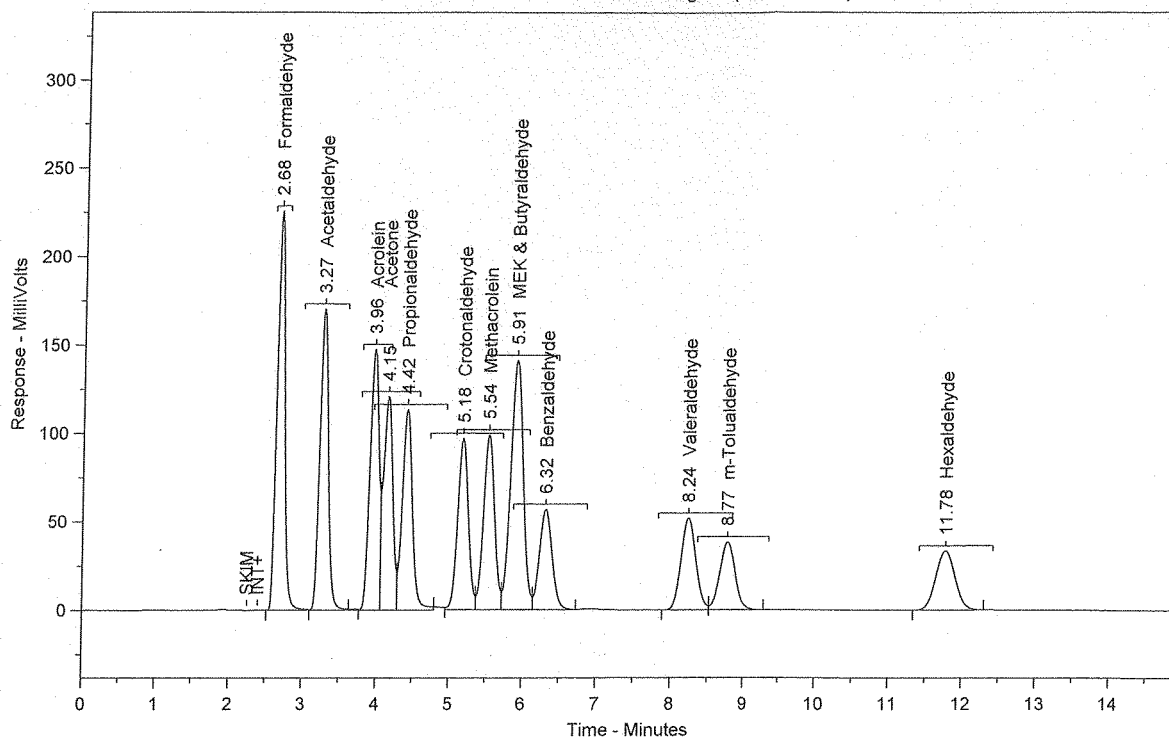
Total Area = 0

Total Height = 0

Total Amount = 0

Chrom Perfect Chromatogram Report

CCV 2.5 ug/mL (PS011613-01)



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

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0013.RAW

Date Taken (end) = 7/1/2013 1:39:43 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 13

Injection Volume = 10

Dilution Factor = 1

| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|---------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 2.5849 | 7.703 | 1663292 | 13.079 | SBB | 0.11 |
| 2 | 3.27 | Acetaldehyde | 2.5811 | 7.691 | 1363884 | 10.725 | TBV | 0.12 |
| 3 | 3.96 | Acrolein | 2.5866 | 7.708 | 1239301 | 9.745 | TVV | 0.15 |
| 4 | 4.15 | Acetone | 2.5888 | 7.714 | 1078009 | 8.477 | TVV | 0.14 |
| 5 | 4.42 | Propionaldehyde | 2.6529 | 7.905 | 1096947 | 8.626 | TVB | 0.15 |
| 6 | 5.18 | Crotonaldehyde | 2.6136 | 7.788 | 993597 | 7.813 | BV | 0.16 |
| 7 | 5.54 | Methacrolein | 2.5972 | 7.739 | 1044351 | 8.212 | VV | 0.16 |
| 8 | 5.91 | MEK & Butyraldehyde | 5.1322 | 15.293 | 1661409 | 13.064 | VV | 0.18 |
| 9 | 6.32 | Benzaldehyde | 2.5399 | 7.569 | 671884 | 5.283 | VB | 0.18 |
| 10 | 8.24 | Valeraldehyde | 2.5682 | 7.653 | 716985 | 5.638 | BV | 0.21 |
| 11 | 8.77 | m-Tolualdehyde | 2.5505 | 7.600 | 575568 | 4.526 | VB | 0.23 |
| 12 | 11.78 | Hexaldehyde | 2.5624 | 7.636 | 612228 | 4.814 | BB | 0.29 |

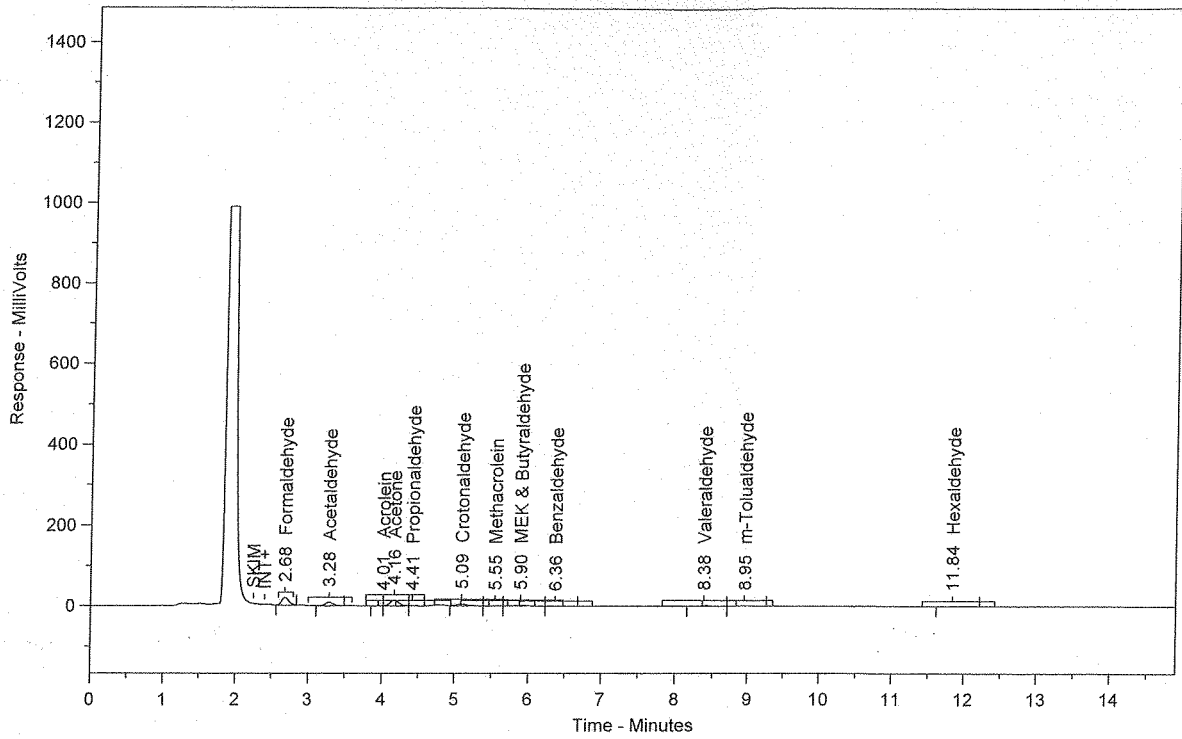
Total Area = 1.271746E+07

Total Height = 1295079

Total Amount = 33.5582

Chrom Perfect Chromatogram Report

130809-64000



Sample Name = 130809-64000

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113\TO-11\070113.0014.RAW

Date Taken (end) = 7/1/2013 1:56:19 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 14

Injection Volume = 10

Dilution Factor = 1

| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|--------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 0.2069 | 18.872 | 133144 | 28.216 | BB | 0.11 |
| 2 | 3.28 | Acetaldehyde | 0.1280 | 11.670 | 67613 | 14.329 | BB | 0.12 |
| 3 | 4.01 | Acrolein | 0.0049 | 0.444 | 2333 | 0.494 | BV | 0.07 |
| 4 | 4.16 | Acetone | 0.3012 | 27.471 | 125424 | 26.580 | VV | 0.13 |
| 5 | 4.41 | Propionaldehyde | 0.0145 | 1.326 | 6014 | 1.274 | VB | 0.12 |
| 6 | 5.09 | Crotonaldehyde | 0.1304 | 11.895 | 49581 | 10.507 | BV | 0.19 |
| 7 | 5.55 | Methacrolein | 0.0182 | 1.658 | 7312 | 1.550 | VV | 0.16 |
| 8 | 5.90 | MEK & Butyraldehyde | 0.0935 | 8.529 | 30273 | 6.416 | VV | 0.19 |
| 9 | 6.36 | Benzaldehyde | 0.0134 | 1.222 | 3544 | 0.751 | VB | 0.22 |
| 10 | 8.38 | Valeraldehyde | 0.0862 | 7.865 | 24073 | 5.102 | BV | 0.24 |
| 11 | 8.95 | m-Tolualdehyde | 0.0857 | 7.814 | 19334 | 4.097 | VB | 0.22 |
| 12 | 11.84 | Hexaldehyde | 0.0135 | 1.233 | 3231 | 0.685 | BB | 0.30 |

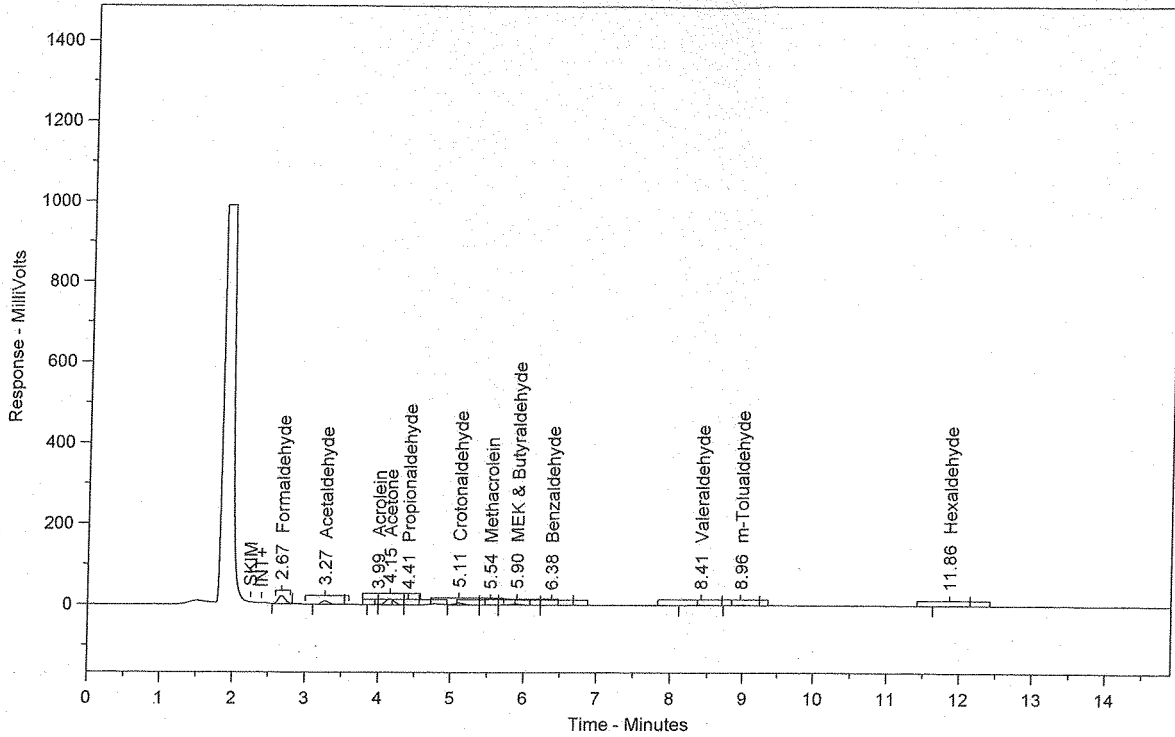
Total Area = 471876.7

Total Height = 54154.02

Total Amount = 1.096427

Chrom Perfect Chromatogram Report

130809-64000 dup



Sample Name = 130809-64000 dup

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0015.RAW

Date Taken (end) = 7/1/2013 2:12:54 PM

Method File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0015.BND

Method Description=TO-11A Carbonyls

Calibration File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0015.BND

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 15

Injection Volume = 10

Dilution Factor = 1

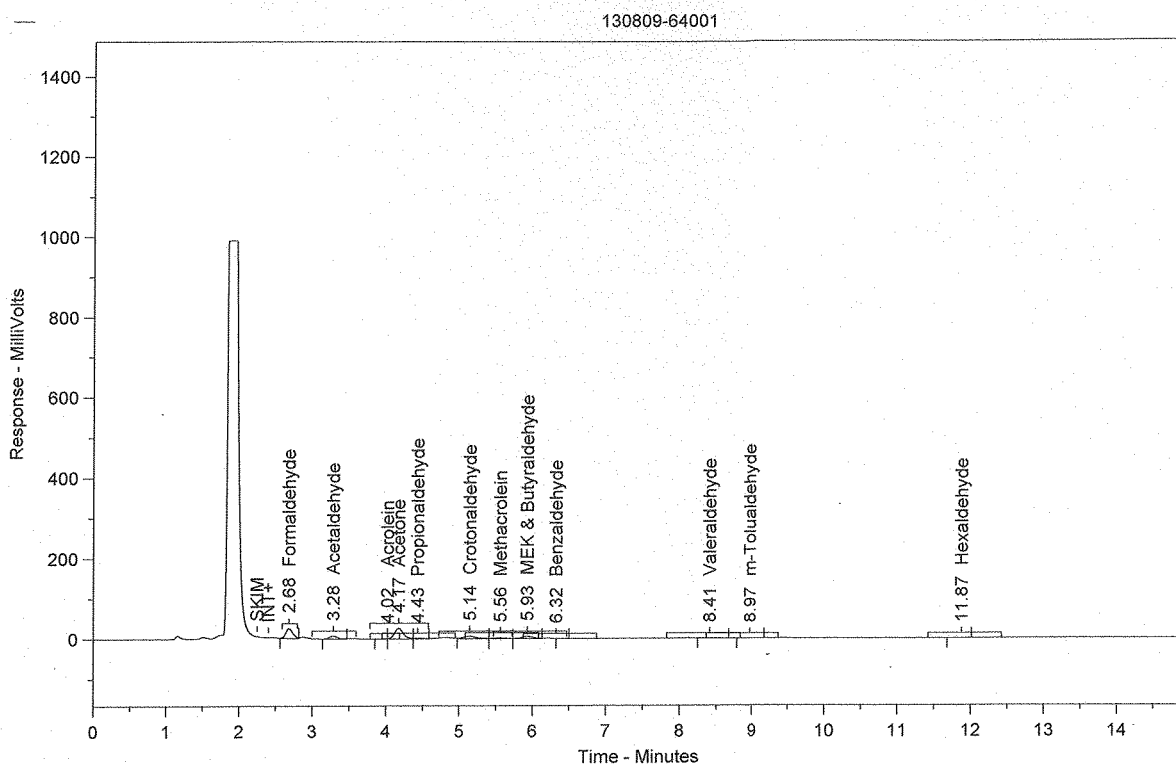
| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|--------|--------|------|-------|
| 1 | 2.67 | Formaldehyde | 0.2131 | 19.096 | 137093 | 28.491 | BB | 0.10 |
| 2 | 3.27 | Acetaldehyde | 0.1276 | 11.439 | 67439 | 14.015 | BB | 0.12 |
| 3 | 3.99 | Acrolein | 0.0040 | 0.360 | 1926 | 0.400 | BV | 0.07 |
| 4 | 4.15 | Acetone | 0.3130 | 28.055 | 130340 | 27.088 | VV | 0.13 |
| 5 | 4.41 | Propionaldehyde | 0.0146 | 1.306 | 6023 | 1.252 | VB | 0.13 |
| 6 | 5.11 | Crotonaldehyde | 0.1310 | 11.739 | 49789 | 10.347 | BV | 0.17 |
| 7 | 5.54 | Methacrolein | 0.0177 | 1.584 | 7108 | 1.477 | VV | 0.15 |
| 8 | 5.90 | MEK & Butyraldehyde | 0.1000 | 8.964 | 32374 | 6.728 | VV | 0.20 |
| 9 | 6.38 | Benzaldehyde | 0.0134 | 1.202 | 3548 | 0.737 | VB | 0.22 |
| 10 | 8.41 | Valeraldehyde | 0.0829 | 7.432 | 23148 | 4.811 | BB | 0.23 |
| 11 | 8.96 | m-Tolualdehyde | 0.0851 | 7.624 | 19195 | 3.989 | BB | 0.22 |
| 12 | 11.86 | Hexaldehyde | 0.0134 | 1.198 | 3193 | 0.664 | BB | 0.28 |

Total Area = 481176

Total Height = 56445

Total Amount = 1.115669

Chrom Perfect Chromatogram Report



Sample Name = 130809-64001

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0016.RAW

Date Taken (end) = 7/1/2013 2:29:30 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 16

Injection Volume = 10

Dilution Factor = 1

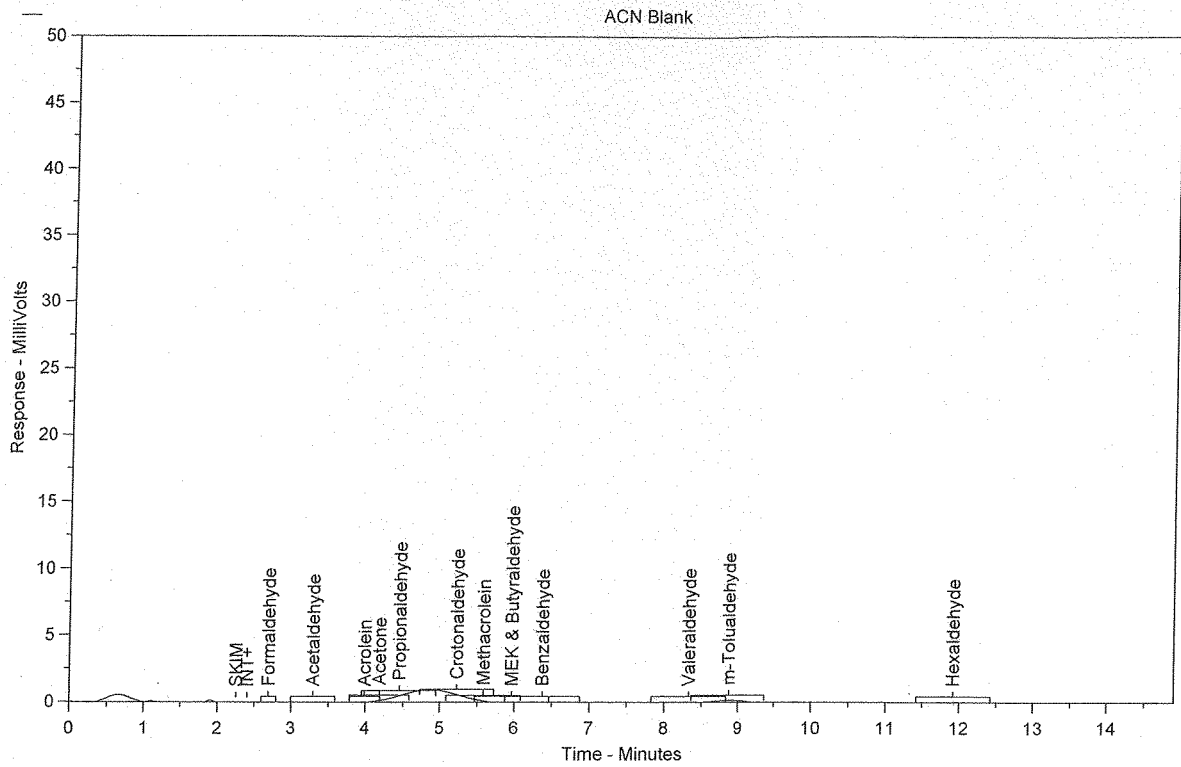
| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|--------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 0.2534 | 17.816 | 163062 | 26.029 | BB | 0.10 |
| 2 | 3.28 | Acetaldehyde | 0.0980 | 6.889 | 51774 | 8.264 | BB | 0.12 |
| 3 | 4.02 | Acrolein | 0.0047 | 0.330 | 2248 | 0.359 | BV | 0.05 |
| 4 | 4.17 | Acetone | 0.5303 | 37.284 | 220829 | 35.250 | VV | 0.13 |
| 5 | 4.43 | Propionaldehyde | 0.0383 | 2.695 | 15849 | 2.530 | VB | 0.13 |
| 6 | 5.14 | Crotonaldehyde | 0.1954 | 13.738 | 74285 | 11.858 | BV | 0.17 |
| 7 | 5.56 | Methacrolein | 0.0544 | 3.824 | 21872 | 3.491 | VV | 0.14 |
| 8 | 5.93 | MEK & Butyraldehyde | 0.1900 | 13.358 | 61508 | 9.818 | VB | 0.16 |
| 9 | 6.32 | Benzaldehyde | 0.0050 | 0.352 | 1323 | 0.211 | BB | 0.11 |
| 10 | 8.41 | Valeraldehyde | 0.0322 | 2.264 | 8991 | 1.435 | BB | 0.28 |
| 11 | 8.97 | m-Tolualdehyde | 0.0157 | 1.106 | 3550 | 0.567 | BB | 0.21 |
| 12 | 11.87 | Hexaldehyde | 0.0049 | 0.344 | 1169 | 0.187 | BB | 0.25 |

Total Area = 626460.3

Total Height = 74118.6

Total Amount = 1.422351

Chrom Perfect Chromatogram Report



Sample Name = ACN Blank

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0017.RAW

Date Taken (end) = 7/1/2013 2:46:05 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 17

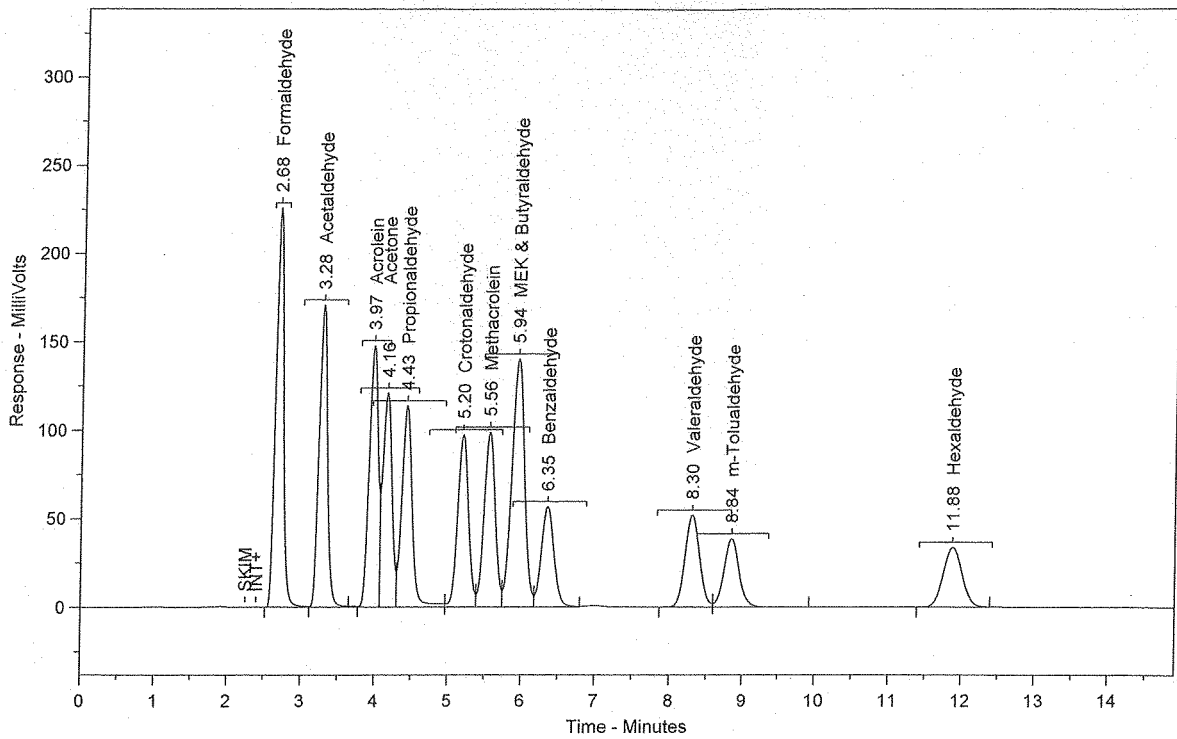
Injection Volume = 10

Dilution Factor = 1

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

Chrom Perfect Chromatogram Report

CCV 2.5 ug/mL (PS011613-01)



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

Instrument = HPLC #1

Raw File Name = C:\Chromperfect 2\Data\HPLC #1\2013\070113TO-11\070113.0018.RAW

Date Taken (end) = 7/1/2013 3:02:41 PM

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

Method Description=TO-11A Carbonyls

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

Concentration Units = ug/ml

Run Time = 14.89889

Vial Number = 18

Injection Volume = 10

Dilution Factor = 1

| Peak # | Ret. Time | Name | Amount | Amt % | Area | Area % | Type | Width |
|--------|-----------|---------------------|--------|--------|---------|--------|------|-------|
| 1 | 2.68 | Formaldehyde | 2.5701 | 7.655 | 1653790 | 13.006 | SBB | 0.11 |
| 2 | 3.28 | Acetaldehyde | 2.5699 | 7.654 | 1357980 | 10.680 | TBV | 0.12 |
| 3 | 3.97 | Acrolein | 2.5715 | 7.659 | 1232070 | 9.690 | TVV | 0.14 |
| 4 | 4.16 | Acetone | 2.5810 | 7.687 | 1074777 | 8.453 | TVV | 0.14 |
| 5 | 4.43 | Propionaldehyde | 2.6932 | 8.021 | 1113616 | 8.758 | TVV | 0.14 |
| 6 | 5.20 | Crotonaldehyde | 2.6289 | 7.830 | 999405 | 7.860 | TVV | 0.16 |
| 7 | 5.56 | Methacrolein | 2.5846 | 7.698 | 1039259 | 8.173 | TVV | 0.16 |
| 8 | 5.94 | MEK & Butyraldehyde | 5.1332 | 15.288 | 1661733 | 13.069 | TVV | 0.18 |
| 9 | 6.35 | Benzaldehyde | 2.5673 | 7.646 | 679136 | 5.341 | TVB | 0.18 |
| 10 | 8.30 | Valeraldehyde | 2.5603 | 7.625 | 714773 | 5.621 | BV | 0.21 |
| 11 | 8.84 | m-Tolualdehyde | 2.5502 | 7.595 | 575499 | 4.526 | VB | 0.23 |
| 12 | 11.88 | Hexaldehyde | 2.5659 | 7.642 | 613068 | 4.822 | BB | 0.28 |

Total Area = 1.271511E+07

Total Height = 1296513

Total Amount = 33.57604

Chrom Perfect Sequence File

File Name = C:\Chromperfect 2\Methods and Sequences\#1 HPLC #1\2013\070113 (TO-11).SEQ

File Date = 7/1/2013 9:18:49 AM

Analyst=

| Entry # | Raw File Name | Method File Name | Sample Name | Vial # | DF |
|---------|-----------------|-------------------|--|--------|----|
| 1 | 070113.0001.raw | 061113 TO-11A.MET | ACN Blank | 1 | 1 |
| 2 | 070113.0002.raw | 061113 TO-11A.MET | CCV 2.5 ug/mL (PS061113-01) | 2 | 1 |
| 3 | 070113.0003.raw | 061113 TO-11A.MET | SS 1.25 ppm (PS011613-01) | 3 | 1 |
| 4 | 070113.0004.raw | 061113 TO-11A.MET | TO-11 Method Blank | 4 | 1 |
| 5 | 070113.0005.raw | 061113 TO-11A.MET | LCS Blank | 5 | 1 |
| 6 | 070113.0006.raw | 061113 TO-11A.MET | LCS 1.25ug/mL (PS011013-01) | 6 | 1 |
| 7 | 070113.0007.raw | 061113 TO-11A.MET | MS 130809-63998 1.25 ppm [(PS061113-01x2] | 7 | 1 |
| 8 | 070113.0008.raw | 061113 TO-11A.MET | MSD 130809-63998 1.25 ppm [(PS061113-01x2] | 8 | 1 |
| 9 | 070113.0009.raw | 061113 TO-11A.MET | 130809-63998 | 9 | 1 |
| 10 | 070113.0010.raw | 061113 TO-11A.MET | 130809-63998 dup | 10 | 1 |
| 11 | 070113.0011.raw | 061113 TO-11A.MET | 130809-63999 | 11 | 1 |
| 12 | 070113.0012.raw | 061113 TO-11A.MET | ACN Blank | 12 | 1 |
| 13 | 070113.0013.raw | 061113 TO-11A.MET | CCV 2.5 ug/mL (PS011613-01) | 13 | 1 |
| 14 | 070113.0014.raw | 061113 TO-11A.MET | 130809-64000 | 14 | 1 |
| 15 | 070113.0015.raw | 061113 TO-11A.MET | 130809-64000 dup | 15 | 1 |
| 16 | 070113.0016.raw | 061113 TO-11A.MET | 130809-64001 | 16 | 1 |
| 17 | 070113.0017.raw | 061113 TO-11A.MET | ACN Blank | 17 | 1 |
| 18 | 070113.0018.raw | 061113 TO-11A.MET | CCV 2.5 ug/mL (PS011613-01) | 18 | 1 |