N00158.AR.000307
NAS WILLOW GROVE
5090.3a

CASE NARRATIVE
Client: TetraTech NUS, Inc.
Project Number: 112G00910 0380
SDG: 05MW17I-GW-01
Microseeps Project No.: P0807247

Sample Receipt

Microseeps, Inc. received the sample shipment on 7/18/2008. The samples were received in good condition, properly preserved and within the correct temperature range. A summary of the TetraTech and Microseeps identifications is presented below.

Field Identification	Laboratory Identification
05MW17I-GW-01	P0807247-01
05MW17S-GW-01	P0807247-02

A copy of all communications concerning this project has been enclosed.

Sample Analyses

The sample analyses were performed in accordance with Microseeps routine Standard Operating procedures. All analyses met the laboratory's internal QC criteria. There were no unusual observances during the analysis of these samples.

U.S. EPA - CLP
1
OTHER ANALYSIS DATA SHEET

EPASampleNo: 05MW17I-GW-01

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807247 Case No.: CTO 411
SAS No.:
SDG No.: 05MW17I-GW-0

Matrix (soil / water): Water
Lab Sample ID: P0807247-01A
Level (low/med):
Date Received: 7/18/2008
% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
	Total Organic Carbon	1.6	mg/L	J		
64-19-7	Acetic Acid	0.09	mg/L			
79-09-4	Propionic Acid	0.07	mg/L	U		
107-92-6	Butyric Acid	0.07	mg/L	U		
50-21-5	Lactic Acid and HIBA	0.16	mg/L			
127-17-3	Pyruvic Acid	0.07	mg/L	U		
503-74-2	i-Pentanoic Acid	0.07	mg/L	U		
109-52-4	Pentanoic Acid	0.07	mg/L	U		
646-07-1	i-Hexanoic Acid	0.10	mg/L	U		
142-62-1	Hexanoic Acid	0.10	mg/L	U		
74-86-2	Acetylene	0.500	ug/L	U		
74-84-0	Ethane	0.006	ug/L	J		
74-85-1	Ethene	0.01	ug/L	J		
74-82-8	Methane	0.180	ug/L			

U.S. EPA - CLP
1
OTHER ANALYSIS DATA SHEET

EPASampleNo: 05MW17S-GW-01

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807247 Case No : CTO 411
SAS No :
SDG No.: 05MW17I-GW-0

Matrix (soil / water): Water
Lab Sample ID: P0807247-02A
Level (low/med):
Date Received: 7/18/2008
% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
	Total Organic Carbon	2.4	mg/L	J		
64-19-7	Acetic Acid	0.15	mg/L			
79-09-4	Propionic Acid	0.07	mg/L	U		
107-92-6	Butyric Acid	0.07	mg/L	U		
50-21-5	Lactic Acid and HIBA	0.25	mg/L			
127-17-3	Pyruvic Acid	0.17	mg/L			
503-74-2	i-Pentanoic Acid	0.07	mg/L	U		
109-52-4	Pentanoic Acid	0.07	mg/L	U		
646-07-1	i-Hexanoic Acid	0.10	mg/L	U		
142-62-1	Hexanoic Acid	0.10	mg/L	U		
74-86-2	Acetylene	0.500	ug/L	U		
74-84-0	Ethane	0.014	ug/L	J		
74-85-1	Ethene	0.024	ug/L	J		
74-82-8	Methane	2.700	ug/L			

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G009100380
Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Initial Calibration Source: Scotty
Continuing Calibration Source:

Concentration Units: mg/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R	Continuing Calibration Found	Continuing Calibration %R	M
Acetylene	74.02	77.14	104						

U.S EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G009100380
Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Initial Calibration Source: Scotty
Continuing Calibration Source:

Concentration Units: mg/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R	Continuing Calibration Found	Continuing Calibration %R	M
Methane	4294	4313.8	100						

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G009100380
Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Initial Calibration Source: Scotty
Continuing Calibration Source:

Concentration Units: mg/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R	Continuing Calibration Found	Continuing Calibration %R	M
Methane	24.79	25.16	101						
Ethane	48.14	47.75	99.2						
Ethene	53.55	53.78	100						
Acetylene	74.02	78.09	105						

U S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G009100380
Lab Code: P0807247 Case No.: CTO 411 SAS No : SDG No.: 05MW17I-GW-0

Initial Calibration Source: ERA
Continuing Calibration Source:

Concentration Units: mg/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R	Continuing Calibration Found	Continuing Calibration %R	M
Total Organic Carbon	50.0	51.62	103						

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G009100380
Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Initial Calibration Source: Restek
Continuing Calibration Source:

Concentration Units: mg/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R	Continuing Calibration Found	Continuing Calibration %R	M
Lactic Acid and HIBA	2.00	2.11	106						
Acetic Acid	2.00	2.19	110						
Propionic Acid	2.00	2.21	110						
Butyric Acid	2.00	2.16	108						
Pyruvic Acid	2.00	2.08	104						
i-Pentanoic Acid	2.00	2.20	110						
Pentanoic Acid	2.00	2.13	106						
i-Hexanoic Acid	2.00	2.12	106						
Hexanoic Acid	2.00	2.08	104						

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G009100380
Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Initial Calibration Source:
Continuing Calibration Source: Sci Spec

Concentration Units: mg/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R	Continuing Calibration Found	Continuing Calibration %R	M
Total Organic Carbon				50.0	50.84	102	50.77	101	

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G009100380
Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Initial Calibration Source:
Continuing Calibration Source: Spectra

Concentration Units: mg/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R	Continuing Calibration Found	Continuing Calibration %R	M
Methane				24.79	25.65	103	25.89	104	
Ethane				48.14	48.88	102	49.41	103	
Ethene				53.55	55.18	103	55.78	104	
Acetylene				74.02	84.39	114	85.66	116	
Methane				4306	4420	103	4390	102	

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G009100380
Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Initial Calibration Source:
Continuing Calibration Source: Restek

Concentration Units: mg/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R	Continuing Calibration Found	Continuing Calibration %R	M
Lactic Acid and HIBA				2.00	2.36	118	2.15	108	
Acetic Acid				2.00	2.34	117	2.17	108	
Propionic Acid				2.00	2.27	114	2.19	110	
Butyric Acid				2.00	2.15	108	2.11	106	
Pyruvic Acid				2.00	2.38	119	2.07	104	
i-Pentanoic Acid				2.00	2.28	114	2.21	110	
Pentanoic Acid				2.00	2.14	107	2.08	104	
i-Hexanoic Acid				2.00	1.94	97.0	1.97	98.5	
Hexanoic Acid				2.00	2.09	104	2.03	102	

U.S. EPA - CLP
3
BLANKS

Lab Name: Microseeps, Inc Contract: 112G009100380

Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Preparation blank Matrix (soil/water) Water

Preparation Blank Concentration Units mg/L

Analyte	Init Calib Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Preparation Blank	C	M
Total Organic Carbon	5.0	U	5.0	U	5.0	U			5.0	U	

U.S. EPA - CLP
3
BLANKS

Lab Name: Microseeps, Inc Contract: 112G009100380

Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Preparation blank Matrix (soil/water) Water

Preparation Blank Concentration Units ug/L

Analyte	Init Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Preparation Blank	C	M
Acetylene	0.500	U	0.500	U					0.500	U	
Ethane	0.025	U	0.025	U					0.025	U	
Ethene	0.025	U	0.025	U					0.025	U	
Methane	0.100	U	0.100	U					0.100	U	

U.S. EPA - CLP
3
BLANKS

Lab Name: Microseeps, Inc Contract: 112G009100380

Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Preparation blank Matrix (soil/water) Water

Preparation Blank Concentration Units mg/L

Analyte	Init Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Preparation Blank	C	M
Acetic Acid	0.07	U	0.07	U	0.07	U			0.07	U	
Propionic Acid	0.07	U	0.07	U	0.07	U			0.07	U	
Butyric Acid	0.07	U	0.07	U	0.07	U			0.07	U	
Lactic Acid and HIBA	0.10	U	0.10	U	0.10	U			0.10	U	
Pyruvic Acid	0.07	U	0.07	U	0.07	U			0.07	U	
i-Pentanoic Acid	0.07	U	0.07	U	0.07	U			0.07	U	
Pentanoic Acid	0.07	U	0.07	U	0.07	U			0.07	U	
i-Hexanoic Acid	0.10	U	0.10	U	0.10	U			0.10	U	
Hexanoic Acid	0.10	U	0.10	U	0.10	U			0.10	U	

U.S. EPA - CLP
5A
SPIKE SAMPLE RECOVERY

EPA Sample No.
05MW17S-GW-01

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807247
Case No.: CTO 411
SAS No.:
SDG No.: 05MW17I-GW-0

Matrix (soil/water): Water
Level (low/med):
% Solids for Sample:

Concentration Units : mg/L

Analyte	Control Limit %R	Spike Sample Result	C	Sample Result	C	Spike Added	%R	Q	M
Total Organic Carbon	70-130	58.44		2.39	J	50.0	112		

Comments:

U.S. EPA - CLP
5A
SPIKE SAMPLE RECOVERY

EPA Sample No.

Lab Name: Microseeps, Inc Contract: 112G009100380 05MW17I-GW-01

Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Matrix (soil/water): Water Level (low/med):

% Solids for Sample:

Concentration Units: mg/L

Analyte	Control Limit %R	Spike Sample Result	C	Sample Result	C	Spike Added	%R	Q	M
Acetic Acid	70-130	2.12		0.09		2.00	101		
Propionic Acid	70-130	2.00		0.07	U	2.00	100		
Butyric Acid	70-130	1.95		0.07	U	2.00	97.5		
Lactic Acid and HIBA	70-130	2.13		0.16		2.00	98.5		
Pyruvic Acid	70-130	2.06		0.07	U	2.00	103		
i-Pentanoic Acid	70-130	1.97		0.07	U	2.00	98.5		
Pentanoic Acid	70-130	1.80		0.07	U	2.00	90.0		
i-Hexanoic Acid	70-130	1.68		0.10	U	2.00	84.0		
Hexanoic Acid	70-130	1.88		0.10	U	2.00	94.0		

Comments:

U.S. EPA - CLP
6
DUPLICATES

EPA Sample No.

Lab Name: Microseeps, Inc Contract: 112G009100380 05MW17I-GW-01

Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Matrix (soil/water): Water Level (low/med):

% Solids for Sample: % Solids for Duplicate:

Concentration Units : mg/L

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Total Organic Carbon	0-20	1.59	J	1.52	J	4.5		

U S. EPA - CLP
6
DUPLICATES

EPA Sample No.
LCS

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807247
Case No.: CTO 411
SAS No.:
SDG No.: 05MW17I-GW-0

Matrix (soil/water): Water
Level (low/med):
% Solids for Sample:
% Solids for Duplicate:
Concentration Units: ug/L

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Methane	0-20	891.6		907.5		1.77		
Ethane	0-20	46.15		46.73		1.25		
Ethene	0-20	42.07		42.50		1.02		
Acetylene	0-20	38.40		37.89		1.34		

U.S. EPA - CLP
6
DUPLICATES

EPA Sample No.

Lab Name: Microseeps, Inc Contract: 112G009100380 05MW17I-GW-01 MS

Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Matrix (soil/water): Water Level (low/med):

% Solids for Sample: % Solids for Duplicate:

Concentration Units : mg/L

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Lactic Acid and HIBA	0-30	2.13		2.37		10.7		
Acetic Acid	0-30	2.12		2.25		5.95		
Propionic Acid	0-30	2.00		2.09		4.40		
Butyric Acid	0-30	1.95		2.01		3.03		
Pyruvic Acid	0-30	2.06		2.25		8.82		
i-Pentanoic Acid	0-30	1.97		2.08		5.43		
Pentanoic Acid	0-30	1.80		1.95		8.0		
i-Hexanoic Acid	0-30	1.68		1.75		4.08		
Hexanoic Acid	0-30	1.88		1.94		3.14		

U.S. EPA - CLP
7
LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc Contract: 112G009100380

Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Solid LCS Source:

Aqueous LCS Source: Sci Spec

Analyte	Aqueous				Solid (mg/Kg)					
	Units	True	Found	%R	True	Found	C	Limits		%R
Total Organic Carbon	mg/L	55.3	56.68	102						

U.S. EPA - CLP
7
LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc Contract: 112G009100380
Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Solid LCS Source:
Aqueous LCS Source: Spectra

Analyte	Aqueous Units	True	Found	%R	Solid (mg/Kg) True	Found	C	Limits		%R
Acetylene	ug/L	36.1	38.40	106						
Ethane	ug/L	41.68	46.15	111						
Ethene	ug/L	38.89	42.07	108						
Methane	ug/L	822.8	891.6	108						

U.S EPA - CLP
7
LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc Contract: 112G009100380

Lab Code: P0807247 Case No.: CTO 411 SAS No.: SDG No.: 05MW17I-GW-0

Solid LCS Source:

Aqueous LCS Source: Restek

Analyte	Aqueous				Solid (mg/Kg)					
	Units	True	Found	%R	True	Found	C	Limits		%R
Acetic Acid	mg/L	2.00	2.24	112						
Propionic Acid	mg/L	2.00	2.12	106						
Butyric Acid	mg/L	2.00	2.05	102						
Lactic Acid and HIBA	mg/L	2.00	2.43	122						
Pyruvic Acid	mg/L	2.00	2.49	124						
i-Pentanoic Acid	mg/L	2.00	2.13	106						
Pentanoic Acid	mg/L	2.00	1.98	99.0						
i-Hexanoic Acid	mg/L	2.00	1.79	89.5						
Hexanoic Acid	mg/L	2.00	1.98	99.0						

microseeps
from insight comes solutions

Client Name: TetraTech NUS, Inc.
Contact: Russ Turner
Address: 235 Mall Boulevard
Suite 260
King of Prussia, PA 19406-1433

Page: Page 1 of 7
Lab Proj #: P0807247
Report Date: 08/06/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

Laboratory Results

Total pages in data package: 148

Lab Sample #	Client Sample ID
P0807247-01	05MW17I-GW-01
P0807247-02	05MW17S-GW-01

Microseeps test results meet all the requirements of the NELAC standards or provide reasons and/or justification if they do not

Approved By: Rachel Whitby ***Date:*** 8/6/08

Project Manager: Rachel Whitby

The analytical results reported here are reliable and usable to the precision expressed in this report As required by some regulating authorities, a full discussion of the uncertainty in our analytical results can be obtained at our web site or through customer service Unless otherwise specified. all results are reported on a wet weight basis

As a valued client we would appreciate your comments on our service
Please call customer service at (412)826-5245 or email customerservice@microseeps.com

Case Narrative:

Client Name: TetraTech NUS, Inc.
Contact: Russ Turner
Address: 235 Mall Boulevard
Suite 260
King of Prussia, PA 19406-1433

Page: Page 2 of 7
Lab Proj #: P0807247
Report Date: 08/06/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
05MW17I-GW-01	Water	P0807247-01	17 Jul 08 9:25	18 Jul 08 10:51

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
WetChem							
N Total Organic Carbon	J	1.6	5.0	mg/L	9060	7/22/08	md
RiskAnalysis							
N Acetylene	U	< 0.500	0.500	ug/L	AM20GAX	7/25/08	sl
N Ethane	J	0.006	0.025	ug/L	AM20GAX	7/25/08	sl
N Ethene	J	0.01	0.025	ug/L	AM20GAX	7/25/08	sl
N Methane		0.180	0.100	ug/L	AM20GAX	7/25/08	sl
SemiVolatiles							
N Acetic Acid		0.09	0.07	mg/L	AM23G	7/31/08	jb
N Butyric Acid	U	< 0.07	0.07	mg/L	AM23G	7/31/08	jb
N Hexanoic Acid	U	< 0.10	0.10	mg/L	AM23G	7/31/08	jb
N i-Hexanoic Acid	U	< 0.10	0.10	mg/L	AM23G	7/31/08	jb
N i-Pentanoic Acid	U	< 0.07	0.07	mg/L	AM23G	7/31/08	jb
N Lactic Acid and HIBA		0.16	0.10	mg/L	AM23G	7/31/08	jb
N Pentanoic Acid	U	< 0.07	0.07	mg/L	AM23G	7/31/08	jb
N Propionic Acid	U	< 0.07	0.07	mg/L	AM23G	7/31/08	jb
N Pyruvic Acid	U	< 0.07	0.07	mg/L	AM23G	7/31/08	jb

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: TetraTech NUS, Inc
Contact: Russ Turner
Address: 235 Mall Boulevard
Suite 260
King of Prussia, PA 19406-1433

Page: Page 3 of 7
Lab Proj #: P0807247
Report Date: 08/06/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
05MW17S-GW-01	Water	P0807247-02	17 Jul 08 12:05	18 Jul 08 10:51

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
WetChem							
N Total Organic Carbon	J	2.4	5.0	mg/L	9060	7/22/08	md
RiskAnalysis							
N Acetylene	U	< 0.500	0.500	ug/L	AM20GAX	7/25/08	sl
N Ethane	J	0.014	0.025	ug/L	AM20GAX	7/25/08	sl
N Ethene	J	0.024	0.025	ug/L	AM20GAX	7/25/08	sl
N Methane		2.700	0.100	ug/L	AM20GAX	7/25/08	sl
SemiVolatiles							
N Acetic Acid		0.15	0.07	mg/L	AM23G	7/31/08	jb
N Butyric Acid	U	< 0.07	0.07	mg/L	AM23G	7/31/08	jb
N Hexanoic Acid	U	< 0.10	0.10	mg/L	AM23G	7/31/08	jb
N i-Hexanoic Acid	U	< 0.10	0.10	mg/L	AM23G	7/31/08	jb
N i-Pentanoic Acid	U	< 0.07	0.07	mg/L	AM23G	7/31/08	jb
N Lactic Acid and HIBA		0.25	0.10	mg/L	AM23G	7/31/08	jb
N Pentanoic Acid	U	< 0.07	0.07	mg/L	AM23G	7/31/08	jb
N Propionic Acid	U	< 0.07	0.07	mg/L	AM23G	7/31/08	jb
N Pyruvic Acid		0.17	0.07	mg/L	AM23G	7/31/08	jb

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: TetraTech NUS, Inc.
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Address: 235 Mall Boulevard
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Page: Page 4 of 7
Lab Proj #: P0807247
Report Date: 08/06/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

Prep Method: Total Organic Carbon
Analysis Method: Total Organic Carbon

M080724017-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Total Organic Carbon	< 5.0	mg/L		5.0		- NA

M080724017-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Total Organic Carbon	57.0	mg/L	55.30	103.00	70 - 130

P0807247-01A-DUP

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Total Organic Carbon	1.5	mg/L			- NA	0.00	0 - 20

P0807247-02A-MS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Total Organic Carbon	58.0	mg/L	50.00	111.00	70 - 130

Outlined Results indicate results outside of Control limits

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD. SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: TetraTech NUS, Inc
Contact: Russ Turner
Address: 235 Mall Boulevard
Suite 260
King of Prussia, PA 19406-1433

Page: Page 5 of 7
Lab Proj #: P0807247
Report Date: 08/06/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

Prep Method: Light Hydrocarbons (C1-C4) in Water
Analysis Method: Light Hydrocarbons (C1-C4) in Water

M080725010-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Acetylene	< 0 500	ug/L		0.500		- NA
Ethane	< 0 025	ug/L		0.025		- NA
Ethene	< 0.025	ug/L		0.025		- NA
Methane	< 0 100	ug/L		0.100		- NA

M080725010-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Acetylene	38.000	ug/L	36.10	105.00	70 - 130
Ethane	46.000	ug/L	41.68	110.00	75 - 125
Ethene	42.000	ug/L	38.89	108.00	75 - 125
Methane	890.000	ug/L	822.80	108.00	75 - 125

M080725010-LCSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Acetylene	38.000	ug/L	36.10	105.00	70 - 130	0.00	0 - 20
Ethane	47.000	ug/L	41.68	113.00	75 - 125	2.15	0 - 20
Ethene	42.000	ug/L	38.89	108.00	75 - 125	0.00	0 - 20
Methane	910.000	ug/L	822.80	111.00	75 - 125	2.22	0 - 20

[ ] Outlined Results indicate results outside of Control limits

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

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Page: Page 6 of 7
Lab Proj #: P0807247
Report Date: 08/06/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

Prep Method: Volatile Fatty Acids by Ion Chromatography
Analysis Method: Volatile Fatty Acids by Ion Chromatography

M080730019-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Acetic Acid	< 0.07	mg/L		0.07		- NA
Propionic Acid	< 0.07	mg/L		0.07		- NA
Butyric Acid	< 0.07	mg/L		0.07		- NA
Lactic Acid and HIBA	< 0.10	mg/L		0.10		- NA
Pyruvic Acid	< 0.07	mg/L		0.07		- NA
i-Pentanoic Acid	< 0.07	mg/L		0.07		- NA
Pentanoic Acid	< 0.07	mg/L		0.07		- NA
i-Hexanoic Acid	< 0.10	mg/L		0.10		- NA
Hexanoic Acid	< 0.10	mg/L		0.10		- NA

M080730019-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Acetic Acid	2.20	mg/L	2.00	110.00	70 - 130
Propionic Acid	2.10	mg/L	2.00	105.00	70 - 130
Butyric Acid	2.00	mg/L	2.00	100.00	70 - 130
Lactic Acid and HIBA	2.40	mg/L	2.00	120.00	70 - 130
Pyruvic Acid	2.50	mg/L	2.00	125.00	70 - 130
i-Pentanoic Acid	2.10	mg/L	2.00	105.00	70 - 130
Pentanoic Acid	2.00	mg/L	2.00	100.00	70 - 130
i-Hexanoic Acid	1.80	mg/L	2.00	90.00	70 - 130
Hexanoic Acid	2.00	mg/L	2.00	100.00	70 - 130

P0807247-01A-MS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Acetic Acid	2.10	mg/L	2.00	101.00	70 - 130
Propionic Acid	2.00	mg/L	2.00	100.00	70 - 130
Butyric Acid	2.00	mg/L	2.00	100.00	70 - 130
Lactic Acid and HIBA	2.10	mg/L	2.00	97.00	70 - 130
Pyruvic Acid	2.10	mg/L	2.00	105.00	70 - 130
i-Pentanoic Acid	2.00	mg/L	2.00	100.00	70 - 130
Pentanoic Acid	1.80	mg/L	2.00	90.00	70 - 130
i-Hexanoic Acid	1.70	mg/L	2.00	85.00	70 - 130
Hexanoic Acid	1.90	mg/L	2.00	95.00	70 - 130

P0807247-01A-MSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

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Page: Page 7 of 7
Lab Proj #: P0807247
Report Date: 08/06/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

P0807247-01A-MSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Acetic Acid	2.20	mg/L	2.00	106.00	70 - 130	4.65	0 - 30
Propionic Acid	2.10	mg/L	2.00	105.00	70 - 130	4.88	0 - 30
Butyric Acid	2.00	mg/L	2.00	100.00	70 - 130	0.00	0 - 30
Lactic Acid and HIBA	2.40	mg/L	2.00	112.00	70 - 130	13.33	0 - 30
Pyruvic Acid	2.30	mg/L	2.00	115.00	70 - 130	9.09	0 - 30
i-Pentanoic Acid	2.10	mg/L	2.00	105.00	70 - 130	4.88	0 - 30
Pentanoic Acid	2.00	mg/L	2.00	100.00	70 - 130	10.53	0 - 30
i-Hexanoic Acid	1.70	mg/L	2.00	85.00	70 - 130	0.00	0 - 30
Hexanoic Acid	1.90	mg/L	2.00	95.00	70 - 130	0.00	0 - 30

Outlined Results indicate results outside of Control limits

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Chain of Custody Documents

P0807247

TETRA TECH NUS, INC. **CHAIN OF CUSTODY** | **NUMBER** 0667 | **PAGE** 1 **OF** 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
00910	Willow Grove	Kevin Kilmartin	610-491-9688	Micro Seeps Inc
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
Donald Whalen				220 William Pitt Way
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
		FedEx 8646 0966 9679		Pittsburgh, PA 15238

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G P

PRESERVATIVE USED: Na_2PO_4 BAK H_2SO_4

DATE YEAR 2008	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: Dissolved Gases	Metabolic Acids	TOC							COMMENTS
7/17	0925	05MW17I-GW-01				GW	G	5	2	2	1							
7/17	1205	05MW17S-GW-01				GW	G	5	2	2	1							

1. RELINQUISHED BY Donald Whalen	DATE 7/17/08	TIME 1800	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

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Cooler Receipt Form

Client: TetraTech NUS, Inc **Client Code:** TetraTecKP **LabProject #:** P0807247
Project: CTO 411 Willow Grove
Cooler ID: 1

A. **Preliminary Examination Phase:** **Date cooler opened:** 7/18/2008
Cooler opened by: dp

1. **Was airbill Attached?** N/A **Airbill #:** **Carrier Name:** FedEx
2. **Custody Seals?** N/A **How many?** 0 **Location:** **Seal Name:**
3. **Seals intact?** Yes
4. **Screened for radiation?** N/A
5. **COC Attached?** Yes **Properly Completed?** Yes **Signed by employee?** Yes
6. **Project Identification from custody paper:** CTO 411 Willow Grove
7. **Preservative:** Yes **Temperature:** 4

Comments:

B. **Log-In Phase: Samples Log-in Date:** 7/18/2008 **Log-in By:** dp

1. **Packing Type:** Other
2. **Were samples in separate bags?** N/A
3. **Were containers intact?** Yes **Labels agree with COC?** Yes
4. **Number of bottles received:** 10 **Number of samples received:** 2
5. **Correct containers used?** Yes **Correct preservatives added?** N/A
6. **Sufficient sample volume?** Yes
7. **Bubbles in VOA samples?** N/A
8. **Was Project manager called and status discussed?** N/A

Comments:

Have designate person initial here to acknowledge receipt of cooler: _____ **Date:** 7/18/8

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200

FedEx Express *US Airbill*

FedEx Tracking Number 8646 0966 9679

Form ID No. 0215

RECIPIENT: PEEL HERE

fedex.com 1.800 GoFedEx 1.800 463.3339

1 From This portion can be removed for Recipient's records.

Date 7/12/08 FedEx Tracking Number 864609669679

Sender's Name [illegible] Phone 310 491-[illegible]

Company [illegible] TECH NUS, INC [illegible]

Address [illegible] MALL BLVD STE 250

Dept./Floor/Suite/Room

City KING OF PRUSSIA State PA ZIP 19406

2 Your Internal Billing Reference [illegible]

3 To

Recipient's Name Sample Customer Phone [illegible]

Company Mar[illegible] Inc

Recipient's Address [illegible] William Pitt Way

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Pittsburgh State PA ZIP 15238

0374747060

8646 0966 9679

4a Express Package Service *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

* To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation:

** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Not available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg
- [ ] Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Obtain Recip Acct. No. [ ]

Total Packages 1 Total Weight 15

Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

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FEDEX CUST 1800 GOFEDEX 1.800 463.3339

P0807247

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TOC Data

041708MD-CAL

Signal . 1 (C)

r.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
1	prime	sample	1000	µL		0	mg/L	0			Prime	TC Low-022608MD	1	1	1	4/17/2008 11:02:08 AM
2	blank	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-022608MD	1	1	1	4/17/2008 11:10:31 AM
3	blank	sample	1000	µL	-1.29	0	mg/L	77.3			UV_NPOC_II	TC Low-022608MD	1	1	1	4/17/2008 11:19:29 AM
4	blank	sample	1000	µL	-1.40	0	mg/L	73.4	-1.35	5.38	UV_NPOC_II	TC Low-022608MD	1	1	1	4/17/2008 11:26:42 AM
5	blank2	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-022608MD	2	1	1	4/17/2008 11:35:00 AM
6	blank2	sample	1000	µL	-1.33	0	mg/L	76.1			UV_NPOC_II	TC Low-022608MD	2	1	1	4/17/2008 11:44:02 AM
7	blank2	sample	1000	µL	-1.37	0	mg/L	74.3	-1.35	2.44	UV_NPOC_II	TC Low-022608MD	2	1	1	4/17/2008 11:51:21 AM
8	blank3	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-022608MD	3	1	1	4/17/2008 11:59:46 AM
9	blank3	sample	1000	µL	-1.28	0	mg/L	78.0			UV_NPOC_II	TC Low-022608MD	3	1	1	4/17/2008 12:08:57 PM
10	blank3	sample	1000	µL	-1.24	0	mg/L	79.4	-1.26	2.15	UV_NPOC_II	TC Low-022608MD	3	1	1	4/17/2008 12:16:20 PM
11	0.5ppm CAL STD	fault	0	µL		0.50	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	4	1	1	4/17/2008 12:24:46 PM
12	0.5ppm CAL STD	calibration	1000	µL	-0.04	0.50	mg/L	103.0			UV_NPOC_II	TC Low-041708MD-C	4	1	1	4/17/2008 12:34:00 PM
13	0.5ppm CAL STD	calibration	1000	µL	-0.07	0.50	mg/L	102.0			UV_NPOC_II	TC Low-041708MD-C	4	1	1	4/17/2008 12:41:32 PM
14	0.5ppm CAL STD	calibration	1000	µL	0.02	0.50	mg/L	105.3			UV_NPOC_II	TC Low-041708MD-C	4	1	1	4/17/2008 12:48:50 PM
15	0.5ppm CAL STD	calibration	1000	µL	-0.01	0.50	mg/L	104.3	-0.03	140.57	UV_NPOC_II	TC Low-041708MD-C	4	1	1	4/17/2008 12:56:25 PM
16	1.0ppm CAL STD	fault	0	µL		1.00	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	5	1	1	4/17/2008 1:04:58 PM
17	1.0ppm CAL STD	calibration	1000	µL	0.54	1.00	mg/L	125.0			UV_NPOC_II	TC Low-041708MD-C	5	1	1	4/17/2008 1:14:24 PM
18	1.0ppm CAL STD	calibration	1000	µL	0.61	1.00	mg/L	126.0			UV_NPOC_II	TC Low-041708MD-C	5	1	1	4/17/2008 1:21:54 PM
19	1.0ppm CAL STD	calibration	1000	µL	0.60	1.00	mg/L	127.3			UV_NPOC_II	TC Low-041708MD-C	5	1	1	4/17/2008 1:29:23 PM
20	1.0ppm CAL STD	calibration	1000	µL	0.64	1.00	mg/L	129.0	0.60	7.49	UV_NPOC_II	TC Low-041708MD-C	5	1	1	4/17/2008 1:36:53 PM
21	5.0ppm CAL STD	fault	0	µL		5.00	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	6	1	1	4/17/2008 1:45:28 PM
22	5.0ppm CAL STD	calibration	1000	µL	4.78	5.00	mg/L	288.2			UV_NPOC_II	TC Low-041708MD-C	6	1	1	4/17/2008 1:55:09 PM
23	5.0ppm CAL STD	calibration	1000	µL	4.77	5.00	mg/L	285.8			UV_NPOC_II	TC Low-041708MD-C	6	1	1	4/17/2008 2:02:52 PM
24	5.0ppm CAL STD	calibration	1000	µL	4.71	5.00	mg/L	283.3			UV_NPOC_II	TC Low-041708MD-C	6	1	1	4/17/2008 2:10:32 PM
25	5.0ppm CAL STD	calibration	1000	µL	4.82	5.00	mg/L	287.5	4.77	0.95	UV_NPOC_II	TC Low-041708MD-C	6	1	1	4/17/2008 2:18:11 PM
26	10.0ppm CAL STD	fault	0	µL		10.00	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	7	1	1	4/17/2008 2:26:52 PM
27	10.0ppm CAL STD	calibration	1000	µL	10.54	10.00	mg/L	504.9			UV_NPOC_II	TC Low-041708MD-C	7	1	1	4/17/2008 2:36:47 PM
28	10.0ppm CAL STD	calibration	1000	µL	10.35	10.00	mg/L	497.6			UV_NPOC_II	TC Low-041708MD-C	7	1	1	4/17/2008 2:44:37 PM
29	10.0ppm CAL STD	calibration	1000	µL	10.49	10.00	mg/L	502.7			UV_NPOC_II	TC Low-041708MD-C	7	1	1	4/17/2008 2:52:29 PM

Sample blanco .0
Calibration blanco 0
Yield (%) 100

Analyst name Maureen Donlin
Print date 6/12/2008

P0807247

041708MD-CAL

Signal 1 (C)

Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
30	10.0ppm CAL STD	calibration	1000	µL	10.40	10.00	mg/L	499.5	10.44	0.82	UV_NPOC_II	TC Low-041708MD-C	7	1	1	4/17/2008 3:00:21 PM
31	25.0ppm CAL STD	fault	0	µL		25.00	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	8	1	1	4/17/2008 3:08:47 PM
32	25.0ppm CAL STD	calibration	1000	µL	25.38	25.00	mg/L	1068.5			UV_NPOC_II	TC Low-041708MD-C	8	1	1	4/17/2008 3:18:07 PM
33	25.0ppm CAL STD	calibration	1000	µL	24.86	25.00	mg/L	1048.3			UV_NPOC_II	TC Low-041708MD-C	8	1	1	4/17/2008 3:25:42 PM
34	25.0ppm CAL STD	calibration	1000	µL	25.01	25.00	mg/L	1054.2			UV_NPOC_II	TC Low-041708MD-C	8	1	1	4/17/2008 3:33:18 PM
35	25.0ppm CAL STD	calibration	1000	µL	25.06	25.00	mg/L	1055.7	25.07	0.69	UV_NPOC_II	TC Low-041708MD-C	8	1	1	4/17/2008 3:40:55 PM
36	50.0ppm CAL STD	fault	0	µL		50.00	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	9	1	1	4/17/2008 3:49:13 PM
37	50.0ppm CAL STD	calibration	1000	µL	50.65	50.00	mg/L	2035.2			UV_NPOC_II	TC Low-041708MD-C	9	1	1	4/17/2008 3:58:40 PM
38	50.0ppm CAL STD	calibration	1000	µL	50.59	50.00	mg/L	2025.5			UV_NPOC_II	TC Low-041708MD-C	9	1	1	4/17/2008 4:06:25 PM
39	50.0ppm CAL STD	calibration	1000	µL	50.20	50.00	mg/L	2010.6			UV_NPOC_II	TC Low-041708MD-C	9	1	1	4/17/2008 4:14:10 PM
40	50.0ppm CAL STD	calibration	1000	µL	50.70	50.00	mg/L	2029.7	50.59	0.55	UV_NPOC_II	TC Low-041708MD-C	9	1	1	4/17/2008 4:21:54 PM
41	100pm CAL STD	fault	0	µL		100.00	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	10	1	1	4/17/2008 4:30:13 PM
42	100pm CAL STD	calibration	1000	µL	101.52	100.00	mg/L	3958.9			UV_NPOC_II	TC Low-041708MD-C	10	1	1	4/17/2008 4:40:02 PM
43	100pm CAL STD	calibration	1000	µL	100.32	100.00	mg/L	3913.2			UV_NPOC_II	TC Low-041708MD-C	10	1	1	4/17/2008 4:48:04 PM
44	100pm CAL STD	calibration	1000	µL	100.75	100.00	mg/L	3929.5			UV_NPOC_II	TC Low-041708MD-C	10	1	1	4/17/2008 4:56:10 PM
45	100pm CAL STD	calibration	1000	µL	100.79	100.00	mg/L	3931.2	100.84	0.49	UV_NPOC_II	TC Low-041708MD-C	10	1	1	4/17/2008 5:04:12 PM
46	150pm CAL STD	fault	0	µL		150.00	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	11	1	1	4/17/2008 5:12:37 PM
47	150pm CAL STD	calibration	1000	µL	150.04	150.00	mg/L	5801.2			UV_NPOC_II	TC Low-041708MD-C	11	1	1	4/17/2008 5:22:36 PM
48	150pm CAL STD	calibration	1000	µL	150.70	150.00	mg/L	5829.2			UV_NPOC_II	TC Low-041708MD-C	11	1	1	4/17/2008 5:30:52 PM
49	150pm CAL STD	calibration	1000	µL	148.30	150.00	mg/L	5735.1			UV_NPOC_II	TC Low-041708MD-C	11	1	1	4/17/2008 5:39:04 PM
50	150pm CAL STD	calibration	1000	µL	147.72	150.00	mg/L	5713.0	149.21	0.96	UV_NPOC_II	TC Low-041708MD-C	11	1	1	4/17/2008 5:47:18 PM
51	ICB	fault	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	12	1	1	4/17/2008 5:55:46 PM
52	ICB	sample	1000	µL	-0.06	0	mg/L	102.9			UV_NPOC_II	TC Low-041708MD-C	12	1	1	4/17/2008 6:05:07 PM
53	ICB	sample	1000	µL	-0.16	0	mg/L	98.9			UV_NPOC_II	TC Low-041708MD-C	12	1	1	4/17/2008 6:12:34 PM
54	ICB	sample	1000	µL	-0.19	0	mg/L	97.4			UV_NPOC_II	TC Low-041708MD-C	12	1	1	4/17/2008 6:19:59 PM
55	ICB	sample	1000	µL	-0.19	0	mg/L	97.4	-0.15	47.53	UV_NPOC_II	TC Low-041708MD-C	12	1	1	4/17/2008 6:27:26 PM
56	ICV 50ppm	fault	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	13	1	1	4/17/2008 6:35:57 PM
57	ICV 50ppm	sample	1000	µL	52.30	0	mg/L	2090.2			UV_NPOC_II	TC Low-041708MD-C	13	1	1	4/17/2008 6:45:56 PM
58	ICV 50ppm	sample	1000	µL	51.53	0	mg/L	2061.0			UV_NPOC_II	TC Low-041708MD-C	13	1	1	4/17/2008 6:53:58 PM

Analyst name Maureen Donlin

Print date 6/12/2008

Sample blanco 0
Calibration blanco 0
Yield (%) 100

P0807247

041708MD-CAL

Signal : 1 (C)

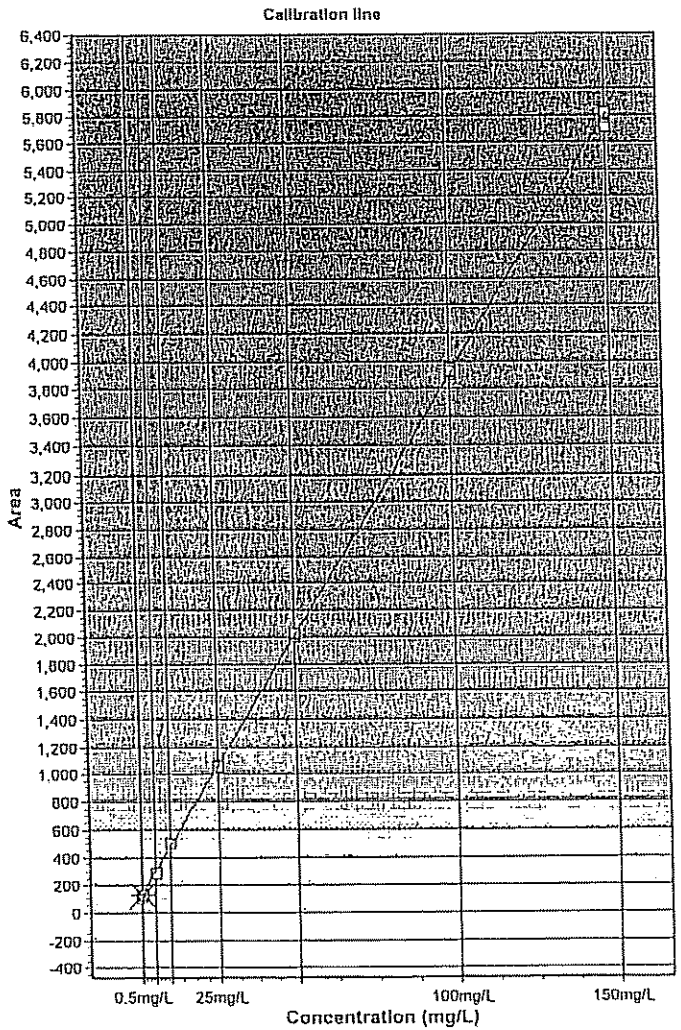
Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
59	ICV 50ppm	sample	1000	µL	51.60	0	mg/L	2063.5			UV_NPOC_II	TC Low-041708MD-C	13	1	1	4/17/2008 7:01:56 PM
60	ICV 50ppm	sample	1000	µL	51.06	0	mg/L	2042.9	51.62	0.99	UV_NPOC_II	TC Low-041708MD-C	13	1	1	4/17/2008 7:09:56 PM
61	PBW	fault	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	14	1	1	4/17/2008 7:18:31 PM
62	PBW	sample	1000	µL	-0.34	0	mg/L	91.9			UV_NPOC_II	TC Low-041708MD-C	14	1	1	4/17/2008 7:26:04 PM
63	PBW	sample	1000	µL	-0.33	0	mg/L	92.0			UV_NPOC_II	TC Low-041708MD-C	14	1	1	4/17/2008 7:35:35 PM
64	PBW	sample	1000	µL	-0.30	0	mg/L	93.2			UV_NPOC_II	TC Low-041708MD-C	14	1	1	4/17/2008 7:43:07 PM
65	PBW	sample	1000	µL	-0.28	0	mg/L	94.1	-0.31	8.92	UV_NPOC_II	TC Low-041708MD-C	14	1	1	4/17/2008 7:50:40 PM
66	LCSW 60.1ppm	fault	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	15	1	1	4/17/2008 7:59:19 PM
67	LCSW 60.1ppm	sample	1000	µL	62.04	0	mg/L	2490.3			UV_NPOC_II	TC Low-041708MD-C	15	1	1	4/17/2008 8:09:37 PM
68	LCSW 60.1ppm	sample	1000	µL	61.04	0	mg/L	2452.6			UV_NPOC_II	TC Low-041708MD-C	15	1	1	4/17/2008 8:17:52 PM
69	LCSW 60.1ppm	sample	1000	µL	61.63	0	mg/L	2444.4			UV_NPOC_II	TC Low-041708MD-C	15	1	1	4/17/2008 8:26:08 PM
70	LCSW 60.1ppm	sample	1000	µL	61.01	0	mg/L	2420.9	61.63	1.23	UV_NPOC_II	TC Low-041708MD-C	15	1	1	4/17/2008 8:34:20 PM
71	P0804107-01A	fault	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	16	1	1	4/17/2008 8:42:53 PM
72	P0804107-01A	sample	1000	µL	10.86	0	mg/L	516.9			UV_NPOC_II	TC Low-041708MD-C	16	1	1	4/17/2008 8:53:02 PM
73	P0804107-01A	sample	1000	µL	10.71	0	mg/L	511.4			UV_NPOC_II	TC Low-041708MD-C	16	1	1	4/17/2008 9:01:16 PM
74	P0804107-01A	sample	1000	µL	10.83	0	mg/L	515.8			UV_NPOC_II	TC Low-041708MD-C	16	1	1	4/17/2008 9:09:34 PM
75	P0804107-01A	sample	1000	µL	10.82	0	mg/L	515.6	10.81	0.59	UV_NPOC_II	TC Low-041708MD-C	16	1	1	4/17/2008 9:17:51 PM
76	P0804107-01A DUP	fault	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	17	1	1	4/17/2008 9:26:15 PM
77	P0804107-01A DUP	sample	1000	µL	10.58	0	mg/L	506.3			UV_NPOC_II	TC Low-041708MD-C	17	1	1	4/17/2008 9:36:22 PM
78	P0804107-01A DUP	sample	1000	µL	10.55	0	mg/L	505.3			UV_NPOC_II	TC Low-041708MD-C	17	1	1	4/17/2008 9:44:37 PM
79	P0804107-01A DUP	sample	1000	µL	10.79	0	mg/L	514.3			UV_NPOC_II	TC Low-041708MD-C	17	1	1	4/17/2008 9:52:51 PM
80	P0804107-01A DUP	sample	1000	µL	10.69	0	mg/L	510.4	10.65	1.02	UV_NPOC_II	TC Low-041708MD-C	17	1	1	4/17/2008 10:01:09 PM
81	P0804107-01A MS 50ppm	fault	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	18	1	1	4/17/2008 10:09:34 PM
82	P0804107-01A MS 50ppm	sample	1000	µL	64.00	0	mg/L	2534.4			UV_NPOC_II	TC Low-041708MD-C	18	1	1	4/17/2008 10:19:54 PM
83	P0804107-01A MS 50ppm	sample	1000	µL	62.54	0	mg/L	2479.2			UV_NPOC_II	TC Low-041708MD-C	18	1	1	4/17/2008 10:28:21 PM
84	P0804107-01A MS 50ppm	sample	1000	µL	63.17	0	mg/L	2503.1			UV_NPOC_II	TC Low-041708MD-C	18	1	1	4/17/2008 10:36:49 PM
85	P0804107-01A MS 50ppm	sample	1000	µL	62.53	0	mg/L	2478.5	63.06	1.10	UV_NPOC_II	TC Low-041708MD-C	18	1	1	4/17/2008 10:45:16 PM
86	P0804107-02A	fault	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	19	1	1	4/17/2008 10:53:42 PM
87	P0804107-02A	sample	1000	µL	3.80	0	mg/L	249.1			UV_NPOC_II	TC Low-041708MD-C	19	1	1	4/17/2008 11:04:03 PM

Analyst name : Maureen Donlin

Print date 6/12/2008

Sample blanco : 0
Calibration blanco 0
Yield (%) 100

P0807247


Calibration line
Area
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6,200
6,000
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2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
-200
-400
0.5mg/L
25mg/L
100mg/L
150mg/L
Concentration (mg/L)

P0807247

CASE NARRATIVE

Batch Number: H080724017

Original Run Date: 7-22-08

Sample Numbers: P0807247-1+2, P0807252-1+2, P0807262-1+2
P0807267-1-3

Out of Control Event: N/A

Corrective Action Taken:

Result:

Observations to support use of data:

Manual Integration Checklist and Approval	
Manual Integration approved? Yes No Satisfactorily documented on this narrative? Manually integrated chromatogram initialed and dated by analyst?	
Signature Lead Analyst or Lab Mgr.	Date

Analyzed and Reviewed by:	[illegible]	Date:	7-24-08
Manual Integration Conducted?		YES	NO
Reviewed by:		Date:	
Reviewed and Entered by:	RW	Date:	7/24/08
Reviewed by:		Date:	
Corrected by:		Date:	

Queue report

072208MD

Maureen Donlin
7-24-08

Signal . 1 (C)

M0807247017

Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
1	prime	sample	1000	µL		0	mg/L	0			Prime	TC Low-041708MD-C	1	1	1	7/22/2008 9:22:01 AM
2	blank	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	2	1	1	7/22/2008 9:30:24 AM
3	blank	sample	1000	µL	0.37	0	mg/L	118.8			UV_NPOC_II	TC Low-041708MD-C	2	1	1	7/22/2008 9:39:30 AM
4	blank	sample	1000	µL	0.26	0	mg/L	114.3	0.31	26.35	UV_NPOC_II	TC Low-041708MD-C	2	1	1	7/22/2008 9:46:46 AM
5	CCB	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	3	1	1	7/22/2008 9:55:10 AM
6	CCB	sample	1000	µL	0.08	0	mg/L	107.6			UV_NPOC_II	TC Low-041708MD-C	3	1	1	7/22/2008 10:04:22 AM
7	CCB	sample	1000	µL	0.06	0	mg/L	107.1	0.07	14.41	UV_NPOC_II	TC Low-041708MD-C	3	1	1	7/22/2008 10:11:42 AM
8	CCV 50ppm	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	4	1	1	7/22/2008 10:20:06 AM
9	CCV 50ppm	sample	1000	µL	51.28	0	mg/L	2051.7			UV_NPOC_II	TC Low-041708MD-C	4	1	1	7/22/2008 10:29:54 AM
10	CCV 50ppm	sample	1000	µL	50.18	0	mg/L	2009.8			UV_NPOC_II	TC Low-041708MD-C	4	1	1	7/22/2008 10:37:45 AM
11	CCV 50ppm	sample	1000	µL	50.82	0	mg/L	2033.9			UV_NPOC_II	TC Low-041708MD-C	4	1	1	7/22/2008 10:45:39 AM
12	CCV 50ppm	sample	1000	µL	51.07	0	mg/L	2043.6	50.84	0.94	UV_NPOC_II	TC Low-041708MD-C	4	1	1	7/22/2008 10:53:31 AM
13	PBW	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	5	1	1	7/22/2008 11:02:01 AM
14	PBW	sample	1000	µL	0.25	0	mg/L	114.2			UV_NPOC_II	TC Low-041708MD-C	5	1	1	7/22/2008 11:11:28 AM
15	PBW	sample	1000	µL	0.22	0	mg/L	113.0			UV_NPOC_II	TC Low-041708MD-C	5	1	1	7/22/2008 11:18:55 AM
16	PBW	sample	1000	µL	0.14	0	mg/L	110.0			UV_NPOC_II	TC Low-041708MD-C	5	1	1	7/22/2008 11:26:21 AM
17	PBW	sample	1000	µL	0.18	0	mg/L	111.5	0.20	24.45	UV_NPOC_II	TC Low-041708MD-C	5	1	1	7/22/2008 11:33:49 AM
18	LCSW	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	6	1	1	7/22/2008 11:42:22 AM
19	LCSW	sample	1000	µL	57.25	0	mg/L	2278.2			UV_NPOC_II	TC Low-041708MD-C	6	1	1	7/22/2008 11:52:20 AM
20	LCSW	sample	1000	µL	56.37	0	mg/L	2244.8			UV_NPOC_II	TC Low-041708MD-C	6	1	1	7/22/2008 12:00:18 PM
21	LCSW	sample	1000	µL	56.82	0	mg/L	2261.8			UV_NPOC_II	TC Low-041708MD-C	6	1	1	7/22/2008 12:08:19 PM
22	LCSW	sample	1000	µL	56.30	0	mg/L	2242.2	56.68	0.78	UV_NPOC_II	TC Low-041708MD-C	6	1	1	7/22/2008 12:16:20 PM
23	P0807247-01A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	7	1	1	7/22/2008 12:24:57 PM
24	P0807247-01A	sample	1000	µL	1.65	0	mg/L	167.3			UV_NPOC_II	TC Low-041708MD-C	7	1	1	7/22/2008 12:34:40 PM
25	P0807247-01A	sample	1000	µL	1.58	0	mg/L	164.5			UV_NPOC_II	TC Low-041708MD-C	7	1	1	7/22/2008 12:42:18 PM
26	P0807247-01A	sample	1000	µL	1.51	0	mg/L	162.1			UV_NPOC_II	TC Low-041708MD-C	7	1	1	7/22/2008 12:49:55 PM
27	P0807247-01A	sample	1000	µL	1.63	0	mg/L	166.6	1.59	3.88	UV_NPOC_II	TC Low-041708MD-C	7	1	1	7/22/2008 12:57:33 PM
28	P0807247-01A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	8	1	1	7/22/2008 1:06:03 PM
29	P0807247-01A Dup	sample	1000	µL	1.55	0	mg/L	163.6			UV_NPOC_II	TC Low-041708MD-C	8	1	1	7/22/2008 1:15:03 PM

101.7%

102.5%

Analyst name : Maureen Donlin

Print date : 7/23/2008

Sample blanco : 0
Calibration blanco : 0
Yield (%) : 100

P0807247

40

072208MD

Signal 1 (C)

Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
30	P0807247-01A dup	sample	1000	µL	1.52	0	mg/L	162.4		4.5%	UV_NPOC_II	TC Low-041708MD-C	8	1	1	7/22/2008 1:22:16 PM
31	P0807247-01A	sample	1000	µL	1.50	0	mg/L	161.7			UV_NPOC_II	TC Low-041708MD-C	8	1	1	7/22/2008 1:29:29 PM
32	P0807247-01A	sample	1000	µL	1.52	0	mg/L	162.4	1.52	1.40	UV_NPOC_II	TC Low-041708MD-C	8	1	1	7/22/2008 1:36:45 PM
33	P0807247-02A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	9	1	1	7/22/2008 1:45:02 PM
34	P0807247-02A	sample	1000	µL	2.41	0	mg/L	196.0			UV_NPOC_II	TC Low-041708MD-C	9	1	1	7/22/2008 1:54:03 PM
35	P0807247-02A	sample	1000	µL	2.33	0	mg/L	193.2			UV_NPOC_II	TC Low-041708MD-C	9	1	1	7/22/2008 2:01:19 PM
36	P0807247-02A	sample	1000	µL	2.37	0	mg/L	194.5			UV_NPOC_II	TC Low-041708MD-C	9	1	1	7/22/2008 2:08:35 PM
37	P0807247-02A	sample	1000	µL	2.44	0	mg/L	197.4	2.39	2.02	UV_NPOC_II	TC Low-041708MD-C	9	1	1	7/22/2008 2:15:53 PM
38	P0807247-02A MS	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	10	1	1	7/22/2008 2:24:12 PM
39	P0807247-02A MS	sample	1000	µL	58.11	0	mg/L	2310.9			UV_NPOC_II	TC Low-041708MD-C	10	1	1	7/22/2008 2:33:45 PM
40	P0807247-02A MS	sample	1000	µL	58.61	0	mg/L	2329.7		112%	UV_NPOC_II	TC Low-041708MD-C	10	1	1	7/22/2008 2:41:32 PM
41	P0807247-02A MS	sample	1000	µL	58.47	0	mg/L	2324.6			UV_NPOC_II	TC Low-041708MD-C	10	1	1	7/22/2008 2:49:17 PM
42	P0807247-02A MS	sample	1000	µL	58.56	0	mg/L	2328.0	58.44	0.39	UV_NPOC_II	TC Low-041708MD-C	10	1	1	7/22/2008 2:57:01 PM
43	P0807252-01A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	11	1	1	7/22/2008 3:05:25 PM
44	P0807252-01A	sample	1000	µL	24.25	0	mg/L	1025.3			UV_NPOC_II	TC Low-041708MD-C	11	1	1	7/22/2008 3:14:54 PM
45	P0807252-01A	sample	1000	µL	24.62	0	mg/L	1039.5			UV_NPOC_II	TC Low-041708MD-C	11	1	1	7/22/2008 3:22:33 PM
46	P0807252-01A	sample	1000	µL	24.52	0	mg/L	1035.4			UV_NPOC_II	TC Low-041708MD-C	11	1	1	7/22/2008 3:30:16 PM
47	P0807252-01A	sample	1000	µL	24.39	0	mg/L	1030.6	24.44	0.66	UV_NPOC_II	TC Low-041708MD-C	11	1	1	7/22/2008 3:37:57 PM
48	P0807252-01A IC MS	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	12	1	1	7/22/2008 3:46:31 PM
49	P0807252-01A IC MS	sample	1000	µL	12.48	0	mg/L	578.6			UV_NPOC_II	TC Low-041708MD-C	12	1	1	7/22/2008 3:56:09 PM
50	P0807252-01A IC MS	sample	1000	µL	13.39	0	mg/L	613.0			UV_NPOC_II	TC Low-041708MD-C	12	1	1	7/22/2008 4:03:48 PM
51	P0807252-01A IC MS	sample	1000	µL	12.30	0	mg/L	571.6			UV_NPOC_II	TC Low-041708MD-C	12	1	1	7/22/2008 4:11:26 PM
52	P0807252-01A IC MS	sample	1000	µL	12.15	0	mg/L	566.1	12.58	4.41	UV_NPOC_II	TC Low-041708MD-C	12	1	1	7/22/2008 4:19:01 PM
53	P0807252-02A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	13	1	1	7/22/2008 4:27:31 PM
54	P0807252-02A	sample	1000	µL	0.19	0	mg/L	111.9			UV_NPOC_II	TC Low-041708MD-C	13	1	1	7/22/2008 4:37:02 PM
55	P0807252-02A	sample	1000	µL	0.08	0	mg/L	107.8			UV_NPOC_II	TC Low-041708MD-C	13	1	1	7/22/2008 4:44:35 PM
56	P0807252-02A	sample	1000	µL	0.04	0	mg/L	106.1			UV_NPOC_II	TC Low-041708MD-C	13	1	1	7/22/2008 4:52:12 PM
57	P0807252-02A	sample	1000	µL	-0.01	0	mg/L	104.3	0.08	112.97	UV_NPOC_II	TC Low-041708MD-C	13	1	1	7/22/2008 4:59:44 PM
58	P0807262-01A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	14	1	1	7/22/2008 5:08:18 PM

rerun possible carryover

Analyst name : Maureen Donlin

Print date 7/23/2008

Sample blanco : 0
Calibration blanco : 0
Yield (%) : 100

P0807247

41

072208MD

Signal . 1 (C)

Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
59	P0807262-01A	sample	1000	µL	2.47	0	mg/L	198.3			UV_NPOC_II	TC Low-041708MD-C	14	1	1	7/22/2008 5:17:55 PM
60	P0807262-01A	sample	1000	µL	2.36	0	mg/L	194.4			UV_NPOC_II	TC Low-041708MD-C	14	1	1	7/22/2008 5:25:32 PM
61	P0807262-01A	sample	1000	µL	2.41	0	mg/L	196.0			UV_NPOC_II	TC Low-041708MD-C	14	1	1	7/22/2008 5:33:10 PM
62	P0807262-01A	sample	1000	µL	2.45	0	mg/L	197.0	2.42	1.88	UV_NPOC_II	TC Low-041708MD-C	14	1	1	7/22/2008 5:40:48 PM
63	CCB	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	15	1	1	7/22/2008 5:49:27 PM
64	CCB	sample	1000	µL	-0.11	0	mg/L	100.4			UV_NPOC_II	TC Low-041708MD-C	15	1	1	7/22/2008 5:59:09 PM
65	CCB	sample	1000	µL	-0.17	0	mg/L	98.2			UV_NPOC_II	TC Low-041708MD-C	15	1	1	7/22/2008 6:06:45 PM
66	CCB	sample	1000	µL	-0.14	0	mg/L	99.2			UV_NPOC_II	TC Low-041708MD-C	15	1	1	7/22/2008 6:14:21 PM
67	CCB	sample	1000	µL	-0.10	0	mg/L	101.0	-0.13	24.83	UV_NPOC_II	TC Low-041708MD-C	15	1	1	7/22/2008 6:21:58 PM
68	CCV	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	16	1	1	7/22/2008 6:30:29 PM
69	CCV	sample	1000	µL	50.89	0	mg/L	2036.7			UV_NPOC_II	TC Low-041708MD-C	16	1	1	7/22/2008 6:40:00 PM
70	CCV	sample	1000	µL	50.28	0	mg/L	2013.7			UV_NPOC_II	TC Low-041708MD-C	16	1	1	7/22/2008 6:47:51 PM
71	CCV	sample	1000	µL	50.76	0	mg/L	2031.7			UV_NPOC_II	TC Low-041708MD-C	16	1	1	7/22/2008 6:55:39 PM
72	CCV	sample	1000	µL	51.15	0	mg/L	2046.6	50.77	0.72	UV_NPOC_II	TC Low-041708MD-C	16	1	1	7/22/2008 7:03:28 PM
73	PBW	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	17	1	1	7/22/2008 7:11:50 PM
74	PBW	sample	1000	µL	-0.01	0	mg/L	104.4			UV_NPOC_II	TC Low-041708MD-C	17	1	1	7/22/2008 7:20:54 PM
75	PBW	sample	1000	µL	-0.04	0	mg/L	103.3			UV_NPOC_II	TC Low-041708MD-C	17	1	1	7/22/2008 7:28:12 PM
76	PBW	sample	1000	µL	-0.21	0	mg/L	96.7			UV_NPOC_II	TC Low-041708MD-C	17	1	1	7/22/2008 7:35:32 PM
77	PBW	sample	1000	µL	-0.11	0	mg/L	100.7	-0.09	100.25	UV_NPOC_II	TC Low-041708MD-C	17	1	1	7/22/2008 7:42:50 PM
78	LCSW	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	18	1	1	7/22/2008 7:51:12 PM
79	LCSW	sample	1000	µL	57.45	0	mg/L	2285.7			UV_NPOC_II	TC Low-041708MD-C	18	1	1	7/22/2008 8:00:51 PM
80	LCSW	sample	1000	µL	57.18	0	mg/L	2275.6			UV_NPOC_II	TC Low-041708MD-C	18	1	1	7/22/2008 8:08:40 PM
81	LCSW	sample	1000	µL	57.23	0	mg/L	2277.3			UV_NPOC_II	TC Low-041708MD-C	18	1	1	7/22/2008 8:16:30 PM
82	LCSW	sample	1000	µL	57.36	0	mg/L	2282.2	57.30	0.21	UV_NPOC_II	TC Low-041708MD-C	18	1	1	7/22/2008 8:24:07 PM
83	P0807262-02A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	19	1	1	7/22/2008 8:32:28 PM
84	P0807262-02A	sample	1000	µL	2.57	0	mg/L	202.2			UV_NPOC_II	TC Low-041708MD-C	19	1	1	7/22/2008 8:41:46 PM
85	P0807262-02A	sample	1000	µL	2.51	0	mg/L	199.9			UV_NPOC_II	TC Low-041708MD-C	19	1	1	7/22/2008 8:49:15 PM
86	P0807262-02A	sample	1000	µL	2.41	0	mg/L	196.1			UV_NPOC_II	TC Low-041708MD-C	19	1	1	7/22/2008 8:56:43 PM
87	P0807262-02A	sample	1000	µL	2.54	0	mg/L	201.2	2.51	2.83	UV_NPOC_II	TC Low-041708MD-C	19	1	1	7/22/2008 9:04:09 PM

101.5%

103.6%

Analyst name Maureen Donlin

Print date : 7/23/2008

Sample blanco : 0

Calibration blanco : 0

Yield (%) : 100

P0807247

42

Light Hydrocarbons
Methane, Ethane, Ethene

Method File: WATER
Operator: slyon

Printed: 6/3/2008 6:00:20 PM

Title:
Datasource: BIOREM11_local
Location: BIOREM14\2008 WATER 2.SEQ

Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 5/27/2008 9:49:38 AM by mmikesell

Peak Table:

Use Recently Detected Retention Times: Off
Peak Retention Time Determination: Absolute
Dead time:
Delay Time of 2'nd Detector: <None>
Delay Time of 3'rd Detector: <None>

No.	Peak Name	Ret.Time	Ret.Time FID	Ret.Time TCD	Ret.Time RGD	Window	Standard	Int.Type	Cal Type
1	Methane	0.643 min	0.643 min			0.200 AN	External	Area	Lin
2	Ethane	0.910 min	0.910 min			0.200 AN	External	Area	Lin
3	Ethene	1.170 min	1.170 min			0.200 AN	External	Area	Lin
4	Propane	1.800 min	1.800 min			0.200 AN	External	Area	Lin
5	Hydrogen	3.070 min			3.070 min	0.200 AN	External	Area	Lin
6	Propene	3.390 min	3.390 min			0.200 AN	External	Area	Lin
7	Carbon Dioxide	3.770 min		3.770 min		0.500 AN	External	Area	Lin
8	iso-Butane	4.550 min	4.550 min			0.500 AN	External	Area	Lin
9	n-Butane	5.400 min	5.400 min			0.500 AN	External	Area	Lin
10	Oxygen	5.870 min		5.870 min		0.400 AN	External	Area	Lin
11	Nitrogen	6.260 min		6.260 min		0.400 AN	External	Area	Lin
12	Acetylene	7.310 min	7.310 min			0.500 AN	External	Area	Lin
13	Methane	7.590 min		7.590 min		0.500 AN	External	Area	Lin
14	Carbon Monoxide	8.460 min		8.460 min		0.500 AN	External	Area	Lin

Method File: WATER
Operator: slyon

Title:
Datasource: BIOREM11_local
Location: BIOREM14\2008 WATER 2 SEQ

Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 5/27/2008 9:49:38 AM by mmikesell

Peak Table:

Use Recently Detected Retention Times: Off
Peak Retention Time Determination: Absolute
Dead time:
Delay Time of 2'nd Detector: <None>
Delay Time of 3'rd Detector: <None>

No.	Peak Name	Ret.Time	Peak Type	Group	Comment
1	Methane	0.643 min	Auto		
2	Ethane	0.910 min	Auto		
3	Ethene	1.170 min	Auto		
4	Propane	1.800 min	Auto		
5	Hydrogen	3.070 min	Auto		
6	Propene	3.390 min	Auto		
7	Carbon Dioxide	3.770 min	Auto		
8	iso-Butane	4.550 min	Auto		
9	n-Butane	5.400 min	Auto		
10	Oxygen	5.870 min	Auto		
11	Nitrogen	6.260 min	Auto		
12	Acetylene	7.310 min	Auto		
13	Methane	7.590 min	Auto		
14	Carbon Monoxide	8.460 min	Auto		

Method File: WATER
Operator: slyon

Title:
Datasource: BIOREM11_local
Location: BIOREM14\2008 WATER 2 SEQ

Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 5/27/2008 9:49:38 AM by mmikeselli

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 19
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Ret.Time	Ret.Time FID	Ret.Time TCD	Ret.Time RGD	Amount ICAL TCD 250x	Amount ICAL TCD 100x	Amount ICAL TCD 50x
1	Methane	0.643 min	0.643 min					
2	Ethane	0.910 min	0.910 min					
3	Ethene	1.170 min	1.170 min					
4	Propane	1.800 min	1.800 min					
5	Hydrogen	3.070 min			3.070 min			
6	Propene	3.390 min	3.390 min					
7	Carbon Dioxide	3.770 min		3.770 min		1.275000	3.189000	6.377000
8	iso-Butane	4.550 min	4.550 min					
9	n-Butane	5.400 min	5.400 min					
10	Oxygen	5.870 min		5.870 min		0.077600	0.194000	0.388000
11	Nitrogen	6.260 min		6.260 min		1.129000	2.823000	5.647000
12	Acetylene	7.310 min	7.310 min					
13	Methane	7.590 min		7.590 min			109.800000	219.600000
14	Carbon Monoxide	8.460 min		8.460 min			0.290100	0.580200

Method File: WATER
Operator: slyon

Printed: 6/3/2008 6:00:20 PM

Title:
Datasource: BIOREM11_local
Location: BIOREM14\2008 WATER 2 SEQ

Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 5/27/2008 9:49:38 AM by mmikesell

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 19
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Ret.Time	Amount ICAL TCD 10x	Amount ICAL TCD 2x	Amount ICAL TCD	Amount ICAL ACETYLENE 500x	Amount ICAL ACETYLENE 100x
1	Methane	0.643 min					
2	Ethane	0.910 min					
3	Ethene	1.170 min					
4	Propane	1.800 min					
5	Hydrogen	3.070 min					
6	Propene	3.390 min					
7	Carbon Dioxide	3.770 min	31.886000	159.430000	318.861000		
8	iso-Butane	4.550 min					
9	n-Butane	5.400 min					
10	Oxygen	5.870 min	1.940000	9.700000	19.400000		
11	Nitrogen	6.260 min	28.233000	141.166000	282.332000		
12	Acetylene	7.310 min				0.298000	1.489000
13	Methane	7.590 min	1098.000000	5490.000000	10980.000000		
14	Carbon Monoxide	8.460 min	2.901000	14.505000	29.010000		

Method File: WATER
Operator: slyon

Title:
Datasource: BIOREM11_local
Location: BIOREM14\2008 WATER 2 SEQ

Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 5/27/2008 9:49:38 AM by mmikesell

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 19
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Ret.Time	Amount ICAL ACETYLENE 20x	Amount ICAL ACETYLENE 4x	Amount ICAL ACETYLENE	Amount ICAL RGD/FID 12500x
1	Methane	0.643 min				0.009700
2	Ethane	0.910 min				0.019000
3	Ethene	1.170 min				0.021000
4	Propane	1.800 min				0.026900
5	Hydrogen	3.070 min				
6	Propene	3.390 min				0.031400
7	Carbon Dioxide	3.770 min				
8	iso-Butane	4.550 min				0.034300
9	n-Butane	5.400 min				0.034700
10	Oxygen	5.870 min				
11	Nitrogen	6.260 min				
12	Acetylene	7.310 min	7.446000	37.230000	148.920000	
13	Methane	7.590 min				
14	Carbon Monoxide	8.460 min				

Method File: WATER
Operator: slyon

Printed: 6/3/2008 6:00:20 PM

Title:
Datasource: BIOREM11_local
Location: BIOREM14\2008 WATER 2 SEQ

Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 5/27/2008 9:49:38 AM by mmikesell

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 19
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Ret.Time	Amount ICAL RGD/FID 2500x	Amount ICAL RGD/FID 1000x	Amount ICAL RGD/FID 250x	Amount ICAL RGD/FID 50x
1	Methane	0.643 min	0.048600		0.486000	
2	Ethane	0.910 min	0.095160		0.951600	
3	Ethene	1.170 min	0.105210		1.052100	
4	Propane	1.800 min	0.134400		1.344000	
5	Hydrogen	3.070 min	2.946000	7.365000	29.459000	147.294000
6	Propene	3.390 min	0.157000		1.570200	
7	Carbon Dioxide	3.770 min				
8	iso-Butane	4.550 min	0.171500		1.714800	
9	n-Butane	5.400 min	0.173700		1.736900	
10	Oxygen	5.870 min				
11	Nitrogen	6.260 min				
12	Acetylene	7.310 min				
13	Methane	7.590 min				
14	Carbon Monoxide	8.460 min				

Method File: WATER
Operator: slyon

Printed: 6/3/2008 6:00:20 PM

Title:
Datasource: BIOREM11_local
Location: BIOREM14\2008 WATER 2 SEQ

Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 5/27/2008 9:49:38 AM by mmikesell

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 19
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Ret.Time	Amount ICAL RGD/FID 25x	Amount ICAL RGD/FID 10x	Amount ICAL RGD/FID
1	Methane	0.643 min	4.860000	12.150000	121.500000
2	Ethane	0.910 min	9.516000	23.789000	237.890000
3	Ethene	1.170 min	10.521000	26.303000	263.030000
4	Propane	1.800 min	13.440000	33.600000	336.000000
5	Hydrogen	3.070 min	294.588000	736.500000	
6	Propene	3.390 min	15.702000	39.256000	392.560000
7	Carbon Dioxide	3.770 min			
8	iso-Butane	4.550 min	17.148000	42.871000	428.710000
9	n-Butane	5.400 min	17.369000	43.423000	434.230000
10	Oxygen	5.870 min			
11	Nitrogen	6.260 min			
12	Acetylene	7.310 min			
13	Methane	7.590 min			
14	Carbon Monoxide	8.460 min			

Method File: WATER
Operator: slyon

Title:
Datasource: BIOREM11_local
Location: BIOREM14\2008 WATER 2 SEQ

Created: 5/5/2004 12:45:44 PM by bcarnicelli
Last Update: 5/27/2008 9:49:38 AM by mmikeseli

Calibration:

Calibration Mode: Total
Auto Recalibrate: On
Curve Fitting Model: Normal

No.	Enabled	Name	Smp.No.	Pos.	Inj. Vol.	Weight	ISTD Amount	Dil. Factor	Inj. Date/Time
1	☒	ICAL TCD 250x	1	20	1 0	1 0000	1 0000	1 0000	2/29/2008 1:20:30 PM
2	☒	ICAL TCD 100x	2	21	1 0	1 0000	1 0000	1 0000	2/29/2008 1:35:03 PM
3	☒	ICAL TCD 50x	3	22	1 0	1 0000	1 0000	1 0000	2/29/2008 1:49:53 PM
4	☒	ICAL TCD 10x	4	23	1 0	1 0000	1 0000	1 0000	2/29/2008 2:02:11 PM
5	☒	ICAL TCD 2x	5	24	1 0	1 0000	1 0000	1 0000	2/29/2008 2:14:30 PM
6	☒	*ICAL TCD*	*6*	*25*	*1.0*	*1 0000*	*1 0000*	*1 0000*	*2/29/2008 2:31:08 PM*
7	☒	ICAL ACETYLENE 500x	9	13	1 0	1 0000	1 0000	1 0000	2/25/2008 4:12:57 PM
8	☒	ICAL ACETYLENE 100x	10	14	1 0	1 0000	1 0000	1 0000	2/25/2008 4:25:58 PM
9	☒	ICAL ACETYLENE 20x	11	15	1 0	1 0000	1 0000	1 0000	2/25/2008 4:38:20 PM
10	☒	ICAL ACETYLENE 4x	12	16	1 0	1 0000	1 0000	1 0000	2/25/2008 4:50:39 PM
11	☒	ICAL ACETYLENE	13	17	1 0	1 0000	1 0000	1 0000	2/25/2008 5:03:03 PM
12	☒	ICAL RGD/FID 12500X	16	2	1 0	1 0000	1 0000	1 0000	3/4/2008 11:22:29 AM
13	☒	ICAL RGD/FID 2500X	17	3	1 0	1 0000	1 0000	1 0000	3/4/2008 11:34:55 AM
14	☒	ICAL RGD/FID 1000X	18	4	1 0	1 0000	1 0000	1 0000	3/4/2008 11:47:26 AM
15	☒	ICAL RGD/FID 250X	19	5	1 0	1 0000	1 0000	1 0000	3/4/2008 11:59:54 AM
16	☒	ICAL RGD/FID 50X	20	6	1 0	1 0000	1 0000	1 0000	3/4/2008 12:12:15 PM
17	☒	ICAL RGD/FID 25X	21	7	1 0	1 0000	1 0000	1 0000	3/4/2008 12:27:36 PM
18	☒	ICAL RGD/FID 10X	22	8	1 0	1 0000	1 0000	1 0000	3/4/2008 12:40:00 PM
19	☒	ICAL RGD/FID	23	9	1 0	1 0000	1 0000	1 0000	3/4/2008 12:52:45 PM

Light Hydrocarbons

Method AM20GAX

3/4/2008

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square %	Offset	Slope	Curve
1	0.63	Methane	Lin	6	100.000	0.00000	0.65761	0.00000
2	0.89	Ethane	Lin	6	100.000	0.00000	0.62692	0.00000
3	1.14	Ethene	Lin	6	100.000	0.00000	0.56446	0.00000
4	1.77	Propane	Lin	6	100.000	0.00000	0.66020	0.00000
5	3.34	Propene	Lin	6	99.999	0.00000	0.54149	0.00000
6	4.55	iso-Butane	Lin	6	99.999	0.00000	0.65984	0.00000
7	5.30	n-Butane	Lin	6	99.999	0.00000	0.69362	0.00000

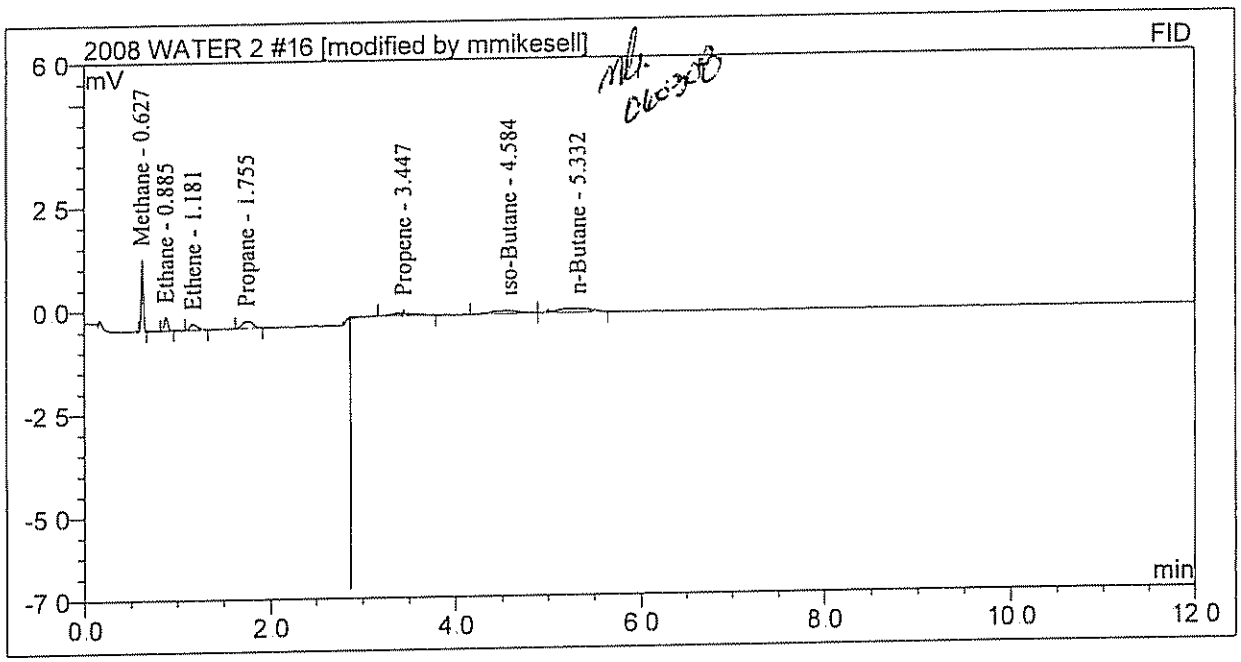
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL RGD/FID 12500X	**Sequence No:**	16
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	3/4/2008 11:22 AM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.627	0.045	1.733	BMB*	0.0689
2	Ethane	0.885	0.016	0.341	BMB*	0.0255
3	Ethene	1.181	0.015	0.151	BMB*	0.0258
4	Propane	1.755	0.024	0.186	BMB*	0.0358
5	Propene	3.447	0.020	0.147	BMB*	0.0370
6	iso-Butane	4.584	0.029	0.086	BMb*	0.0440
7	n-Butane	5.332	0.042	0.104	bMB*	0.0609

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



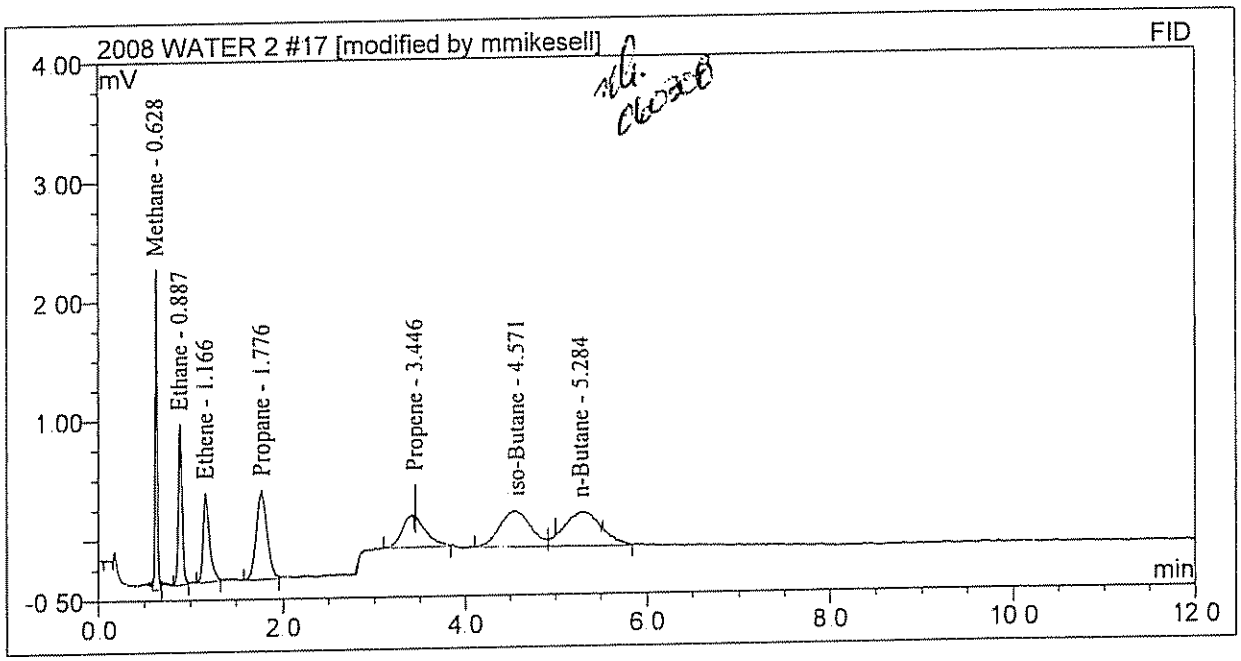
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL RGD/FID 2500X	**Sequence No:**	17
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	3/4/2008 11:34 AM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.628	0.073	2.682	BMB*	0.1110
2	Ethane	0.887	0.066	1.341	BMB*	0.1057
3	Ethene	1.166	0.062	0.743	BMB*	0.1091
4	Propane	1.776	0.098	0.747	BMB*	0.1477
5	Propene	3.446	0.079	0.520	BMB*	0.1454
6	iso-Butane	4.571	0.118	0.300	BM *	0.1781
7	n-Butane	5.284	0.134	0.286	MB*	0.1927

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



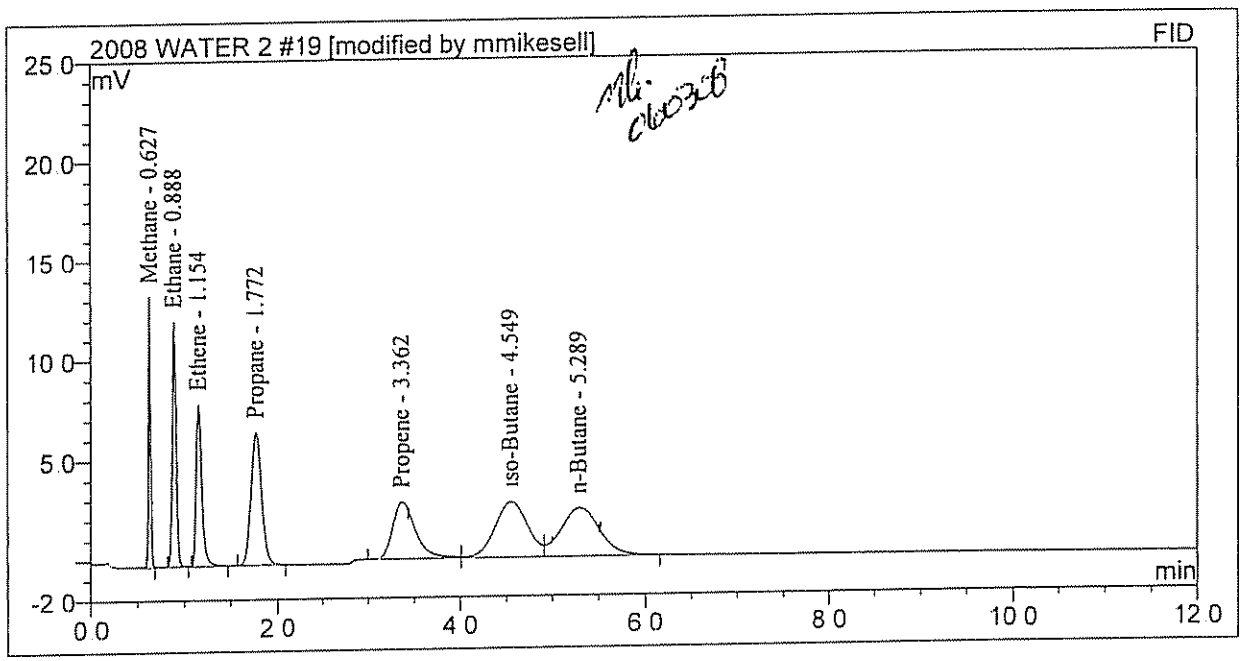
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL RGD/FID 250X	**Sequence No:**	19
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	3/4/2008 11:59 AM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.627	0.359	13.590	BMB*	0.5456
2	Ethane	0.888	0.602	12.274	BMB*	0.9605
3	Ethene	1.154	0.589	8.100	BMB*	1.0427
4	Propane	1.772	0.881	6.648	BMB*	1.3343
5	Propene	3.362	0.841	2.873	BM *	1.5531
6	iso-Butane	4.549	1.141	2.808	M *	1.7296
7	n-Butane	5.289	1.189	2.442	MB*	1.7139

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



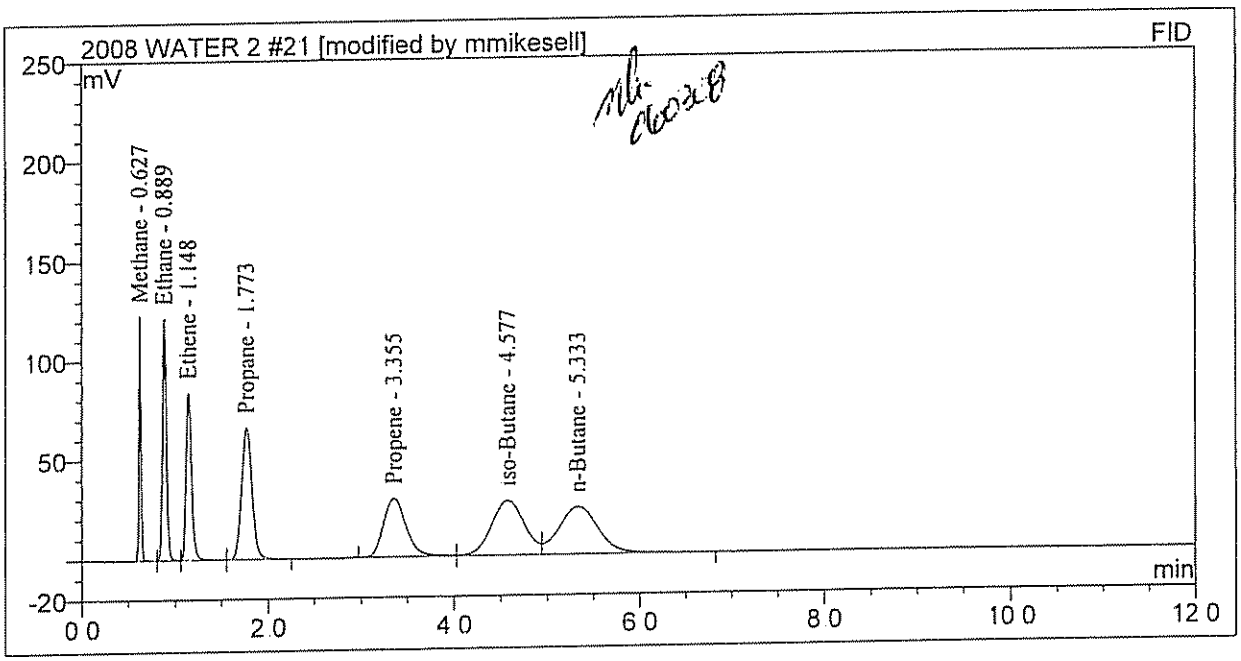
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL RGD/FID 25X	**Sequence No:**	21
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	3/4/2008 12:27 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.627	3.252	123.310	BM	4.9451
2	Ethane	0.889	5.991	122.096	M	9.5559
3	Ethene	1.148	5.935	84.298	M	10.5136
4	Propane	1.773	8.833	66.475	MB	13.3786
5	Propene	3.355	8.371	29.475	BM *	15.4589
6	iso-Butane	4.577	11.216	27.493	M *	16.9974
7	n-Butane	5.333	11.815	23.811	MB*	17.0336

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



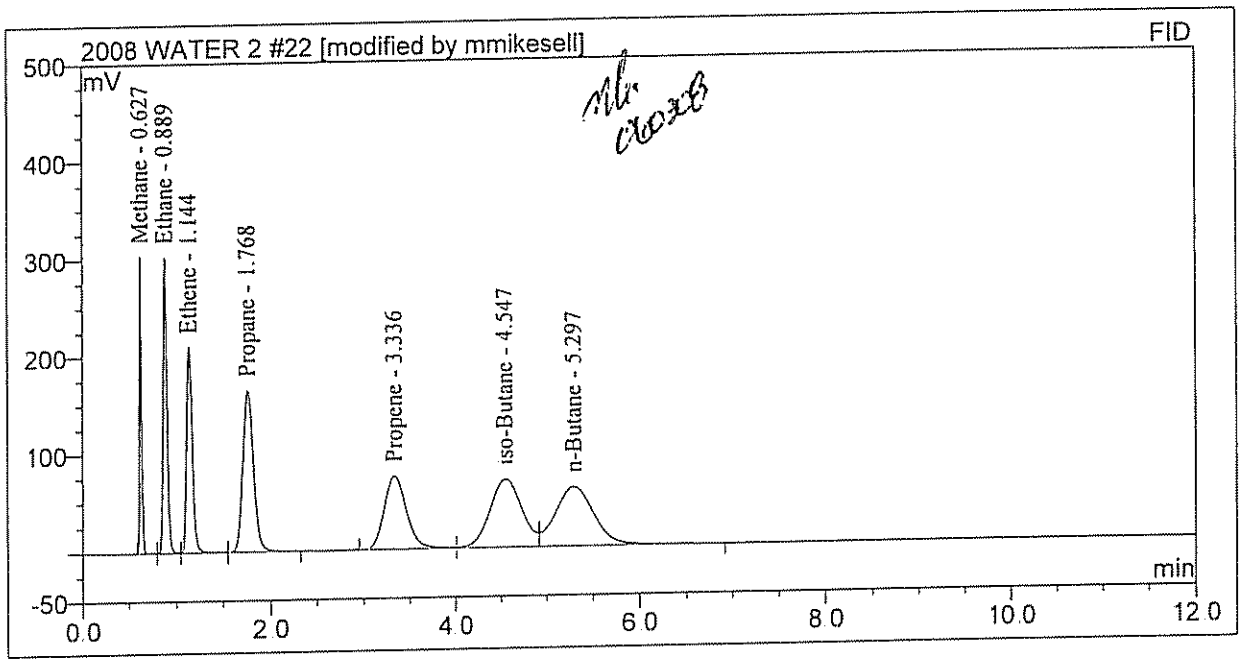
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL RGD/FID 10X	**Sequence No:**	22
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	3/4/2008 12:40 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.627	7.982	303.537	BM	12.1386
2	Ethane	0.889	14.794	302.679	M	23.5988
3	Ethene	1.144	14.674	210.683	M	25.9960
4	Propane	1.768	21.821	164.817	MB	33.0519
5	Propene	3.336	20.791	74.269	BM *	38.3956
6	iso-Butane	4.547	27.697	68.909	M *	41.9758
7	n-Butane	5.297	29.211	60.162	MB*	42.1140

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO_2, O_2, N_2, CO mg/L)
RGD UNITS (Hydrogen nM)



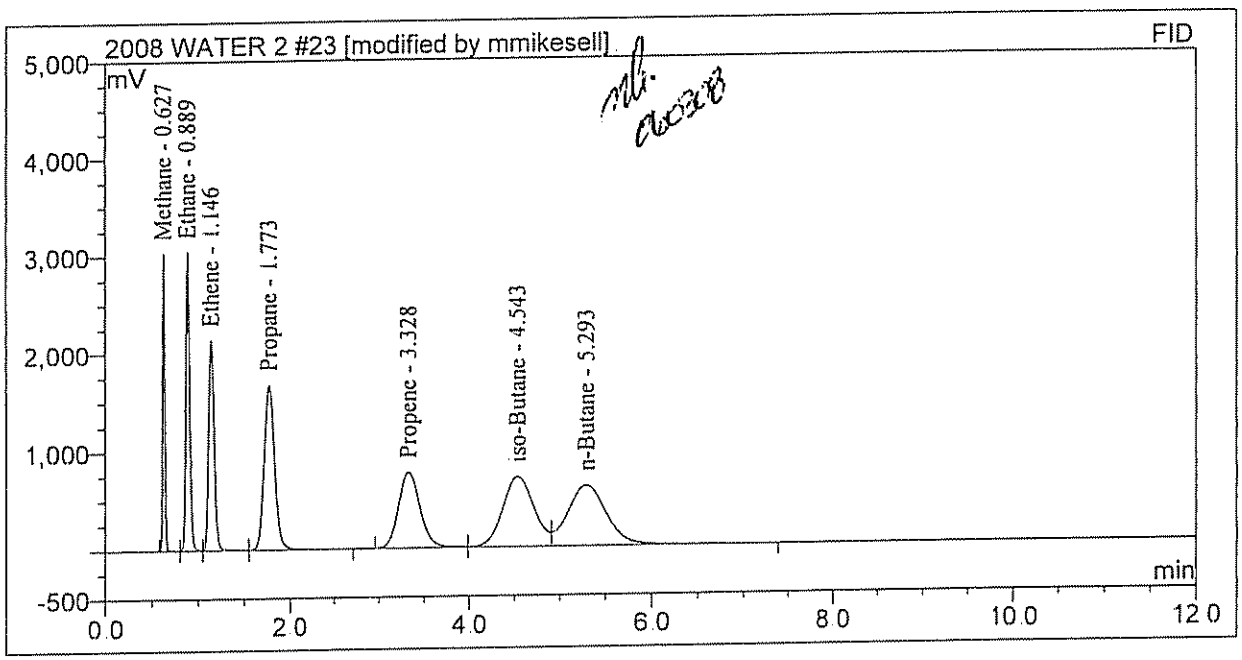
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL RGD/FID	**Sequence No:**	23
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	3/4/2008 12:52 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.627	79.898	3035.062	BM	121.4975
2	Ethane	0.889	149.148	3046.300	M	237.9074
3	Ethene	1.146	148.488	2142.478	M	263.0610
4	Propane	1.773	221.864	1676.391	MB	336.0573
5	Propene	3.328	212.620	770.570	BM *	392.6558
6	iso-Butane	4.543	282.945	711.186	M *	428.8055
7	n-Butane	5.293	301.290	615.284	MB*	434.3744

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



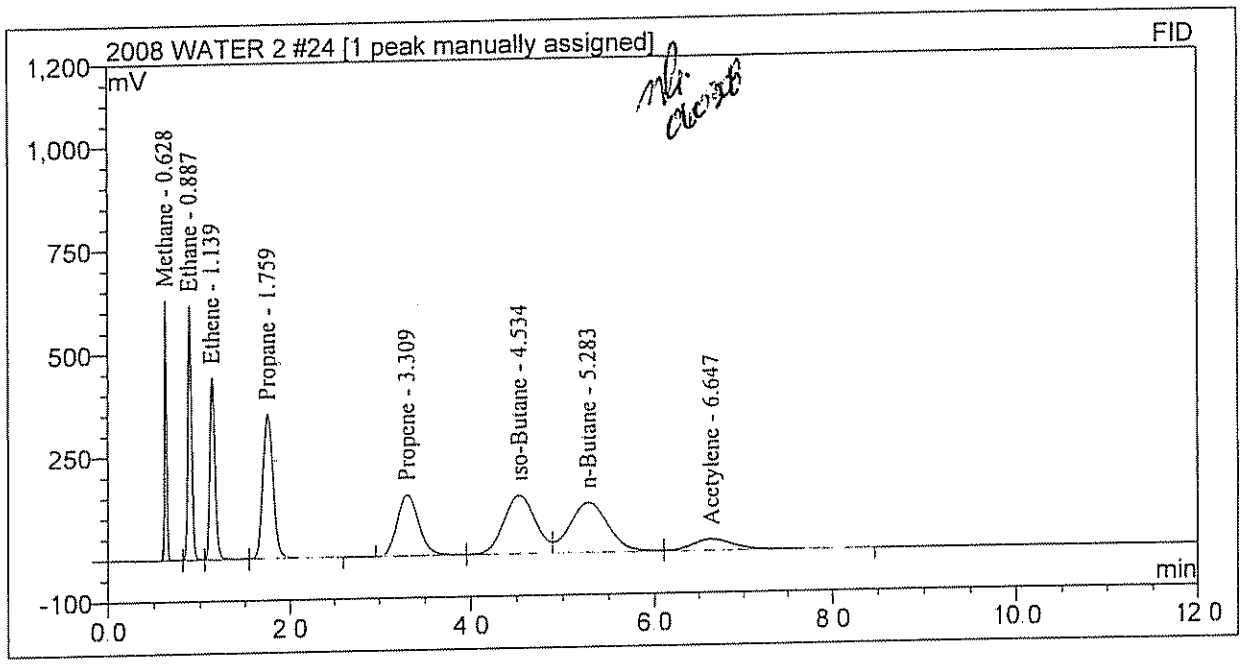
MICROSEEPS

Sample Analysis Report

Sample Name:	ICV RGD/FID	**Sequence No:**	24
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	3/4/2008 1:07 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount TV	Amount	
1	Methane	0.628	16.543	630.013	BM	24.79	25.1561	101 % R
2	Ethane	0.887	29.938	616.514	M	48.14	47.7545	99
3	Ethene	1.139	30.355	441.882	M	53.55	53.7767	100
4	Propane	1.759	46.070	351.046	MB	68.54	69.7815	102
5	Propene	3.309	41.310	148.796	BM	78.98	76.2887	97
6	iso-Butane	4.534	57.209	142.311	M	84.20	86.7009	103
7	n-Butane	5.283	59.404	122.081	M	87.37	85.6443	98
8	Acetylene	6.647	15.919	28.479	MB^	74.02	78.0950	105

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



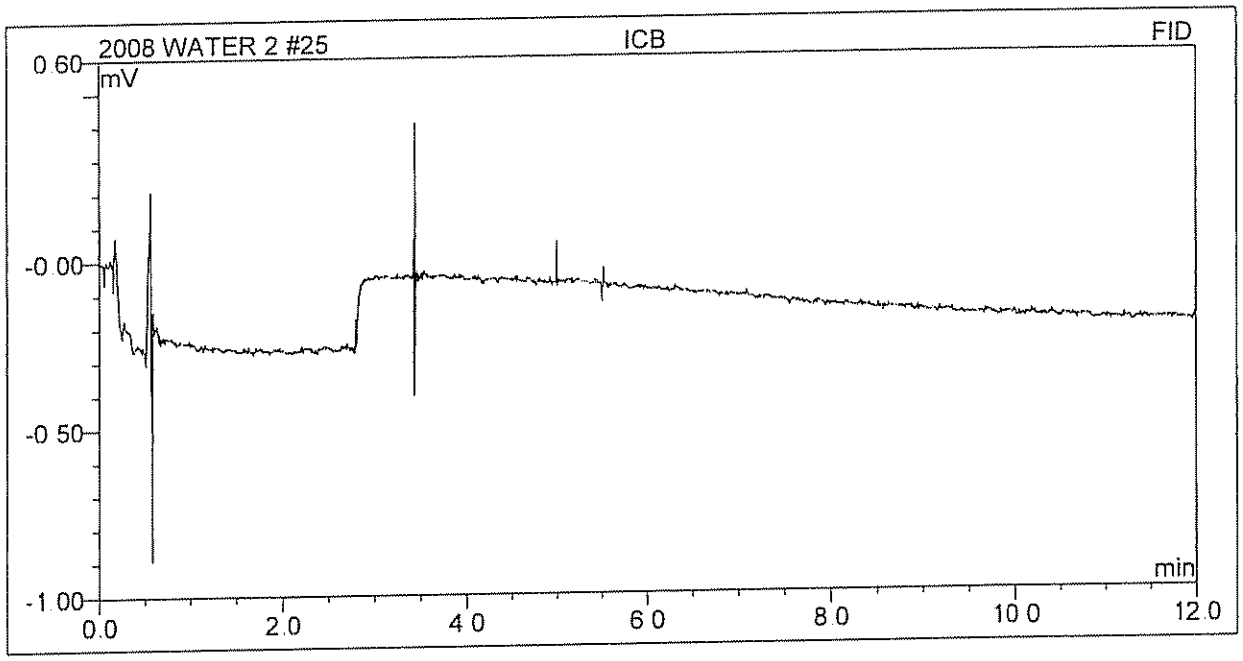
MICROSEEPS

Sample Analysis Report

Sample Name:	ICB	**Sequence No:**	25
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	3/4/2008 1:19 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



Permanent Gases

Method AM20GAX

2/29/2008

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square %	Offset	Slope	Curve
1	3.83	Carbon Dioxide	Lin	6	99.963	0.00000	0.19674	0.00000
2	5.78	Oxygen	Lin	6	99.937	0.00000	0.28431	0.00000
3	6.11	Nitrogen	Lin	6	99.991	0.00000	0.35323	0.00000
4	7.55	Methane	Lin	5	99.981	0.00000	0.00053	0.00000
5	8.38	Carbon Monoxide	Lin	5	99.999	0.00000	0.34927	0.00000

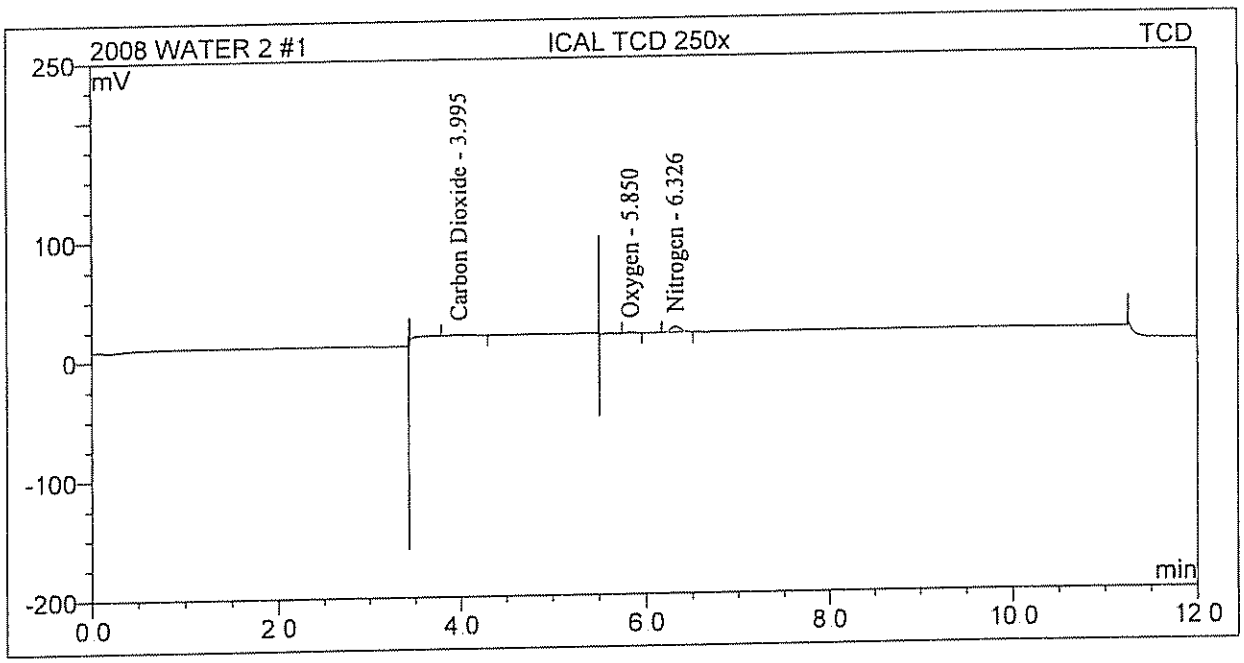
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD 250x	**Sequence No:**	1
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	2/29/2008 1:20 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	3.995	0.199	0.866	BMB	1.0119
2	Oxygen	5.850	0.075	0.870	BMB	0.2641
3	Nitrogen	6.326	0.604	5.122	BMB	1.7112

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



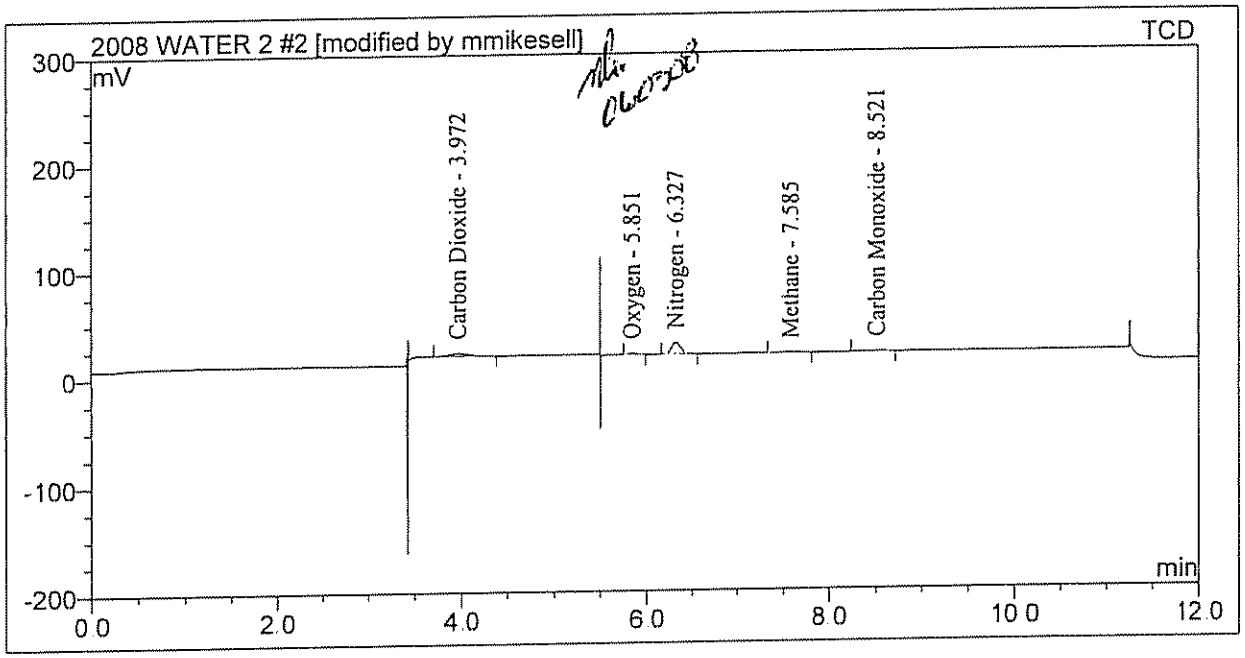
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD 100x	**Sequence No:**	2
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1 0000
Date Time Collected:	2/29/2008 1:35 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	3.972	0.617	2.608	BMB	3.1365
2	Oxygen	5.851	0.120	1.337	BMB	0.4230
3	Nitrogen	6.327	1.300	10.856	BMB	3.6800
4	Methane	7.585	0.065	0.357	BMB*	122.8441
5	Carbon Monoxide	8.521	0.116	0.493	BMB*	0.3322

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



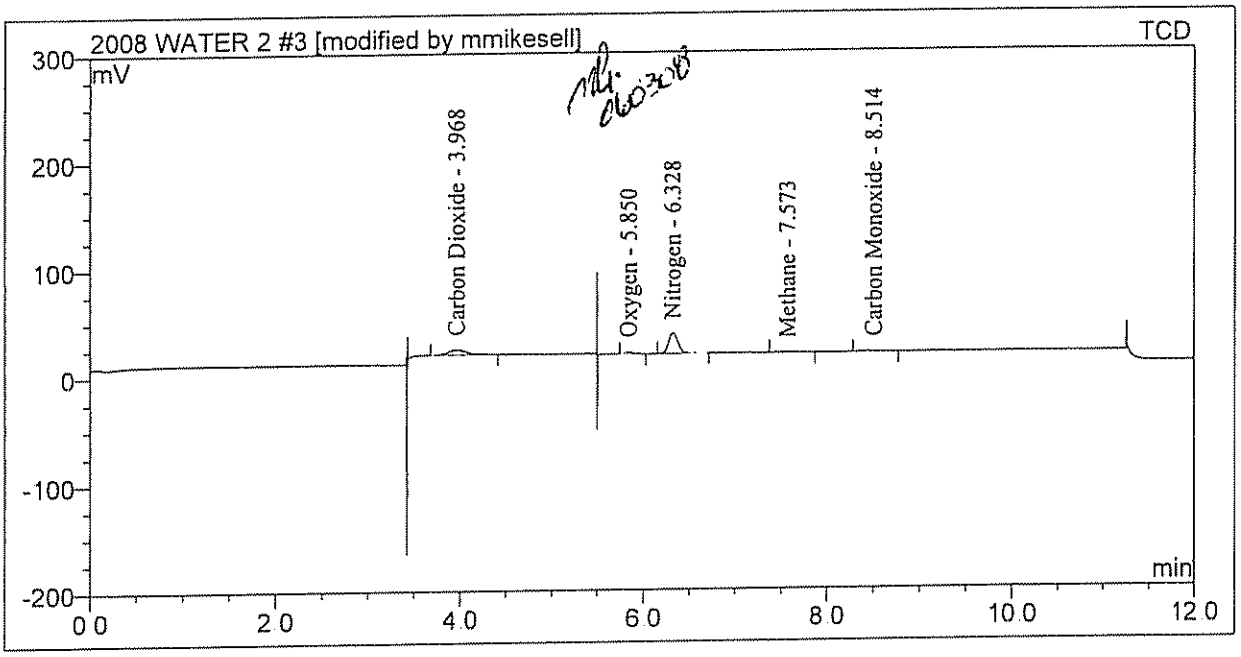
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD 50x	**Sequence No:**	3
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1 0000
Date Time Collected:	2/29/2008 1:49 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	3.968	1.201	4.941	BMB*	6.1019
2	Oxygen	5.850	0.191	2.136	BMB	0.6710
3	Nitrogen	6.328	2.359	19.458	BMB	6.6773
4	Methane	7.573	0.138	0.639	BMB*	262.9299
5	Carbon Monoxide	8.514	0.198	0.859	BMB*	0.5681

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



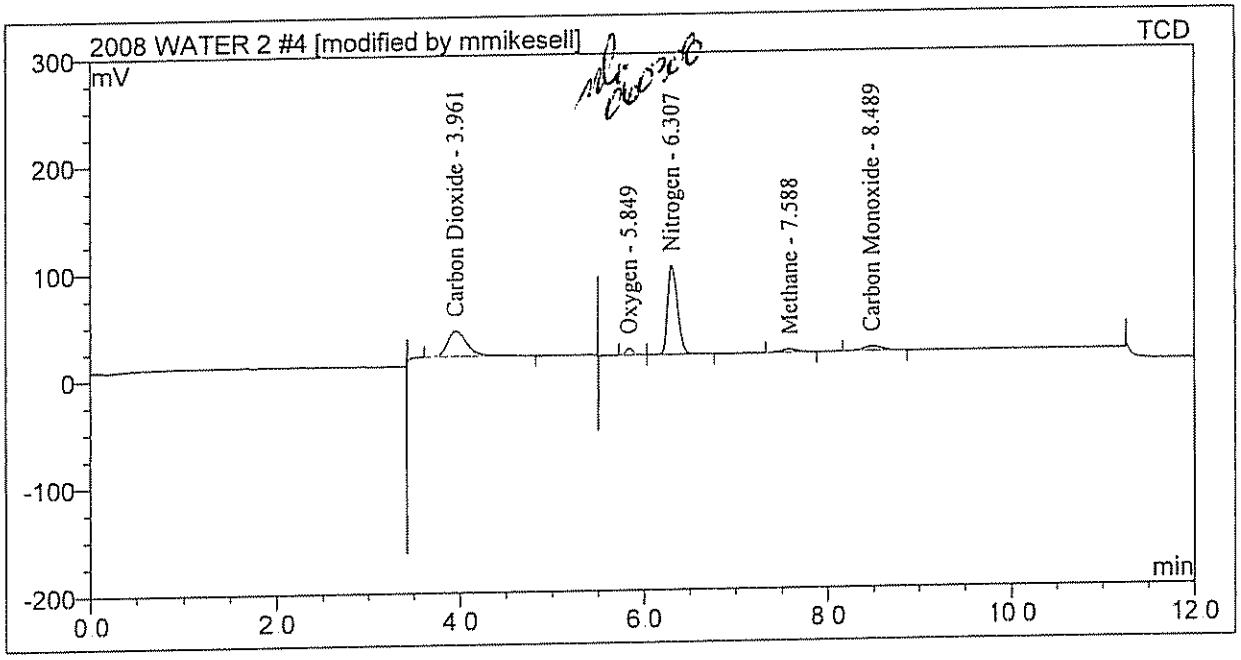
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD 10x	**Sequence No:**	4
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	2/29/2008 2:02 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	siyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	3.961	6.103	24.194	BMB*	31.0198
2	Oxygen	5.849	0.588	6.463	BM	2.0683
3	Nitrogen	6.307	10.150	83.005	MB	28.7350
4	Methane	7.588	0.576	2.958	BMB	1094.1014
5	Carbon Monoxide	8.489	1.014	4.267	BMB*	2.9030

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



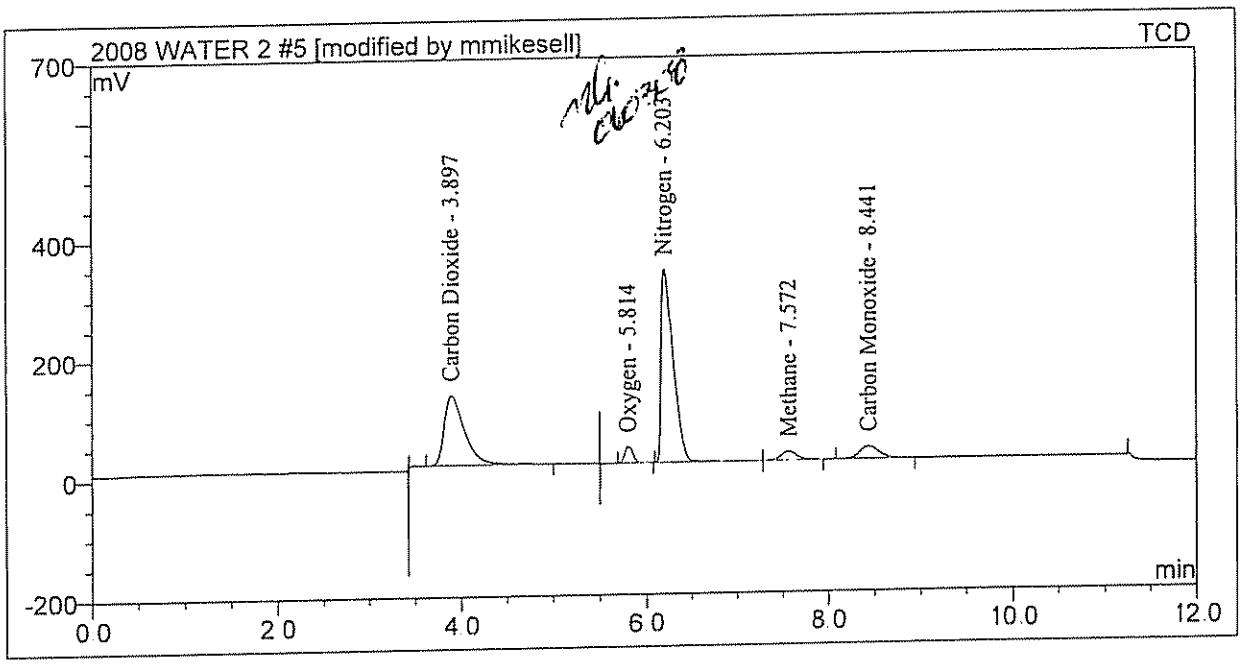
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD 2x	**Sequence No:**	5
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	2/29/2008 2:14 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	3.897	30.407	117.121	BMB	154.5531
2	Oxygen	5.814	2.738	27.910	BMB	9.6288
3	Nitrogen	6.203	49.264	324.537	BMb*	139.4692
4	Methane	7.572	2.835	14.739	bMB*	5382.3346
5	Carbon Monoxide	8.441	5.040	20.590	BMB*	14.4297

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



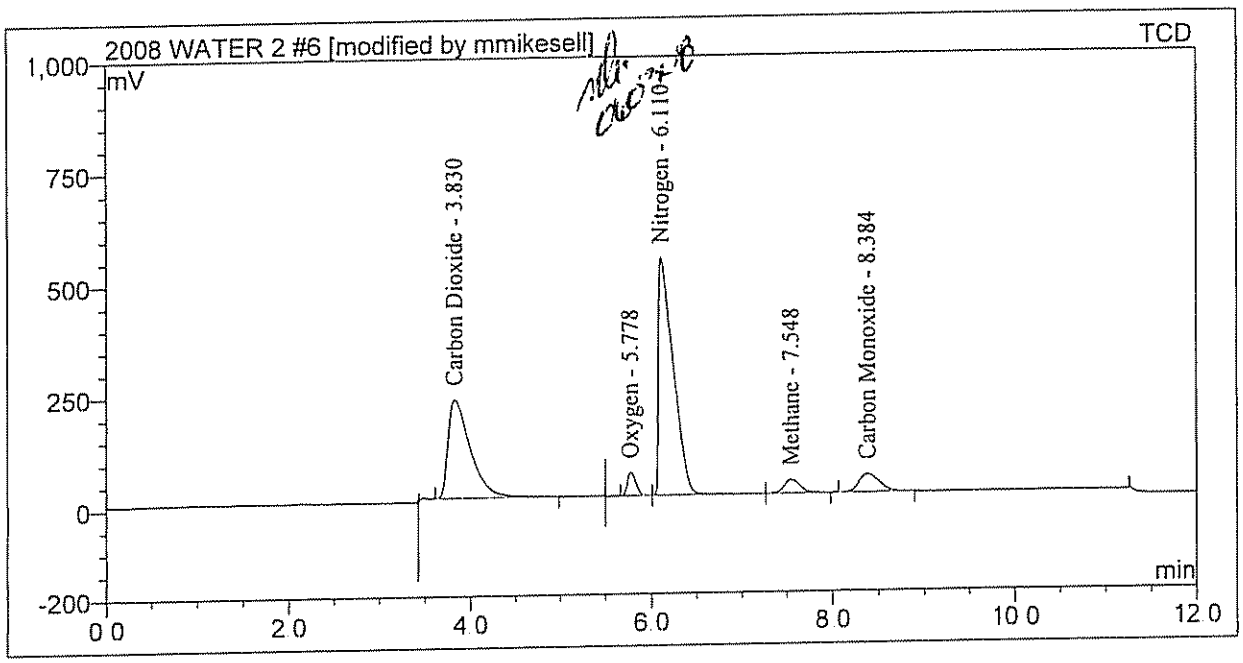
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD	**Sequence No:**	6
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1 0000
Date Time Collected:	2/29/2008 2:31 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Carbon Dioxide	3.830	63.232	220.310	BMB	321.3931
2	Oxygen	5.778	5.520	52.149	BM *	19.4141
3	Nitrogen	6.110	99.998	531.835	Mb*	283.0987
4	Methane	7.548	5.812	29.999	bMB*	11033.2255
5	Carbon Monoxide	8.384	10.145	40.281	BMB*	29.0473

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



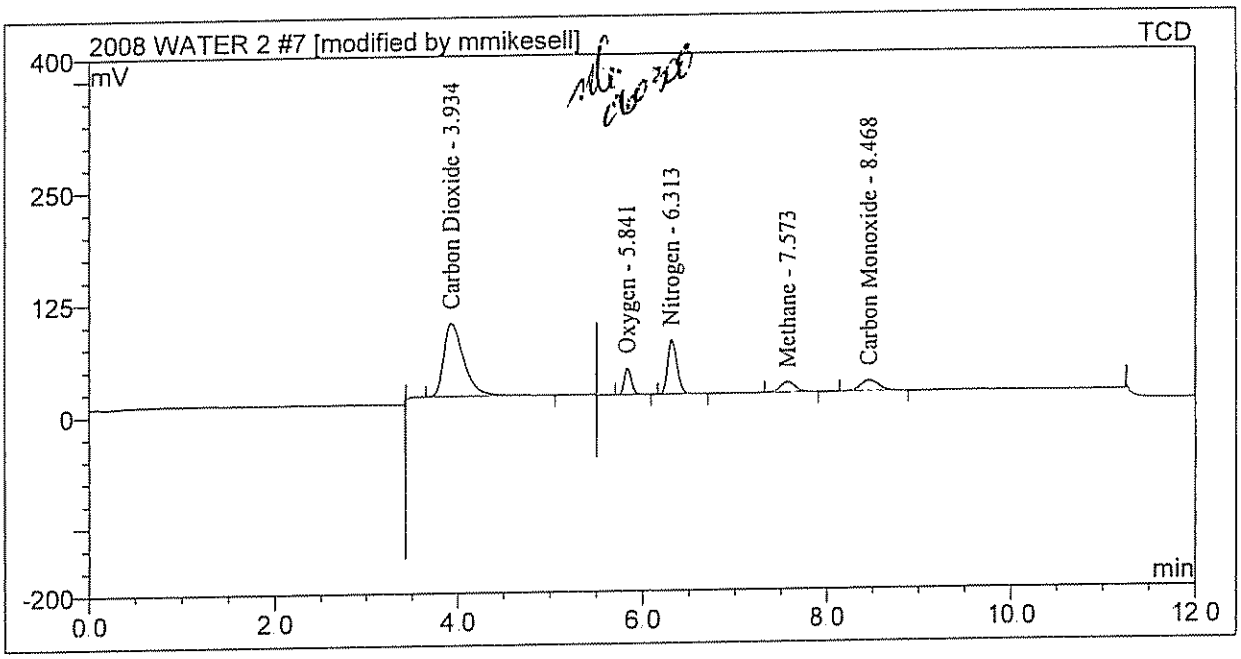
MICROSEEPS

Sample Analysis Report

Sample Name:	ICV TCD	**Sequence No:**	7
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	2/29/2008 2:43 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount TV		
1	Carbon Dioxide	3.934	21.002	81.750	BMB*	107	106.7483	100
2	Oxygen	5.841	2.696	29.935	BMB	9.82	9.4819	97
3	Nitrogen	6.313	7.187	60.350	BMB	20.4	20.3461	100
4	Methane	7.573	2.272	11.795	BMB*	4254	4313.8409	100
5	Carbon Monoxide	8.468	2.890	12.305	BMB*	8.34	8.2740	99

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



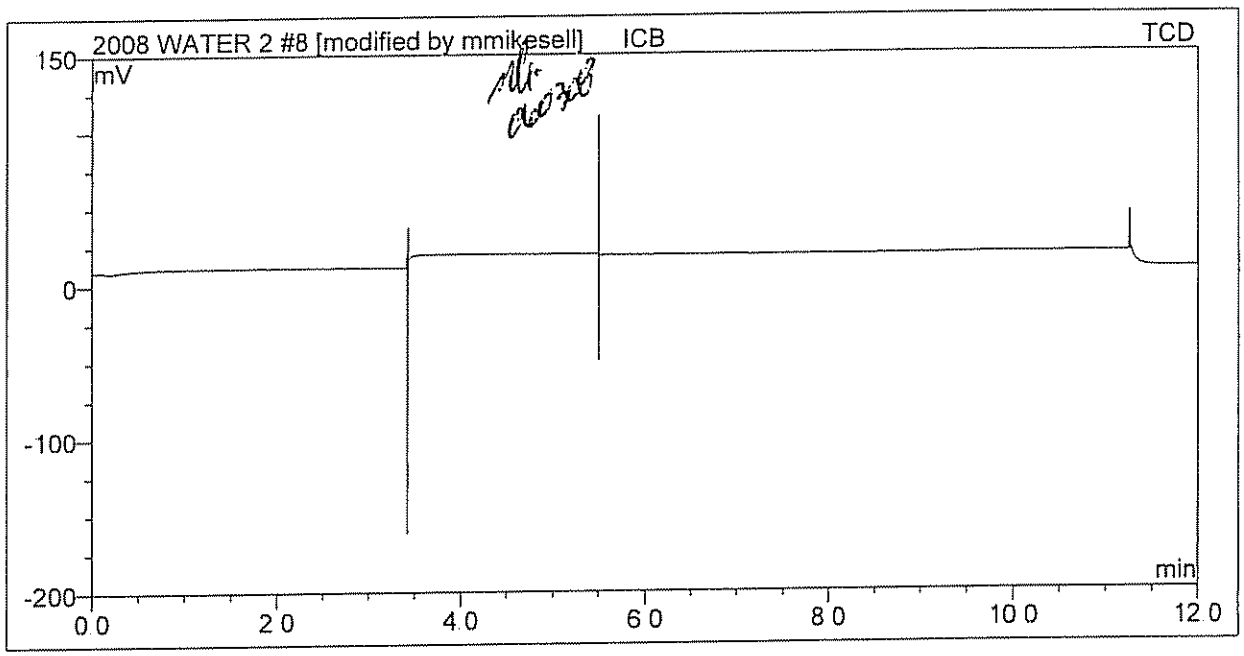
MICROSEEPS

Sample Analysis Report

Sample Name:	ICB	**Sequence No:**	8
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	2/29/2008 2:55 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



Acetylene

Method AM20GAX

2/25/2008

No.	Ret.Time min	Peak Name	Cal.Type	Points	R-Square %	Offset	Slope	Curve
1	6.97	Acetylene	Lin	5	99.983	0.00000	0.20384	0.00000

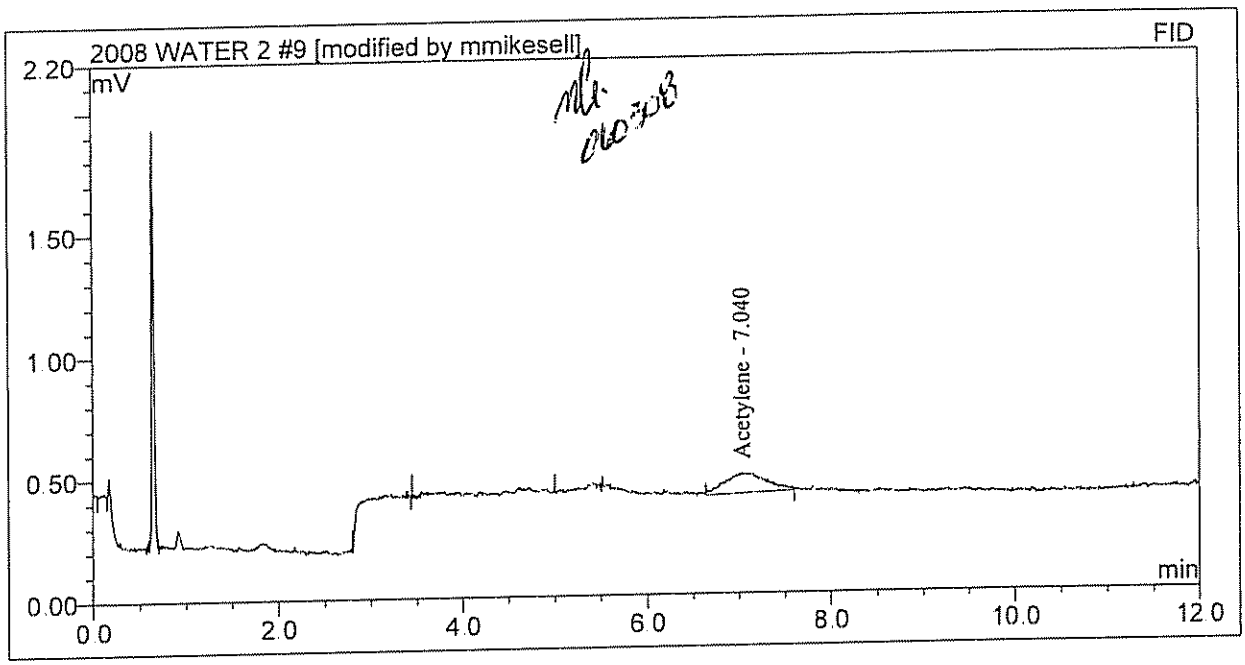
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL ACETYLENE 500x	**Sequence No:**	9
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	2/25/2008 4:12 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	siyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Acetylene	7.040	0.042	0.084	BMB*	0.2049

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



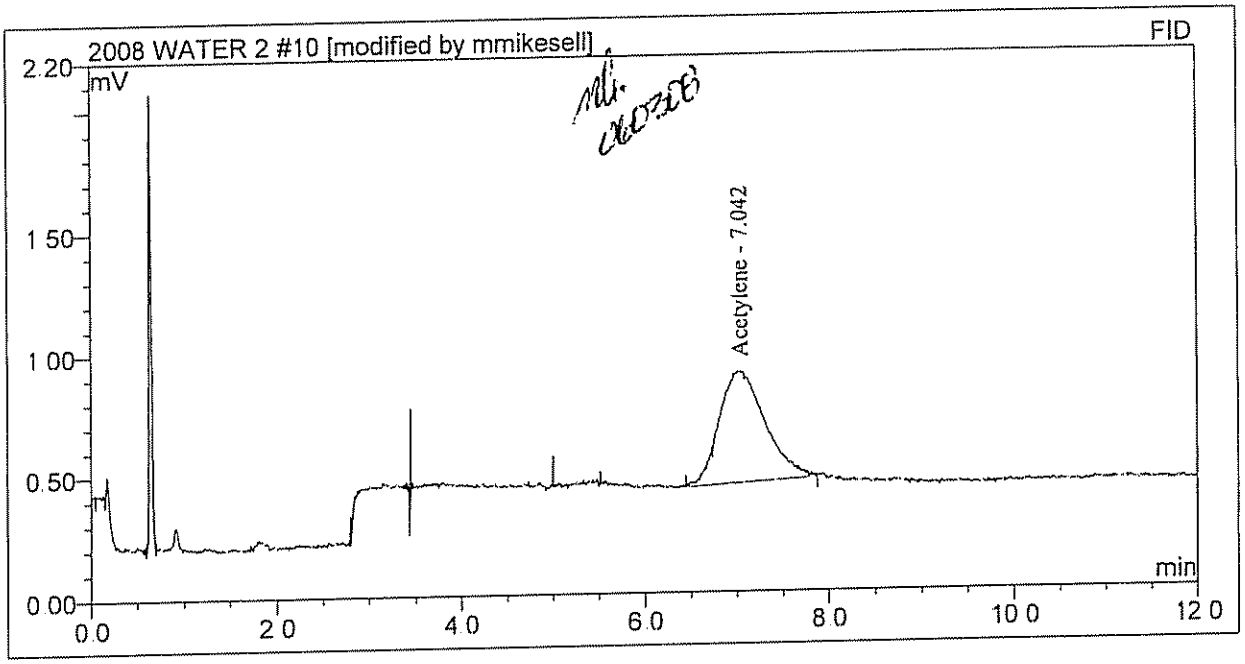
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL ACETYLENE 100x	**Sequence No:**	10
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1 0000
Date Time Collected:	2/25/2008 4:25 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Acetylene	7.042	0.264	0.460	BMB*	1.2945

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



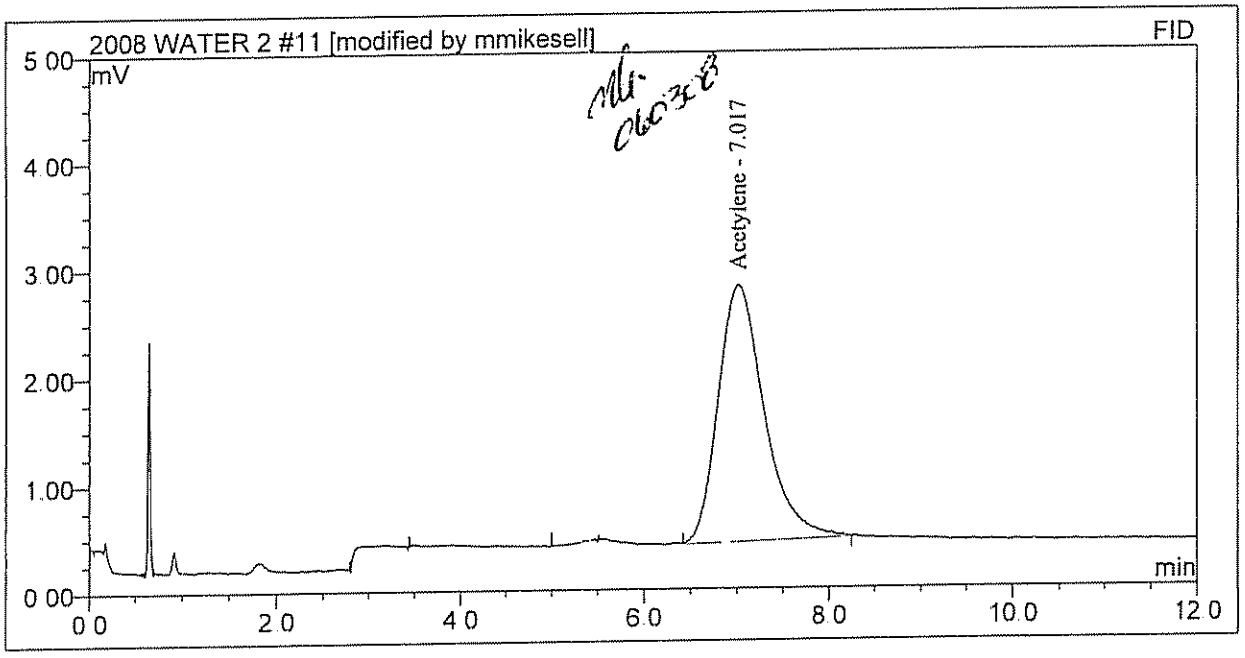
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL ACETYLENE 20x	**Sequence No:**	11
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	2/25/2008 4:38 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Acetylene	7.017	1.381	2.393	BMB*	6.7761

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



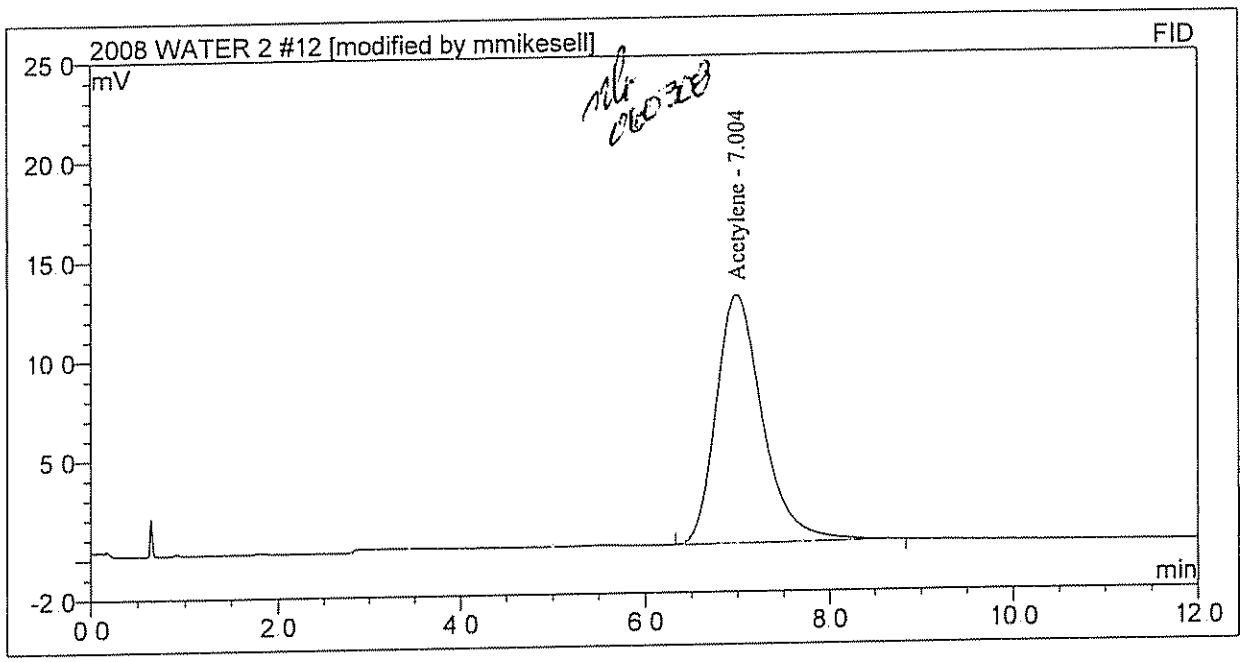
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL ACETYLENE 4x	**Sequence No:**	12
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	2/25/2008 4:50 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Acetylene	7.004	7.295	12.512	BMB*	35.7895

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



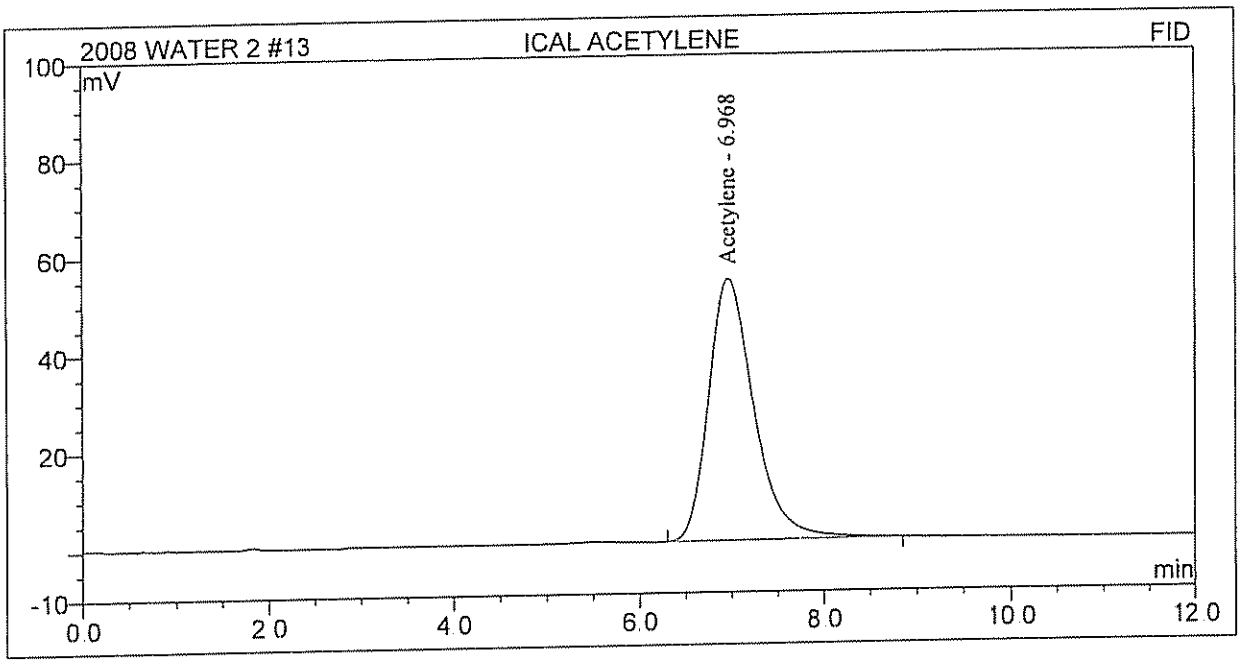
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL ACETYLENE	**Sequence No:**	13
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	2/25/2008 5:03 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Acetylene	6.968	30.437	53.481	BMB	149.3158

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



MICROSEEPS

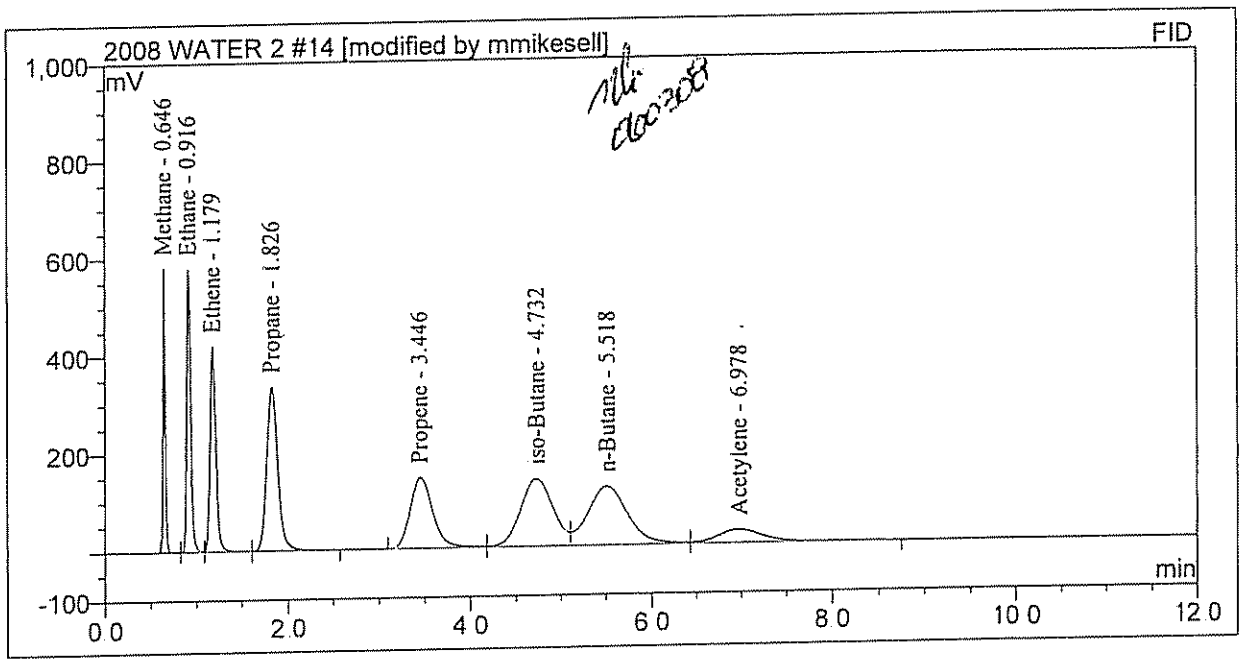
Sample Analysis Report

Sample Name:	ICV RGD/FID	**Sequence No:**	14
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1 0000
Date Time Collected:	2/25/2008 5:15 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	
1	Methane	0.646	16.620	581.558	BM		25.2736
2	Ethane	0.916	30.363	579.398	M		48.4319
3	Ethene	1.179	30.867	420.178	M		54.6846
4	Propane	1.826	46.819	335.486	MB		70.9161
5	Propene	3.446	42.109	145.495	BM *		77.7647
6	iso-Butane	4.732	57.123	138.101	M *		86.5708
7	n-Butane	5.518	60.997	119.831	M *		87.9406
8	Acetylene	6.978	15.724	26.985	MB*	74.02	77.1367

104%

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



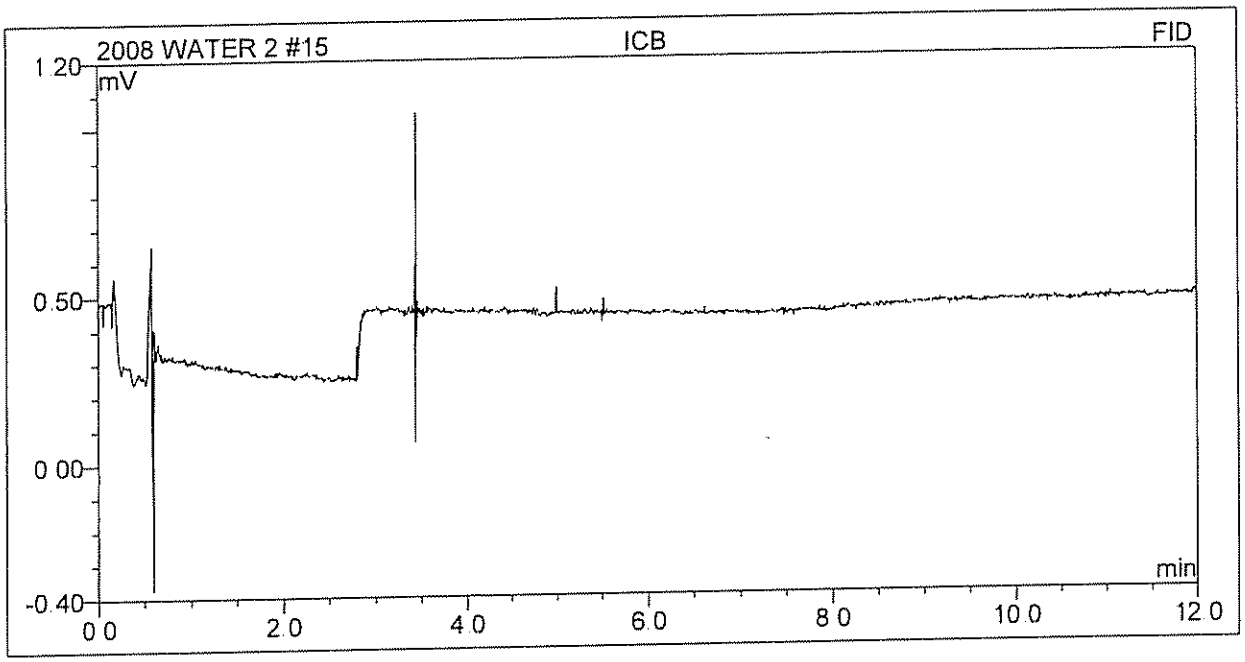
MICROSEEPS

Sample Analysis Report

Sample Name:	ICB	**Sequence No:**	15
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	2/25/2008 5:27 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



Risk Department
Case Narrative

Batch number: M080725010 - LHC
M080725011 - PG

Original Run Date: 7-25-08

Manual integration was necessary to quantify amounts near reporting levels or repair software assigned baseline inaccuracies.

Matrix: Water

Sample numbers:
P0807247 - (1-2) FDP
P0807249 - (1-3)
P0807259 - (1-4)
P0807264 - (1-11)

Out of Control Event:

None

Corrective Action Taken:

Result:

Observations to support use of data:

Manual Integration Checklist and Approval

- Manual Integration approved? Yes No
- Satisfactorily documented on this narrative?
- Manually integrated chromatogram initialed and dated by analyst?

Signature Lead Analyst or Lab. Mgr. 072808 Date

Analyzed & Reviewed by: [illegible] Date: 7-25-08

Manual Integration Conducted? YES NO
(Circle One)

Reviewed by: [illegible] Date: 072808

Reviewed & Entered by: CIMS Upload Date: 7-25-08

Reviewed by: _____ Date: _____

Corrected by: _____ Date: _____

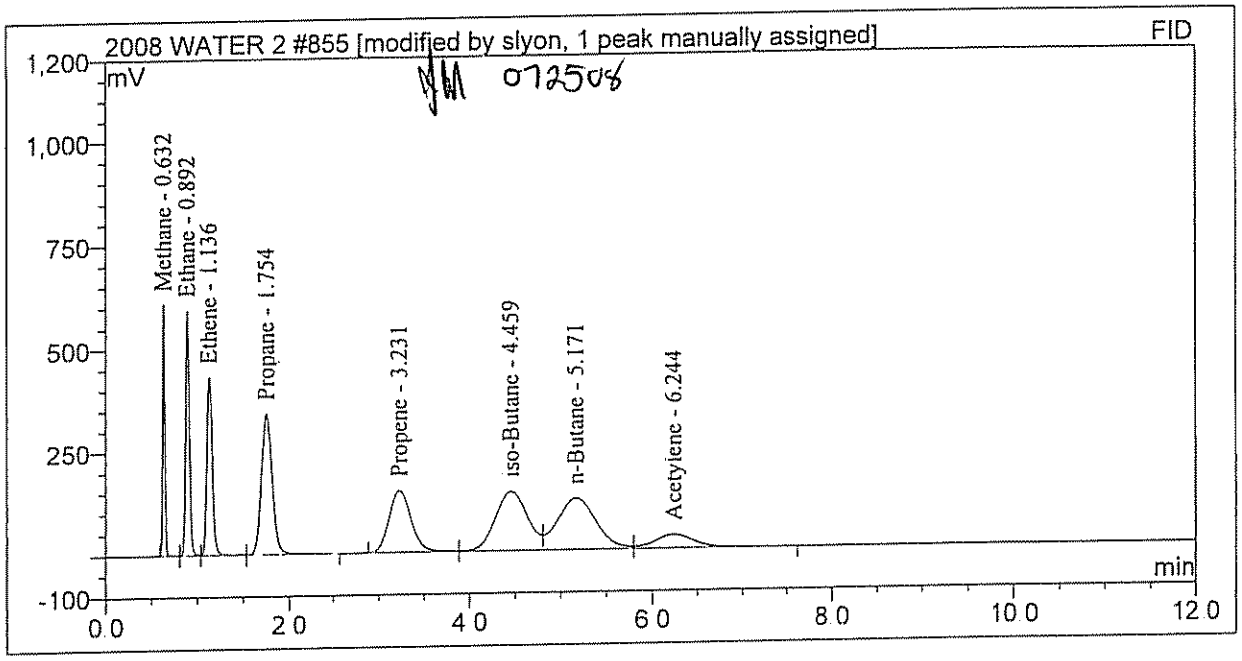
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV FID 072508	**Sequence No:**	855
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 11:06 AM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	
1	Methane	0.632	16.868	610.043	BM	25.6503	104 %
2	Ethane	0.892	30.645	594.716	M	48.8817	102 %
3	Ethene	1.136	31.145	432.382	M	55.1757	104 %
4	Propane	1.754	47.264	342.187	MB	71.5915	
5	Propene	3.231	42.738	150.104	BM *	78.9255	
6	iso-Butane	4.459	58.728	143.435	M *	89.0022	
7	n-Butane	5.171	60.923	124.609	M *	87.8331	
8	Acetylene	6.244	17.203	33.496	MB*^	84.3954	114 %

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



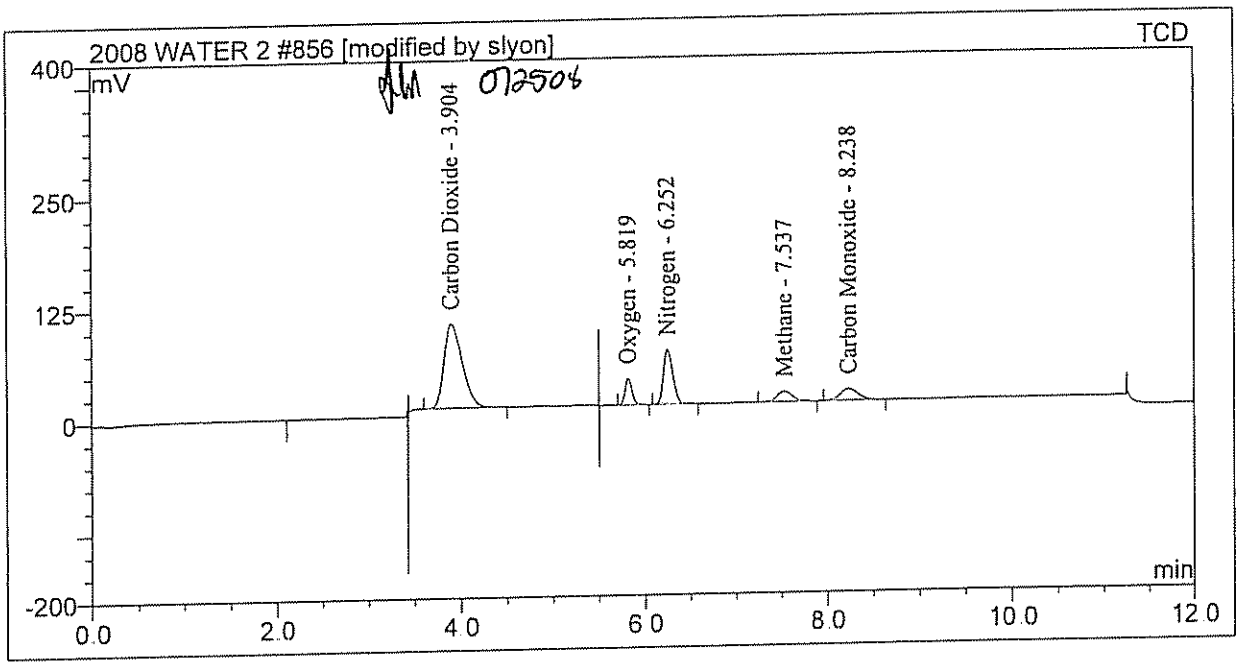
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV TCD 072508	**Sequence No:**	856
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 11:19 AM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	
1	Carbon Dioxide	3.904	21.771	94.142	BMB*	110.6566	103 %
2	Oxygen	5.819	2.693	29.726	BMB	9.4707	
3	Nitrogen	6.252	7.318	61.196	BMB	20.7171	
4	Methane	7.537	2.328	11.761	BMB*	4420.1361	103 %
5	Carbon Monoxide	8.238	2.955	13.037	BMB*	8.4614	

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



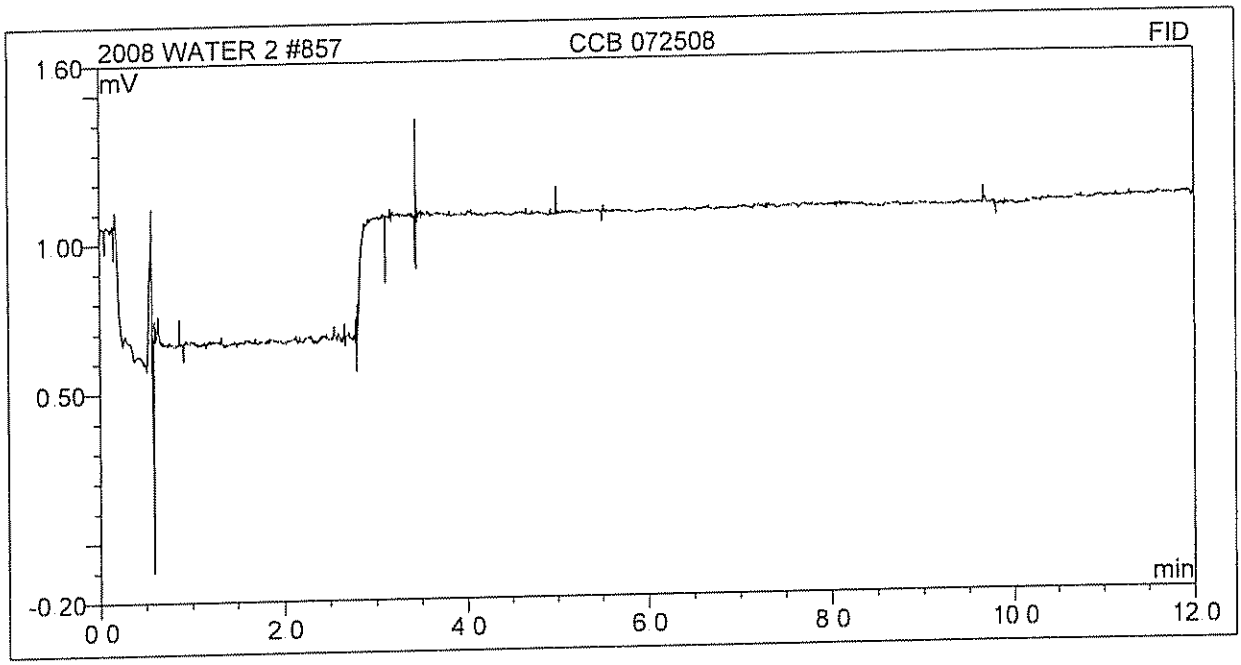
MICROSEEPS

Sample Analysis Report

Sample Name:	CCB 072508	**Sequence No:**	857
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 11:41 AM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO_2, O_2, N_2, CO mg/L)
RGD UNITS (Hydrogen nM)



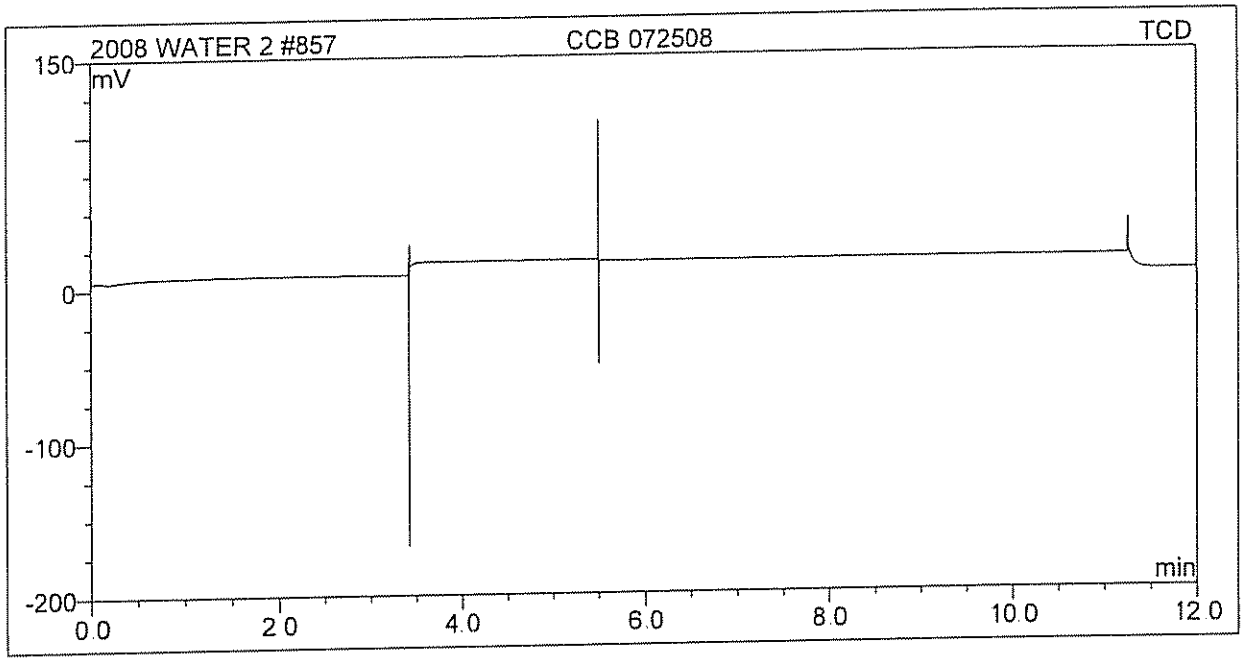
MICROSEEPS

Sample Analysis Report

Sample Name:	CCB 072508	**Sequence No:**	857
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 11:41 AM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



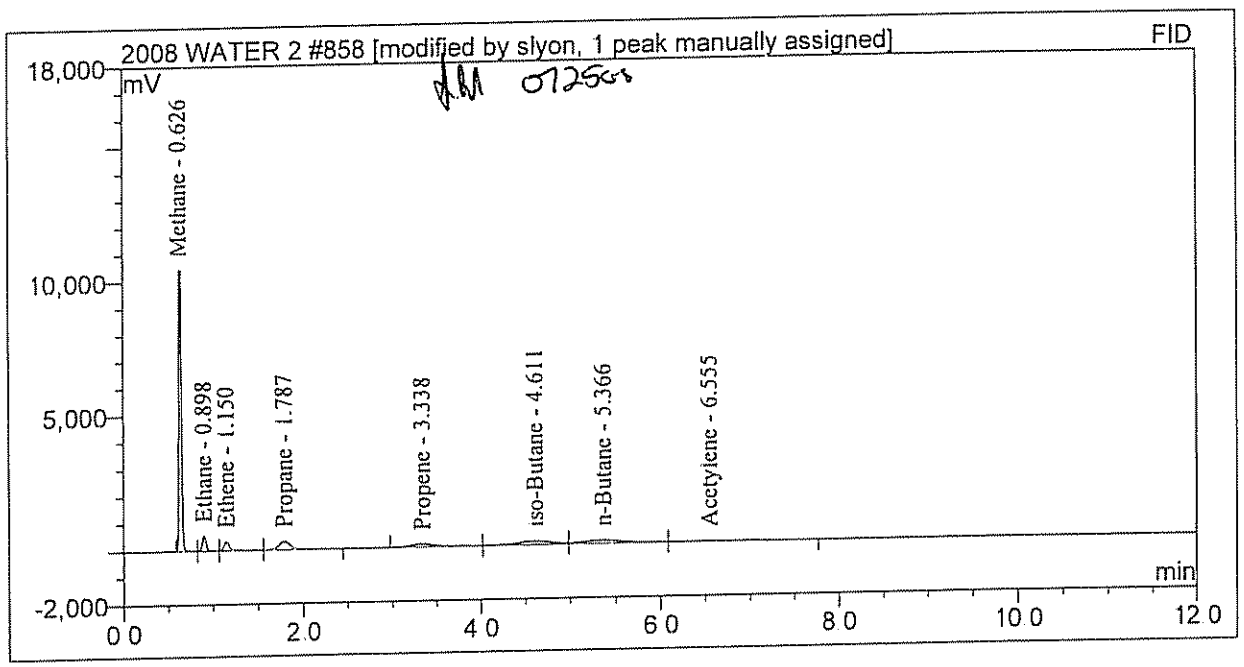
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725010-LCS	**Sequence No:**	858
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1 0000
Date Time Collected:	7/25/2008 11:58 AM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	
1	Methane	0.626	390.365	10436.370	BM	~~593.0106~~	SC 072508
2	Ethane	0.898	28.931	564.375	M	46.1477	111 %
3	Ethene	1.150	23.750	327.869	M	42.0749	105 %
4	Propane	1.787	43.295	303.469	MB	65.5783	
5	Propene	3.338	31.969	106.728	BM	59.0385	
6	iso-Butane	4.611	57.247	132.412	M	86.7586	
7	n-Butane	5.366	58.211	112.266	M *	83.9237	
8	Acetylene	6.555	7.828	14.071	MB*^	38.4025	106 %

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



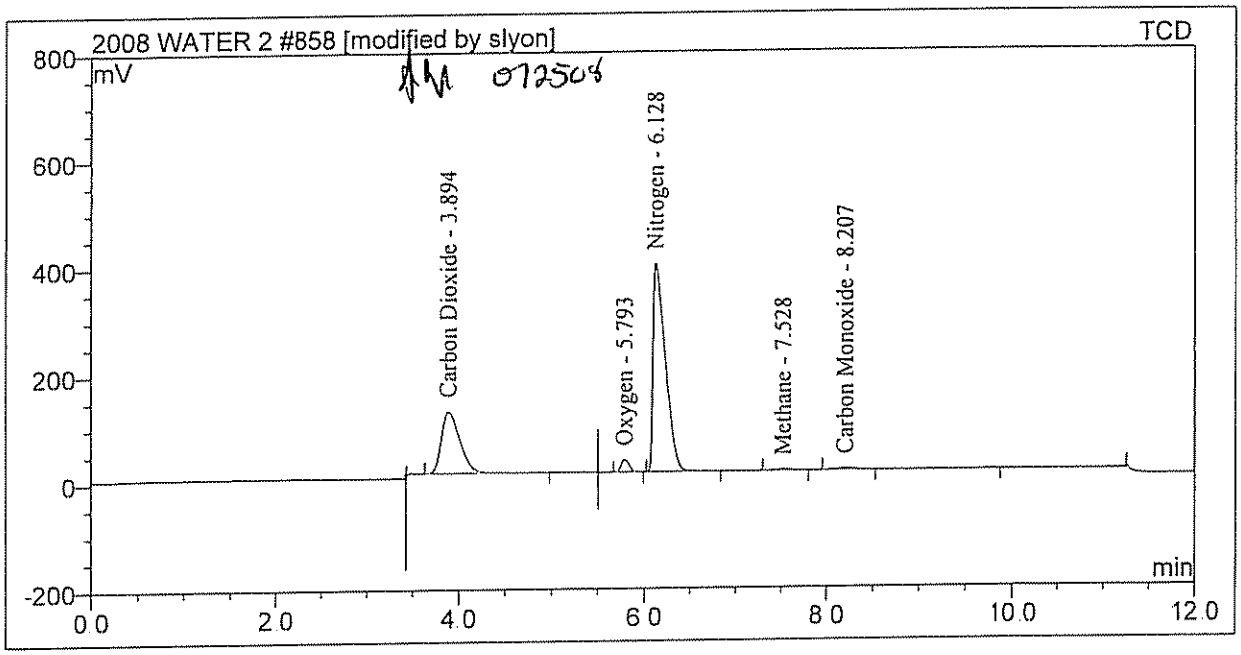
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725010-LCS	**Sequence No:**	858
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 11:58 AM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	
1	Carbon Dioxide	3.894	26.647	114.916	BMB	135.4387	105 %
2	Oxygen	5.793	2.294	22.771	BMB	8.0701	
3	Nitrogen	6.128	60.711	387.023	BMB	171.8756	
4	Methane	7.528	0.470	2.405	BMB*	891.6402	108 %
5	Carbon Monoxide	8.207	0.773	3.402	BMB*	2.2124	

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



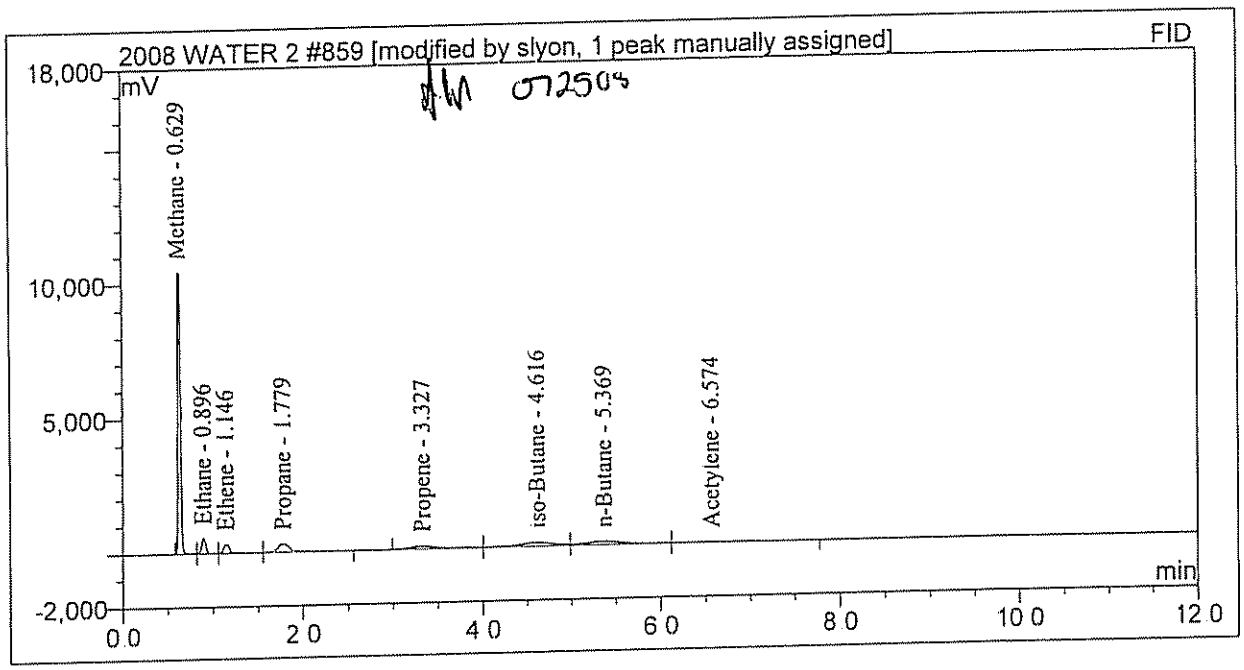
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725010-LCSD	**Sequence No:**	859
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 12:16 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.629	391.702	10436.486	BM *	~~595.6436~~ SL 072508
2	Ethane	0.896	29.296	574.494	M *	46.7300 112 %
3	Ethene	1.146	23.987	333.439	M *	42.4960 109 %
4	Propane	1.779	43.923	309.829	MB*	66.5300
5	Propene	3.327	32.183	107.519	BM	59.4334
6	iso-Butane	4.616	57.796	133.585	M	87.5910
7	n-Butane	5.369	58.931	113.506	M *	84.9616
8	Acetylene	6.574	7.723	14.086	MB*^	37.8862

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



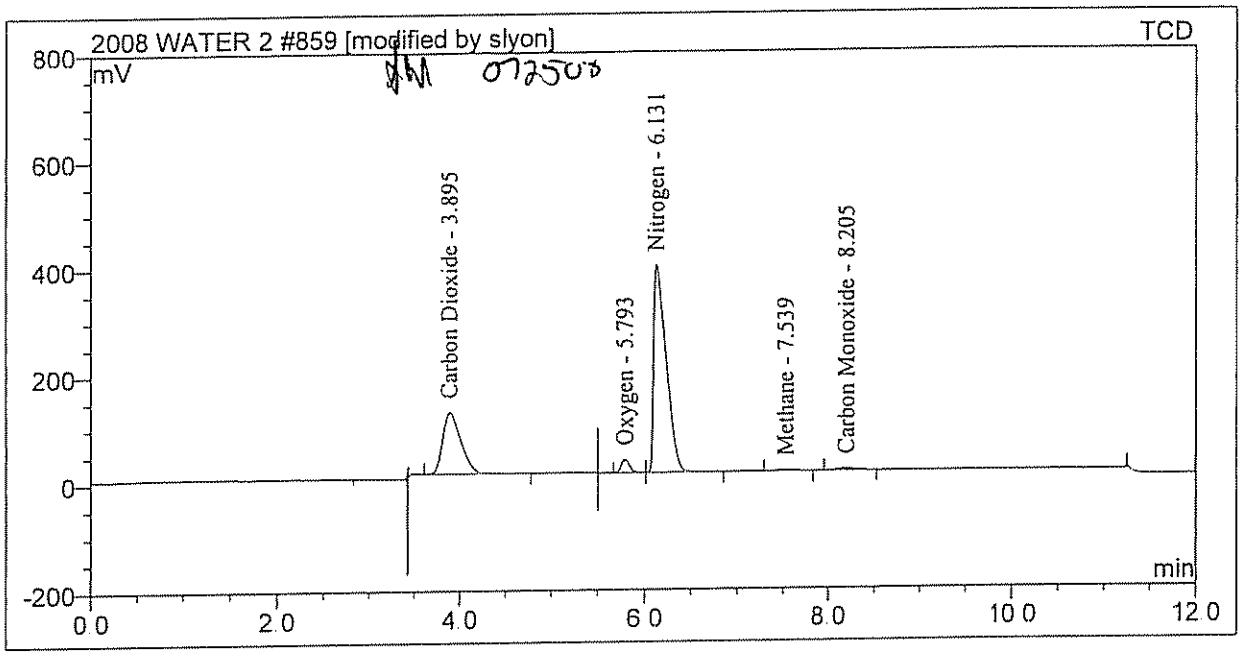
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725010-LCSD	**Sequence No:**	859
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1 0000
Date Time Collected:	7/25/2008 12:16 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	
1	Carbon Dioxide	3.895	26.475	114.382	BMB*	134.5661	104 %
2	Oxygen	5.793	2.434	24.181	BM	8.5602	
3	Nitrogen	6.131	60.593	385.517	MB	171.5420	
4	Methane	7.539	0.478	2.439	BMB*	907.5329	110 %
5	Carbon Monoxide	8.205	0.810	3.602	BMB*	2.3203	

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



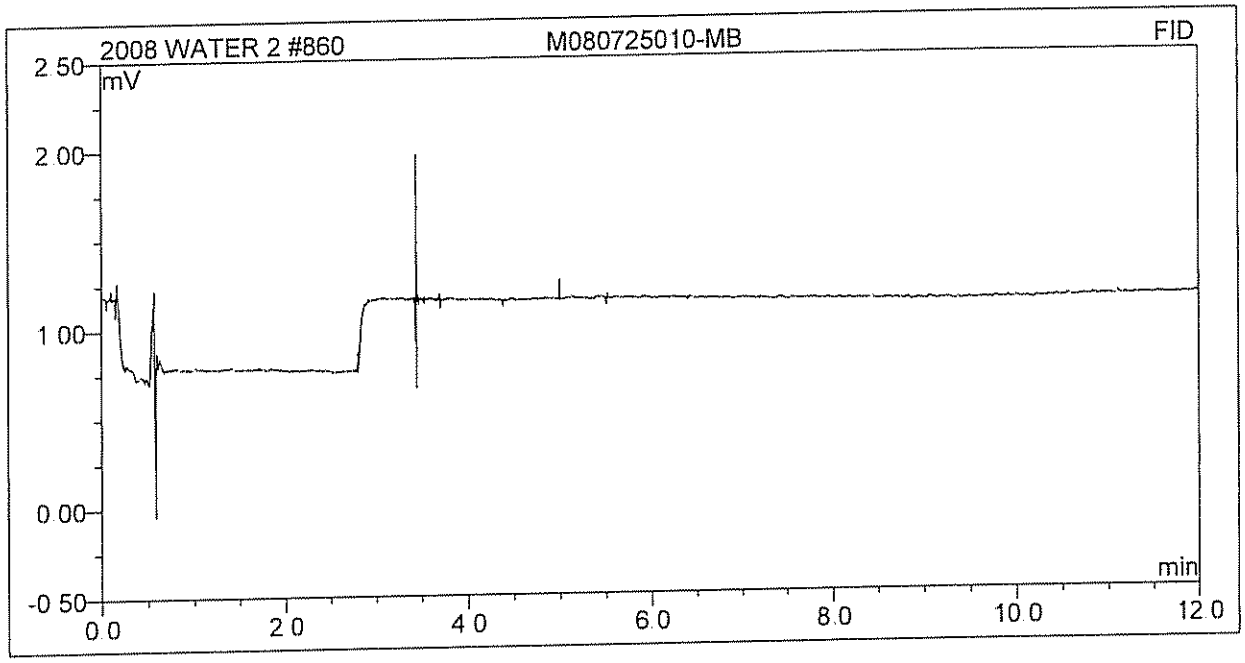
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725010-MB	**Sequence No:**	860
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1 0000
Date Time Collected:	7/25/2008 12:50 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



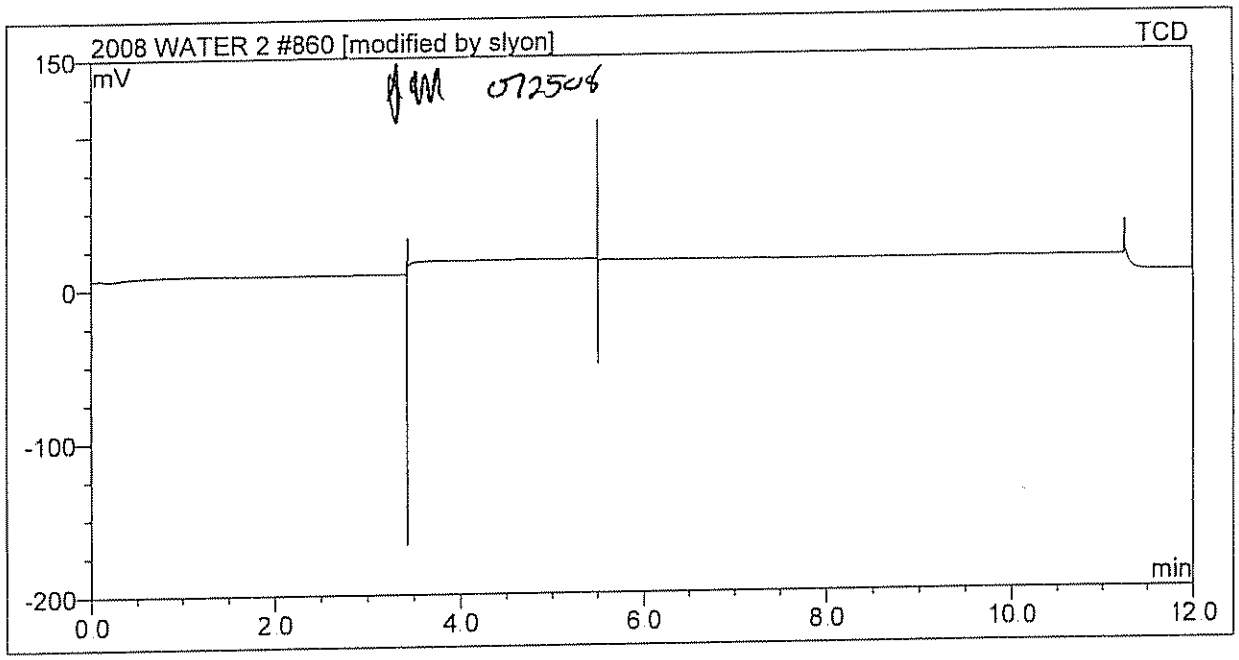
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725010-MB	**Sequence No:**	860
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 12:50 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



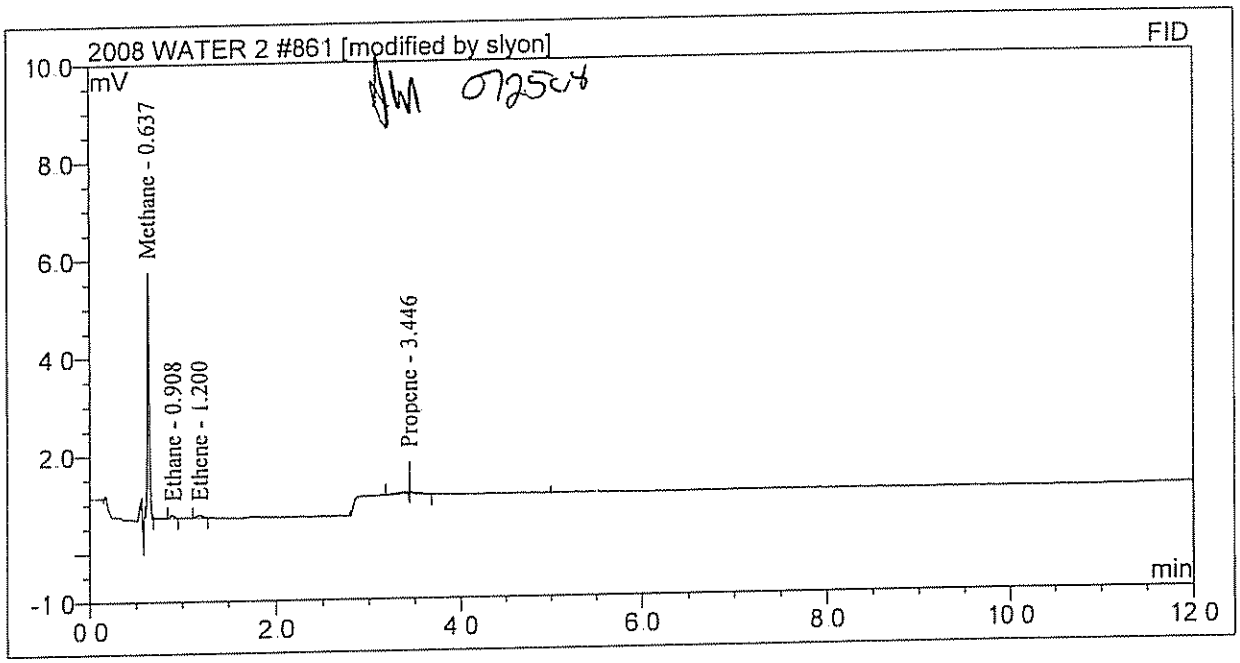
MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A B	**Sequence No:**	861
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 1:03 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.637	0.119	5.020	BMB*	0.1812
2	Ethane	0.908	0.004	0.070	BMB*	0.0064
3	Ethene	1.200	0.006	0.069	BMB*	0.0099
4	Propene	3.446	0.016	0.681	BMB*	0.0292

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



JM 072508

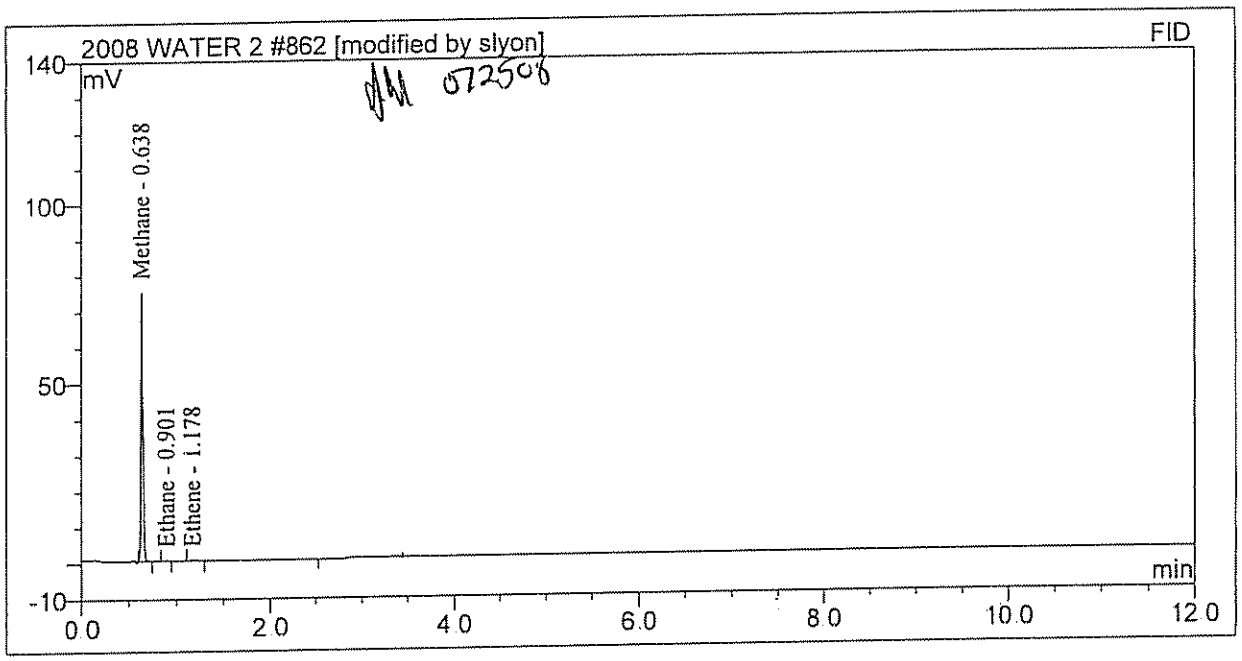
MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-02A B	**Sequence No:**	862
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1 0000
Date Time Collected:	7/25/2008 1:15 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.638	1.780	74.810	BMB*	2.7069
2	Ethane	0.901	0.008	0.169	BMB*	0.0135
3	Ethene	1.178	0.014	0.163	BMB*	0.0241

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



JH 072508

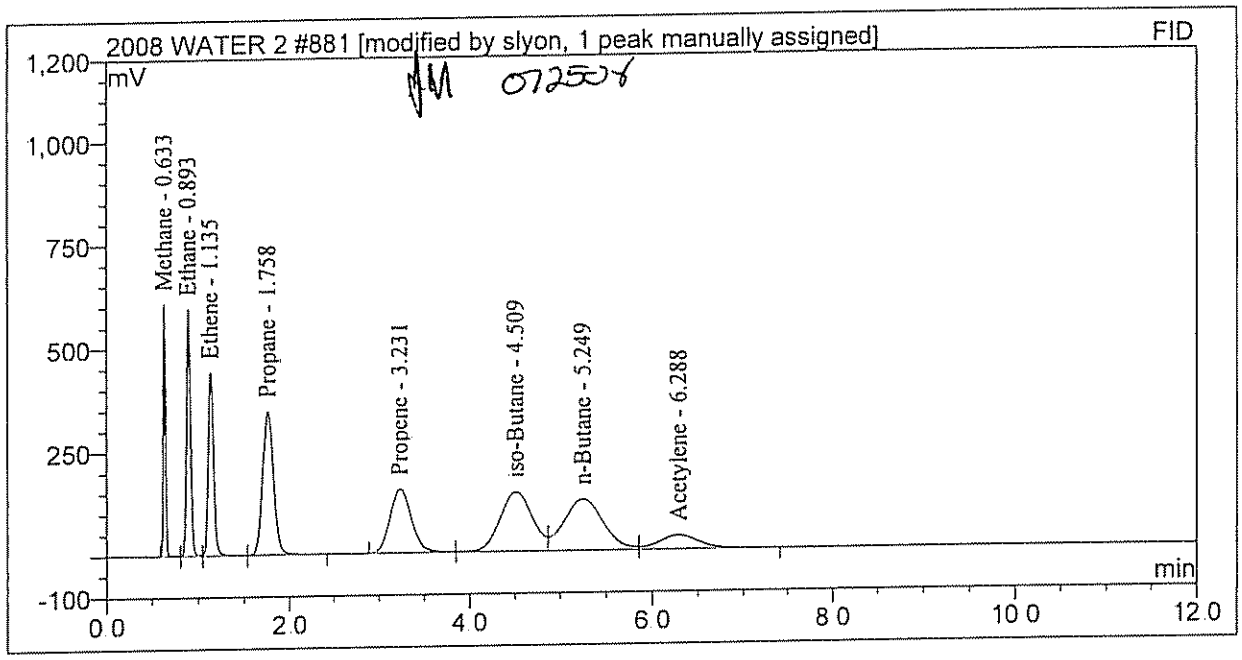
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV2 FID 072508	**Sequence No:**	881
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1 0
Quantitation Method:	WATER	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 5:55 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	
1	Methane	0.633	17.023	608.964	BM	25.8862	104 %
2	Ethane	0.893	30.975	596.073	M	49.4085	103 %
3	Ethene	1.135	31.484	442.430	M	55.7771	105 %
4	Propane	1.758	47.696	347.010	MB	72.2454	
5	Propene	3.231	43.146	154.666	BM *	79.6793	
6	iso-Butane	4.509	59.479	143.433	M *	90.1406	
7	n-Butane	5.249	61.470	124.286	M *	88.6225	
8	Acetylene	6.288	17.460	34.144	MB*^	85.6550	116 %

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)



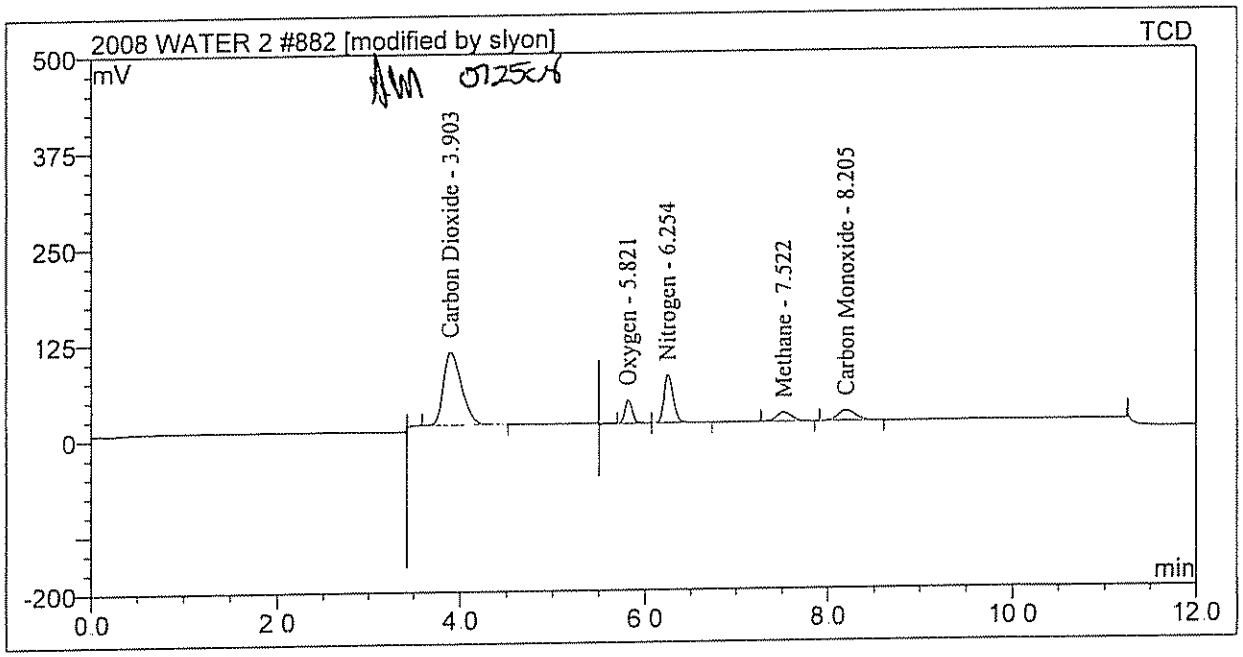
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV2 TCD 072508	**Sequence No:**	882
Sequence Name:	2008 WATER 2	**Instrument ID:**	BIOREM14
Program Method:	BIOREM14AM20	**Injection vol.:**	1.0
Quantitation Method:	WATER	**Dilution Factor:**	1 0000
Date Time Collected:	7/25/2008 6:07 PM	**Analytical Method:**	AM20GAx/PM01
System Operator:	slyon	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	
1	Carbon Dioxide	3.903	21.741	95.175	BMB	110.5019	103 %
2	Oxygen	5.821	2.798	30.532	BM	9.8406	
3	Nitrogen	6.254	7.472	62.636	MB	21.1535	
4	Methane	7.522	2.313	11.929	BMB*	4390.3667	102 %
5	Carbon Monoxide	8.205	3.041	13.597	BMB*	8.7068	

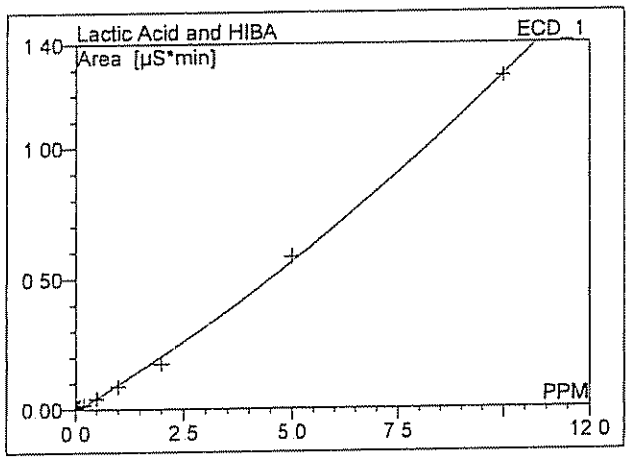
FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane ug/L, CO2, O2, N2, CO mg/L)
RGD UNITS (Hydrogen nM)

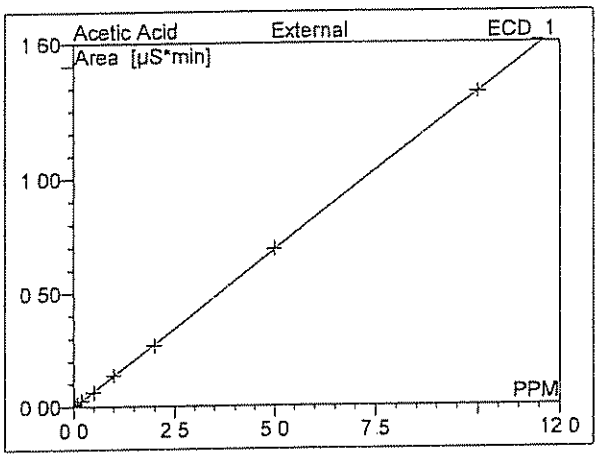


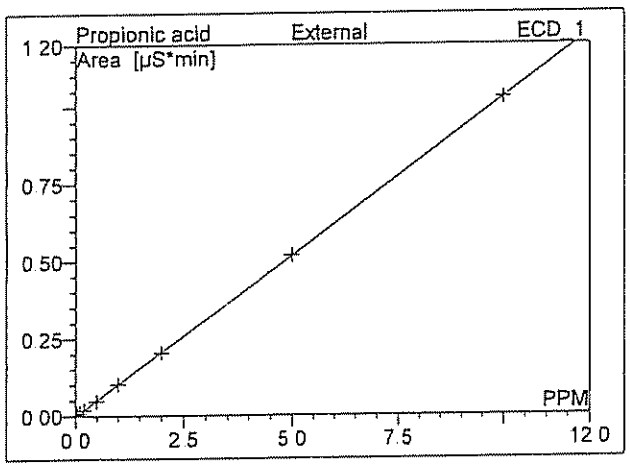
Volatile Fatty Acid Data

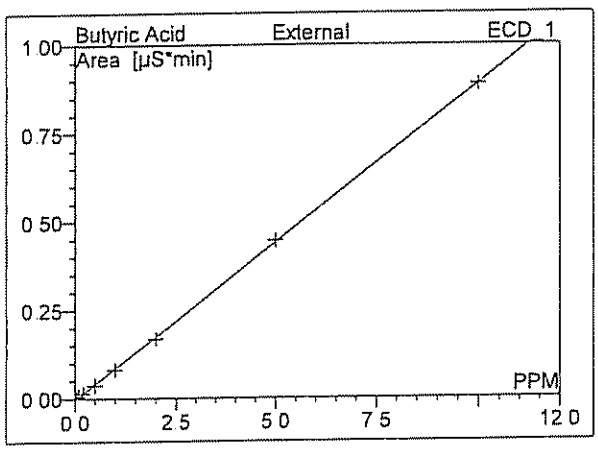
Calibration Batch Report

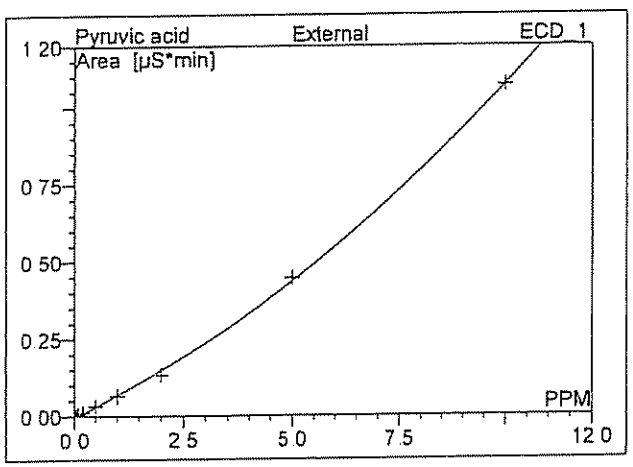
Sequence:	LLVFA 070208	Inj. Vol.:	1.0
Program:	PWM070716AA	Operator:	SEMIVOL13
Inj. Date/Time:	07/02/08	Run Time:	30.00

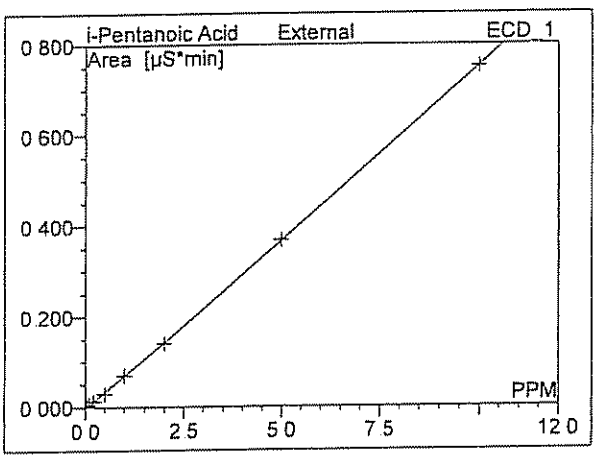




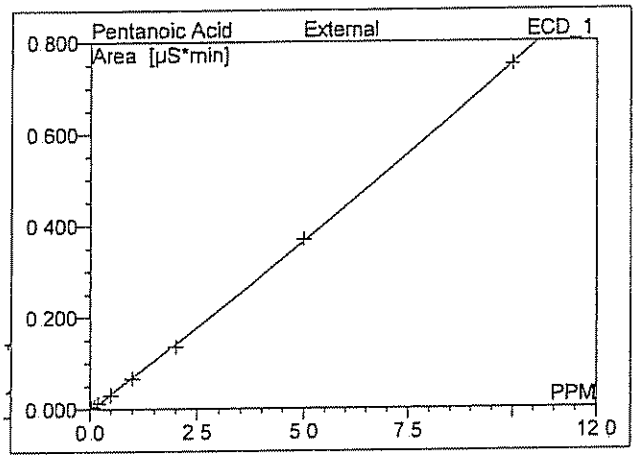


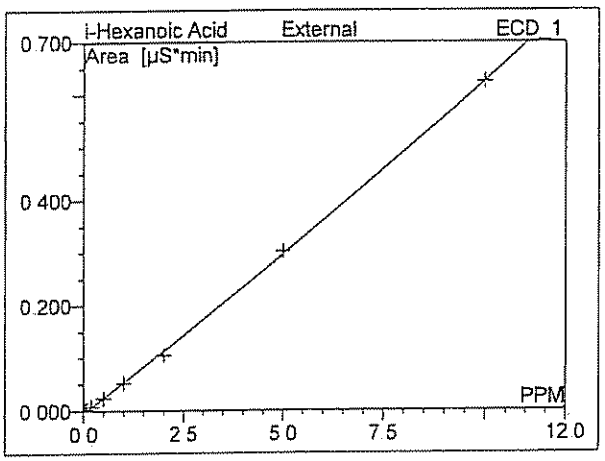


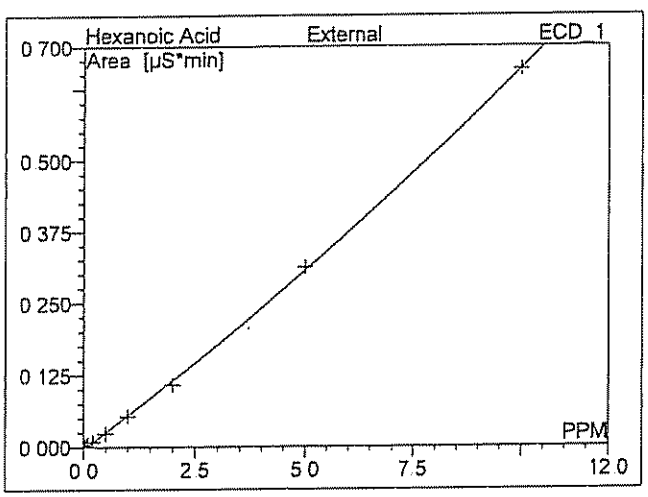




Sequence:	LLVFA 070208	Inj. Vol.:	1.0
Program:	PWM070716AA	Operator:	n.a.
Inj. Date/Time:	07/02/08	Run Time:	30.00







Peak Name	Cal.Mode	Cal.Type	Slope	#Points	Rel.Std.Dev.	R-Square
					%	%
QUINIC	Total	QOff	0.000	8	n.a.	n.a.
Lactic Acid and HIBA	Total	QOff	0.100	8	6.286	99.894
Acetic Acid	Total	QOff	0.138	8	1.049	99.996
Propionic acid	Total	QOff	0.105	8	0.804	99.998
FORMIC	Total	QOff	0.000	8	n.a.	n.a.
Butyric Acid	Total	QOff	0.089	8	2.036	99.987
Pyruvic acid	Total	QOff	0.069	8	4.055	99.959
i-Pentanoic Acid	Total	QOff	0.072	8	1.486	99.993
Pentanoic Acid	Total	QOff	0.072	8	2.232	99.985
BAK	Total	QOff	0.000	8	n.a.	n.a.
i-Hexanoic Acid	Total	QOff	0.058	8	3.284	99.969
Hexanoic Acid	Total	QOff	0.058	8	3.176	99.971

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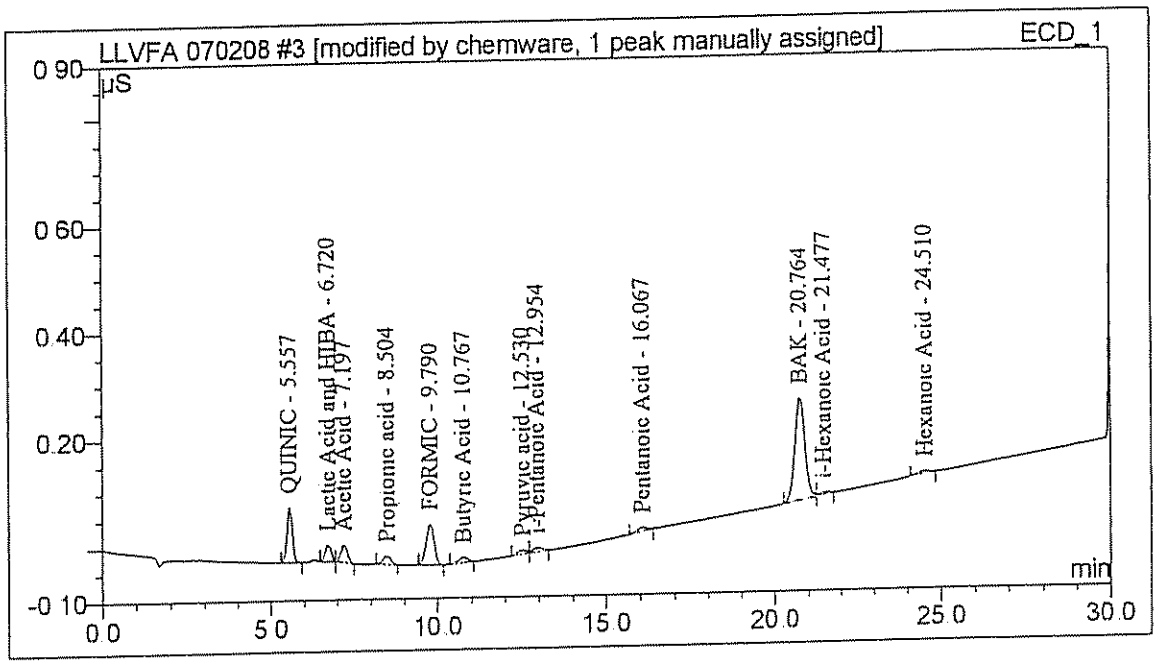
Sample Analysis Report

Sample Name:	LLVFA ICAL 1	**Sequence No:**	3
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 11:27 AM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.557	0.020	0.102	BMB	n.a.
2	Lactic Acid and HIBA	6.720	0.006	0.030	BMB	0.1397
3	Acetic Acid	7.197	0.007	0.032	BMB	0.0735
4	Propionic acid	8.504	0.004	0.015	BMB	0.0644
5	FORMIC	9.790	0.021	0.075	BMB	n.a.
6	Butyric Acid	10.767	0.003	0.010	BMB*	0.0950
7	Pyruvic acid	12.530	0.002	0.008	BM *^	0.1353
8	i-Pentanoic Acid	12.954	0.003	0.008	MB*	0.1056
9	Pentanoic Acid	16.067	0.003	0.007	BMB	0.0921
10	BAK	20.764	0.066	0.190	BM *	n.a.
11	i-Hexanoic Acid	21.477	0.001	0.004	MB*	0.1424
12	Hexanoic Acid	24.510	0.002	0.005	BMB*	0.1126

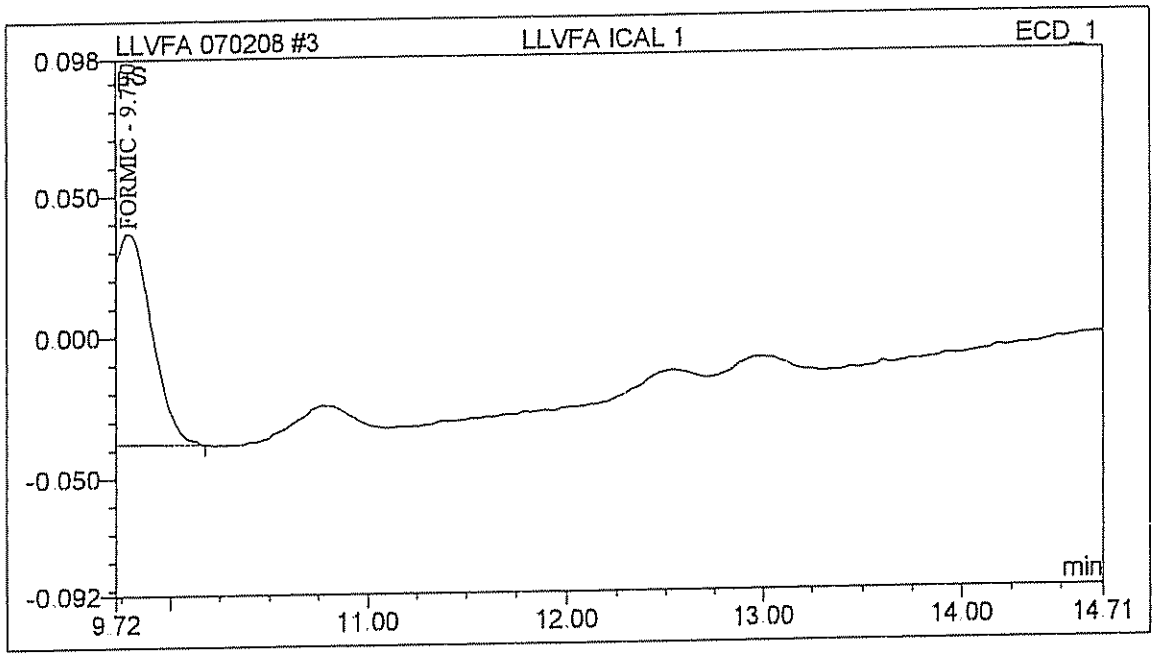


MICROSEEPS

Sample Analysis Report

Sample Name:	LLVFA ICAL 1	**Sequence No:**	3
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 11:27 AM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.557	0.020	0.102	BMB	n.a.
2	Lactic Acid and HIBA	6.720	0.006	0.030	BMB	0.1397
3	Acetic Acid	7.197	0.007	0.032	BMB	0.0735
4	Propionic acid	8.504	0.004	0.015	BMB	0.0644
5	FORMIC	9.790	0.021	0.075	BMB	n.a.
6	Pentanoic Acid	16.067	0.003	0.007	BMB	0.0921
7	BAK	20.764	0.065	0.188	BMB	n.a.

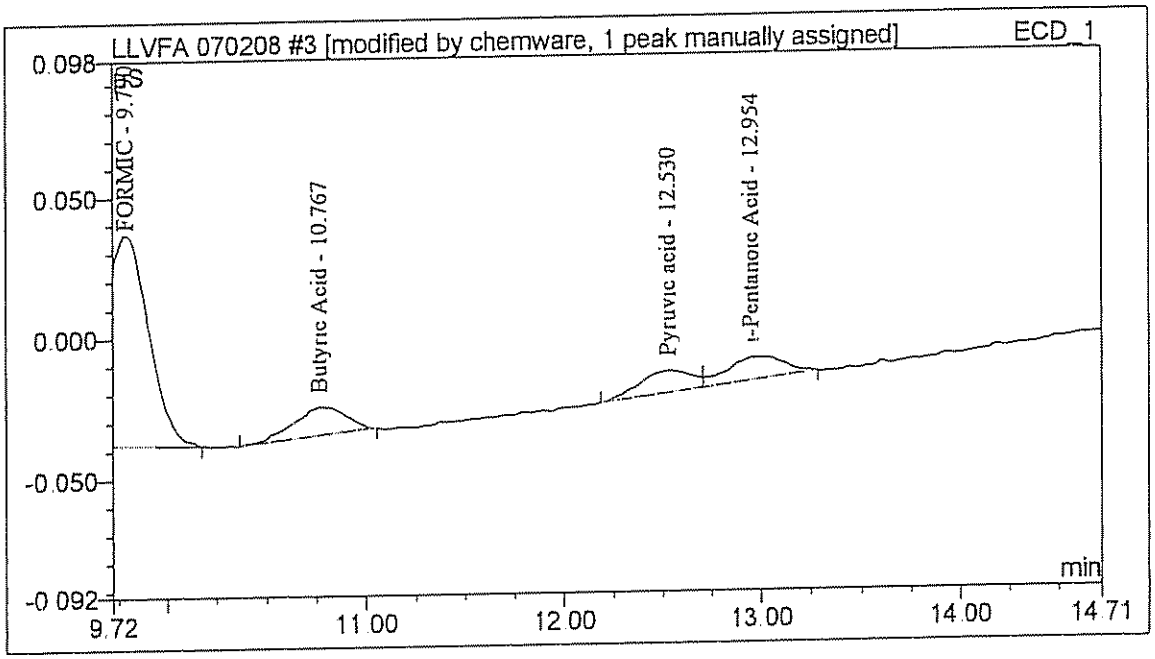


MICROSEEPS

Sample Analysis Report

Sample Name:	LLVFA ICAL 1	**Sequence No:**	3
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1 0000
Date Time Collected:	7/2/2008 11:27 AM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.557	0.020	0.102	BMB	n.a.
2	Lactic Acid and HIBA	6.720	0.006	0.030	BMB	0.1397
3	Acetic Acid	7.197	0.007	0.032	BMB	0.0735
4	Propionic acid	8.504	0.004	0.015	BMB	0.0644
5	FORMIC	9.790	0.021	0.075	BMB	n.a.
6	Butyric Acid	10.767	0.003	0.010	BMB*	0.0950
7	Pyruvic acid	12.530	0.002	0.008	BM *^	0.1353
8	i-Pentanoic Acid	12.954	0.003	0.008	MB*	0.1056
9	Pentanoic Acid	16.067	0.003	0.007	BMB	0.0921
10	BAK	20.764	0.065	0.188	BMB	n.a.

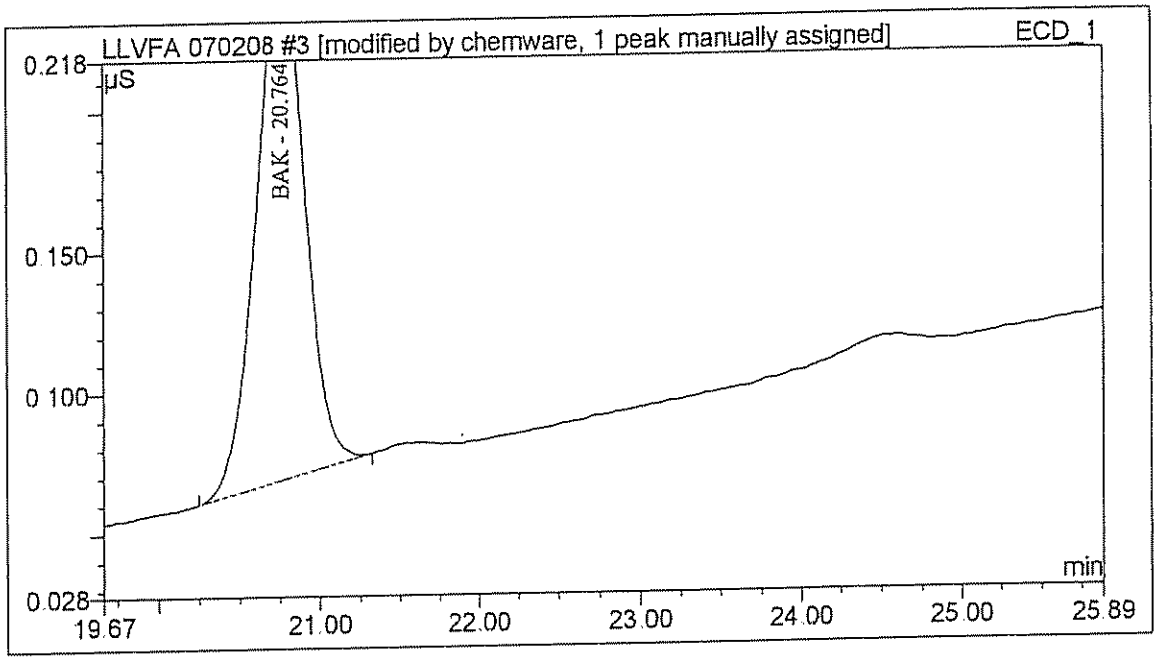


MICROSEEPS

Sample Analysis Report

Sample Name:	LLVFA ICAL 1	**Sequence No:**	3
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1 0000
Date Time Collected:	7/2/2008 11:27 AM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.557	0.020	0.102	BMB	n.a.
2	Lactic Acid and HIBA	6.720	0.006	0.030	BMB	0.1397
3	Acetic Acid	7.197	0.007	0.032	BMB	0.0735
4	Propionic acid	8.504	0.004	0.015	BMB	0.0644
5	FORMIC	9.790	0.021	0.075	BMB	n.a.
6	Butyric Acid	10.767	0.003	0.010	BMB*	0.0950
7	Pyruvic acid	12.530	0.002	0.008	BM *^	0.1353
8	i-Pentanoic Acid	12.954	0.003	0.008	MB*	0.1056
9	Pentanoic Acid	16.067	0.003	0.007	BMB	0.0921
10	BAK	20.764	0.065	0.188	BMB	n.a.

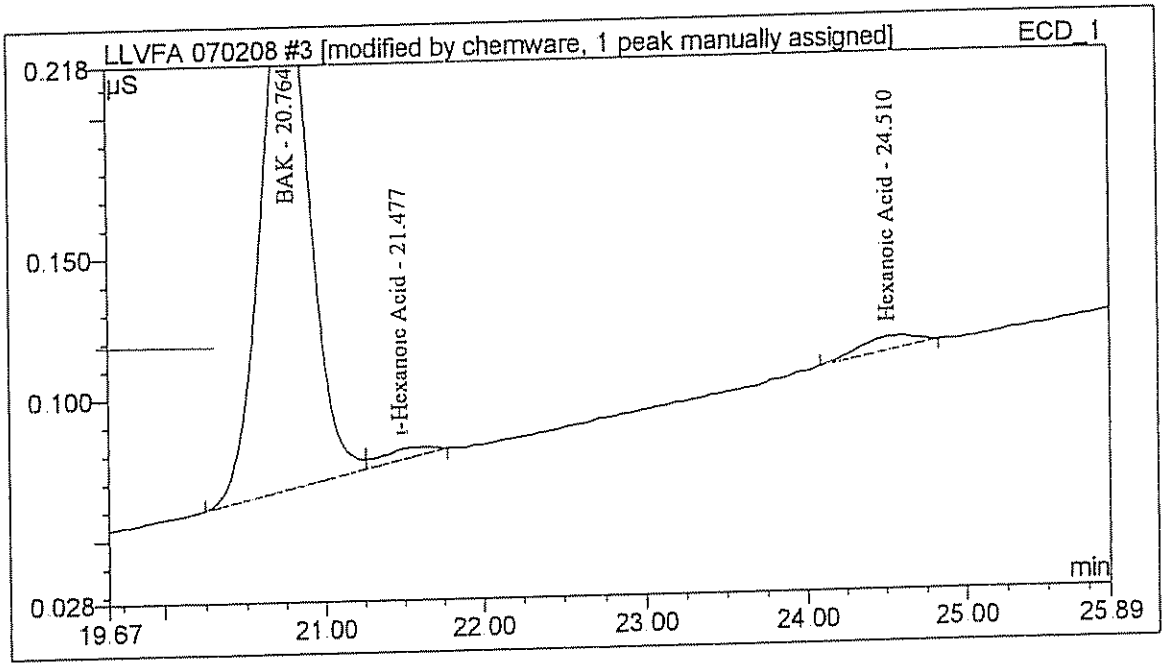


MICROSEEPS

Sample Analysis Report

Sample Name:	LLVFA ICAL 1	**Sequence No:**	3
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 11:27 AM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.557	0.020	0.102	BMB	n.a.
2	Lactic Acid and HIBA	6.720	0.006	0.030	BMB	0.1397
3	Acetic Acid	7.197	0.007	0.032	BMB	0.0735
4	Propionic acid	8.504	0.004	0.015	BMB	0.0644
5	FORMIC	9.790	0.021	0.075	BMB	n.a.
6	Butyric Acid	10.767	0.003	0.010	BMB*	0.0950
7	Pyruvic acid	12.530	0.002	0.008	BM *^	0.1353
8	i-Pentanoic Acid	12.954	0.003	0.008	MB*	0.1056
9	Pentanoic Acid	16.067	0.003	0.007	BMB	0.0921
10	BAK	20.764	0.066	0.190	BM *	n.a.
11	i-Hexanoic Acid	21.477	0.001	0.004	MB*	0.1424
12	Hexanoic Acid	24.510	0.002	0.005	BMB*	0.1126

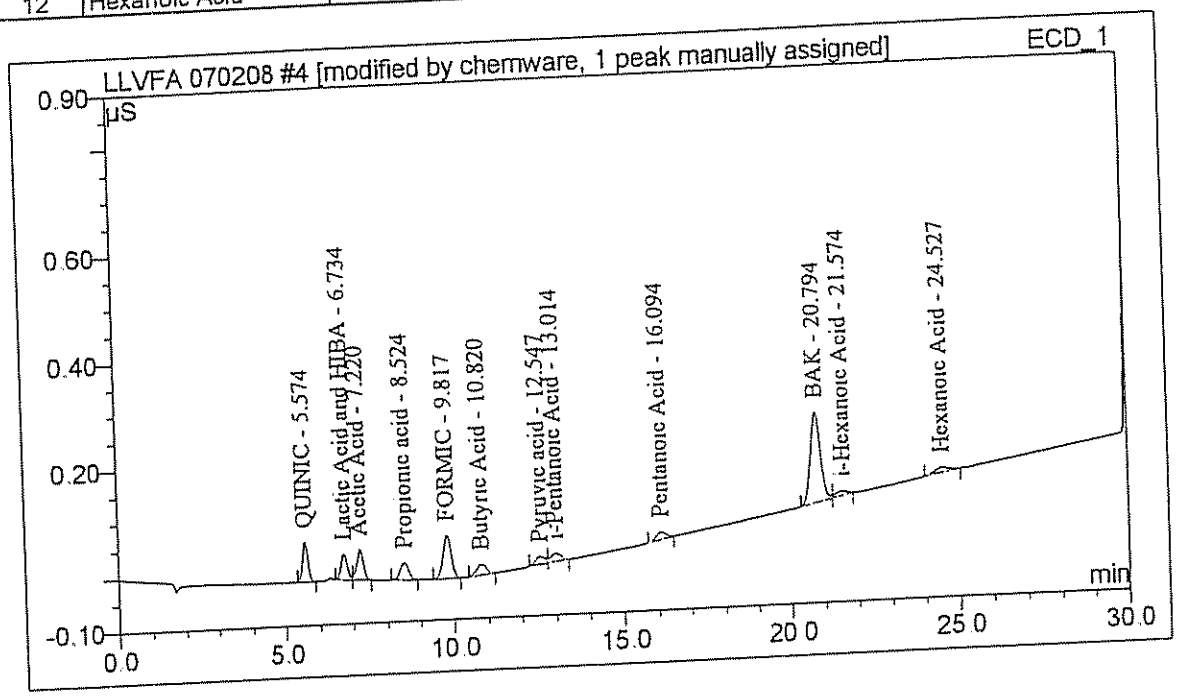


MICROSEEPS

Sample Analysis Report

Sample Name:	LLVFA ICAL 2	**Sequence No:**	4
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 12:08 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.574	0.014	0.074	BMB	n.a.
2	Lactic Acid and HIBA	6.734	0.011	0.048	BM	0.1833
3	Acetic Acid	7.220	0.013	0.056	MB	0.1147
4	Propionic acid	8.524	0.009	0.032	BMB	0.1118
5	FORMIC	9.817	0.023	0.080	BMB	n.a.
6	Butyric Acid	10.820	0.007	0.020	BMB	0.1370
7	Pyruvic acid	12.547	0.005	0.016	BM ^	0.1669
8	i-Pentanoic Acid	13.014	0.005	0.016	MB	0.1425
9	Pentanoic Acid	16.094	0.005	0.015	BMB	0.1250
10	BAK	20.794	0.058	0.167	BM *	n.a.
11	i-Hexanoic Acid	21.574	0.003	0.008	MB*	0.1743
12	Hexanoic Acid	24.527	0.005	0.010	BMB	0.1626



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current time: 5:03 PM

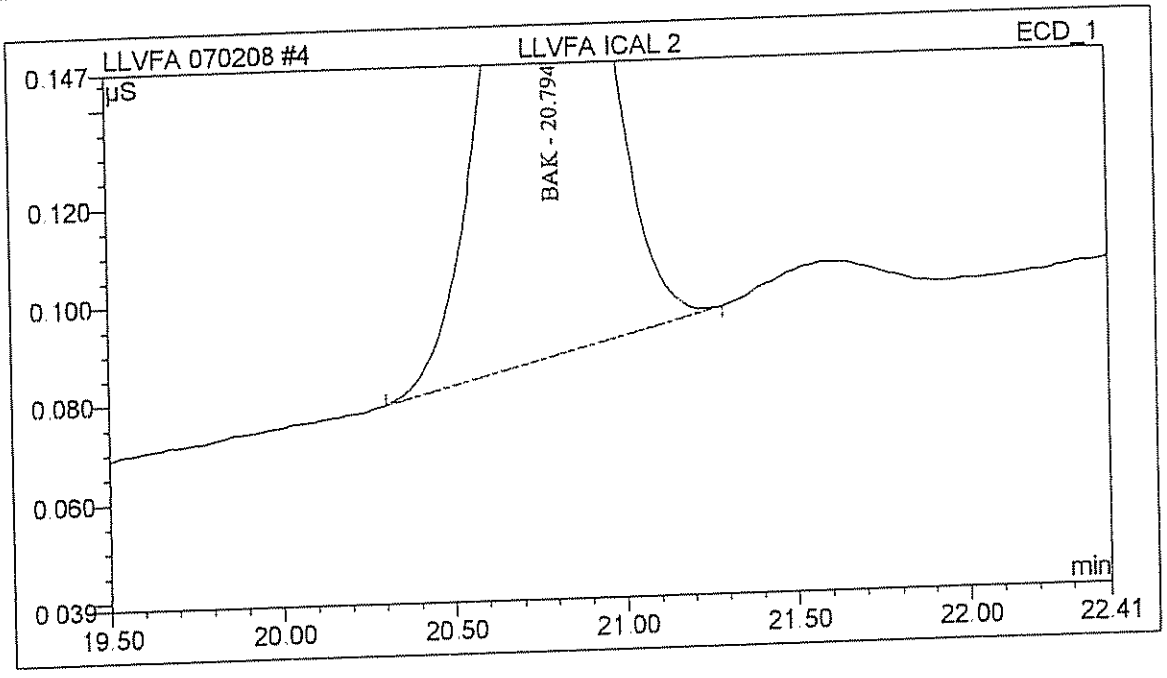
6.60 Build 1428

MICROSEEPS

Sample Analysis Report

Sample Name:	LLVFA ICAL 2	**Sequence No:**	4
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 12:08 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.574	0.014	0.074	BMB	n.a.
2	Lactic Acid and HIBA	6.734	0.011	0.048	BM	0.1833
3	Acetic Acid	7.220	0.013	0.056	MB	0.1147
4	Propionic acid	8.524	0.009	0.032	BMB	0.1118
5	FORMIC	9.817	0.023	0.080	BMB	n.a.
6	Butyric Acid	10.820	0.007	0.020	BMB	0.1370
7	i-Pentanoic Acid	12.547	0.005	0.016	BM	0.1321
8	Pyruvic acid	13.014	0.005	0.016	MB	0.1776
9	Pentanoic Acid	16.094	0.005	0.015	BMB	0.1250
10	BAK	20.794	0.056	0.165	BMB	n.a.
11	Hexanoic Acid	24.527	0.005	0.010	BMB	0.1626



current date: 7/2/2008
current time: 5:02 PM

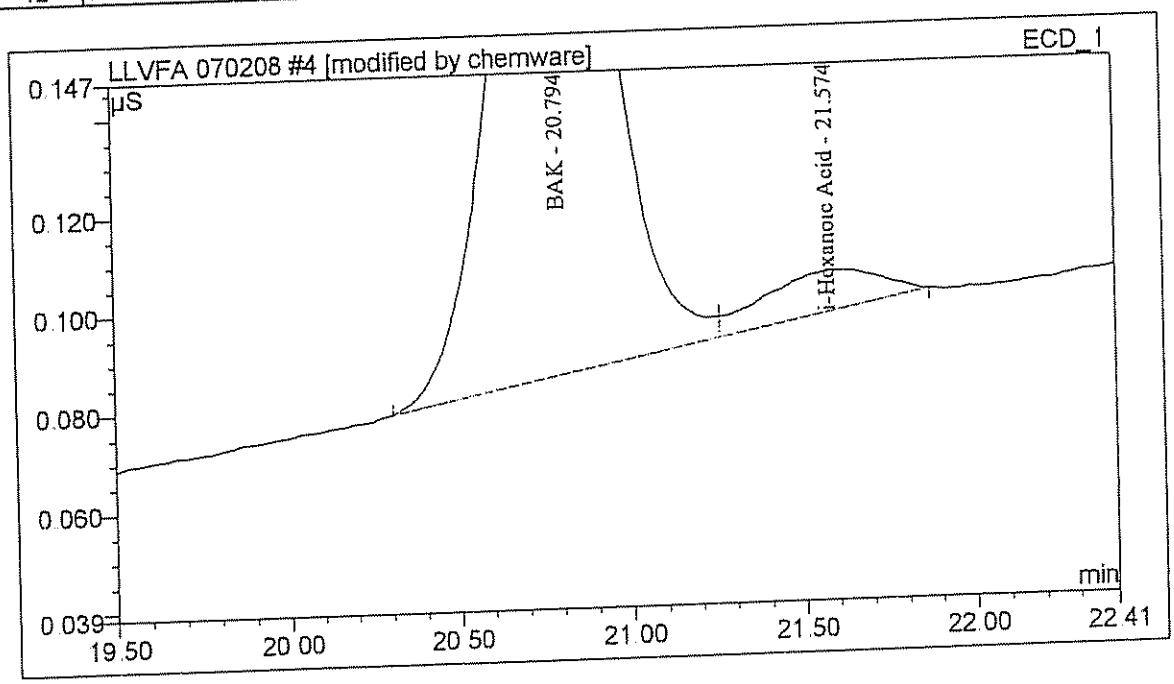
6 60 Build 1428

MICROSEEPS

Sample Analysis Report

Sample Name:	LLVFA ICAL 2	**Sequence No:**	4
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 12:08 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.574	0.014	0.074	BMB	n.a.
2	Lactic Acid and HIBA	6.734	0.011	0.048	BM	0.1833
3	Acetic Acid	7.220	0.013	0.056	MB	0.1147
4	Propionic acid	8.524	0.009	0.032	BMB	0.1118
5	FORMIC	9.817	0.023	0.080	BMB	n.a.
6	Butyric Acid	10.820	0.007	0.020	BMB	0.1370
7	i-Pentanoic Acid	12.547	0.005	0.016	BM	0.1321
8	Pyruvic acid	13.014	0.005	0.016	MB	0.1776
9	Pentanoic Acid	16.094	0.005	0.015	BMB	0.1250
10	BAK	20.794	0.058	0.167	BM *	n.a.
11	i-Hexanoic Acid	21.574	0.003	0.008	MB*	0.1743
12	Hexanoic Acid	24.527	0.005	0.010	BMB	0.1626



current date: 7/2/2008
current time: 5:02 PM

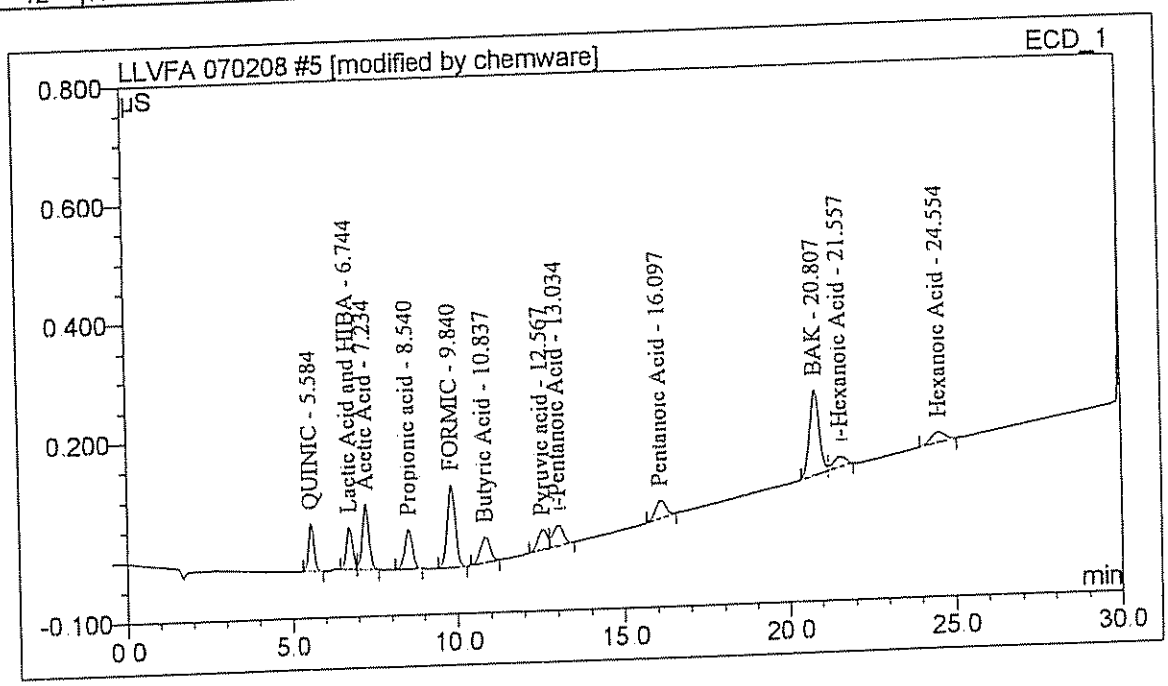
6.60 Build 1428

MICROSEEPS

Sample Analysis Report

Sample Name:	LLVFA ICAL 3	**Sequence No:**	5
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 12:50 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.584	0.015	0.080	BMB	n.a.
2	Lactic Acid and HIBA	6.744	0.016	0.071	BM	0.2350
3	Acetic Acid	7.234	0.025	0.109	MB	0.2017
4	Propionic acid	8.540	0.018	0.066	BMB	0.2005
5	FORMIC	9.840	0.039	0.138	BMB	n.a.
6	Butyric Acid	10.837	0.014	0.043	BMB	0.2220
7	Pyruvic acid	12.567	0.011	0.034	BM	0.2509
8	i-Pentanoic Acid	13.034	0.012	0.035	MB	0.2350
9	Pentanoic Acid	16.097	0.011	0.030	BMB	0.2121
10	BAK	20.807	0.049	0.142	BM *	n.a.
11	i-Hexanoic Acid	21.557	0.008	0.017	MB*	0.2425
12	Hexanoic Acid	24.554	0.009	0.019	BMB	0.2306



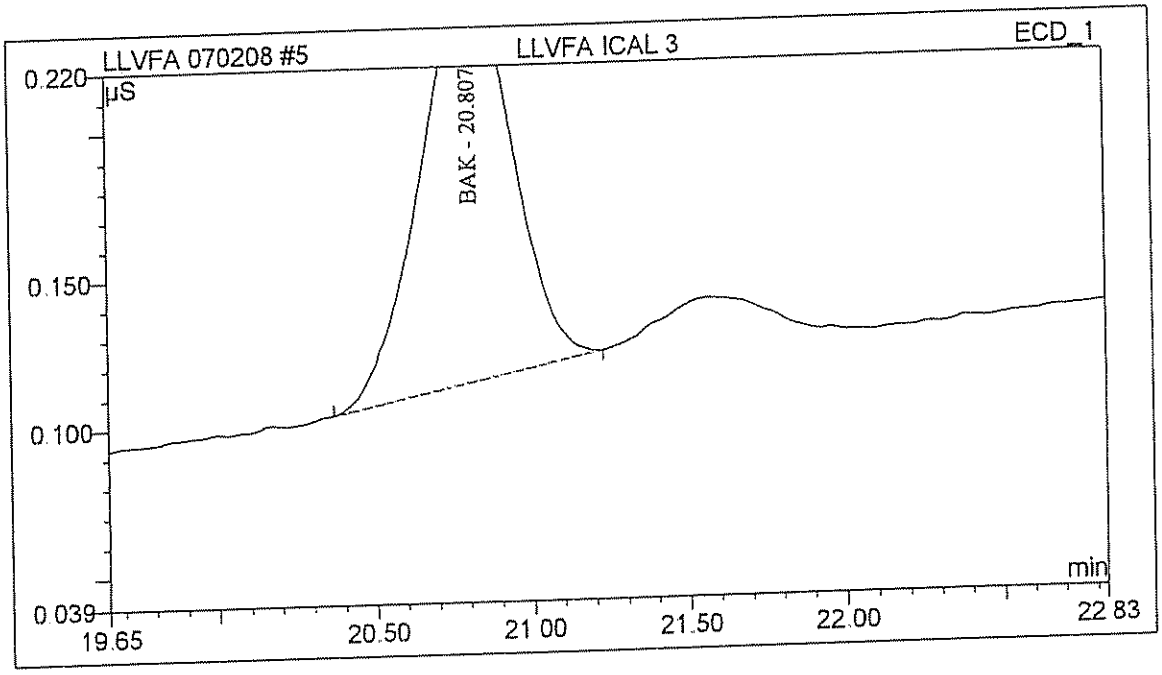
current date: 7/2/2008
current time: 5:00 PM

MICROSEEPS

Sample Analysis Report

Sample Name:	LLVFA ICAL 3	**Sequence No:**	5
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 12:50 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.584	0.015	0.080	BMB	n.a.
2	Lactic Acid and HIBA	6.744	0.016	0.071	BM	0.2350
3	Acetic Acid	7.234	0.025	0.109	MB	0.2017
4	Propionic acid	8.540	0.018	0.066	BMB	0.2005
5	FORMIC	9.840	0.039	0.138	BMB	n.a.
6	Butyric Acid	10.837	0.014	0.043	BMB	0.2220
7	Pyruvic acid	12.567	0.011	0.034	BM	0.2509
8	i-Pentanoic Acid	13.034	0.012	0.035	MB	0.2350
9	Pentanoic Acid	16.097	0.011	0.030	BMB	0.2121
10	BAK	20.807	0.046	0.139	BMB	n.a.
11	Hexanoic Acid	24.554	0.009	0.019	BMB	0.2306



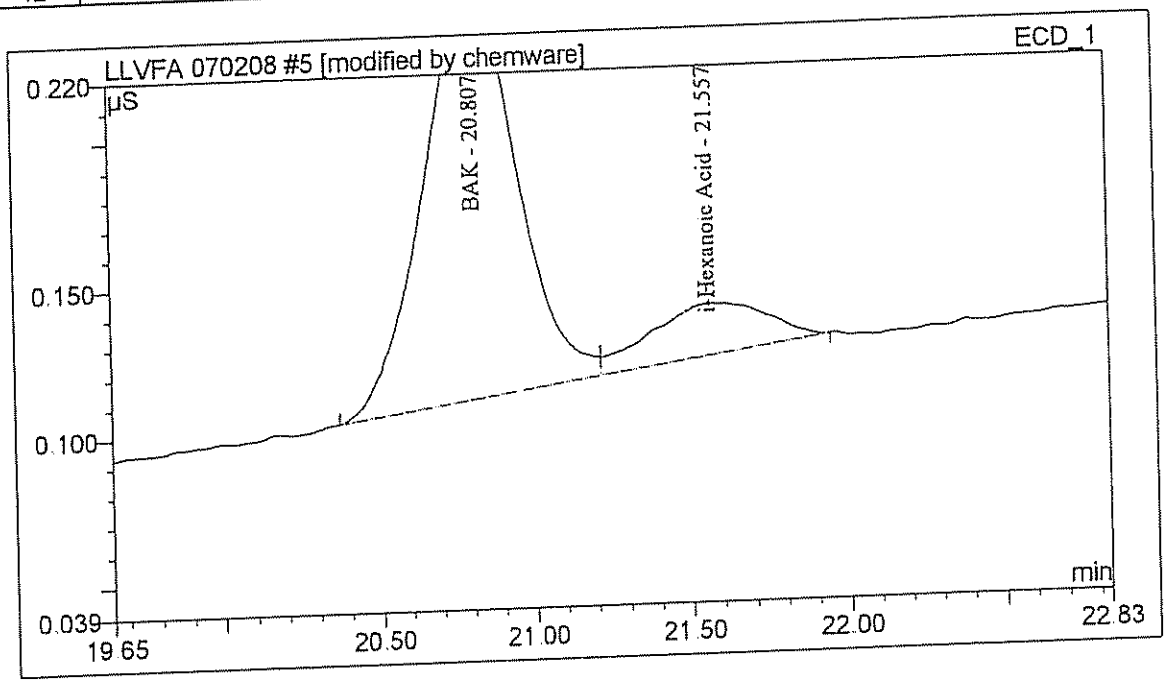
current date: 7/2/2008
current time: 5:00 PM

MICROSEEPS

Sample Analysis Report

Sample Name:	LLVFA ICAL 3	**Sequence No:**	5
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 12:50 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.584	0.015	0.080	BMB	n.a.
2	Lactic Acid and HIBA	6.744	0.016	0.071	BM	0.2350
3	Acetic Acid	7.234	0.025	0.109	MB	0.2017
4	Propionic acid	8.540	0.018	0.066	BMB	0.2005
5	FORMIC	9.840	0.039	0.138	BMB	n.a.
6	Butyric Acid	10.837	0.014	0.043	BMB	0.2220
7	Pyruvic acid	12.567	0.011	0.034	BM	0.2509
8	i-Pentanoic Acid	13.034	0.012	0.035	MB	0.2350
9	Pentanoic Acid	16.097	0.011	0.030	BMB	0.2121
10	BAK	20.807	0.049	0.142	BM *	n.a.
11	i-Hexanoic Acid	21.557	0.008	0.017	MB*	0.2425
12	Hexanoic Acid	24.554	0.009	0.019	BMB	0.2306



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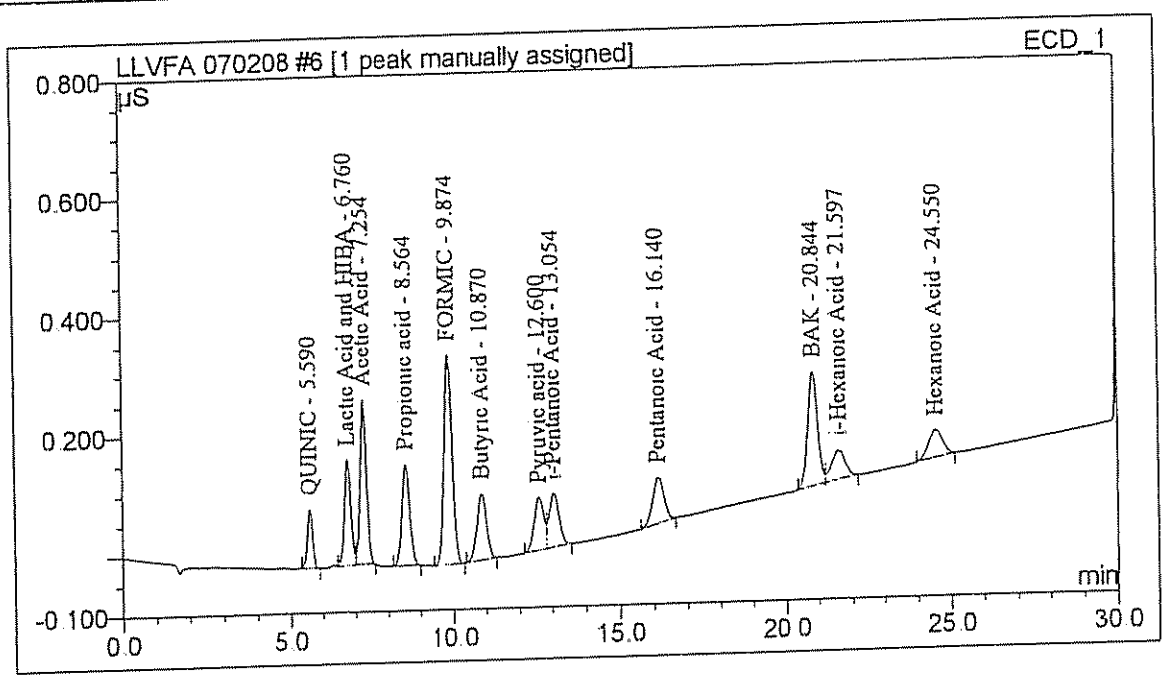
Sample Analysis Report

Sample Name:	LLVFA ICAL 4	**Sequence No:**	6
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 1:31 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.590	0.019	0.099	BMB	n.a.
2	Lactic Acid and HIBA	6.760	0.040	0.177	BM	0.4771
3	Acetic Acid	7.254	0.064	0.275	MB	0.4785
4	Propionic acid	8.564	0.048	0.170	BMB	0.4852
5	FORMIC	9.874	0.100	0.351	BMB	n.a.
6	Butyric Acid	10.870	0.037	0.111	BMB	0.4821
7	Pyruvic acid	12.600	0.029	0.089	BM ^	0.4995
8	i-Pentanoic Acid	13.054	0.032	0.090	MB	0.4899
9	Pentanoic Acid	16.140	0.030	0.077	BMB	0.4726
10	BAK	20.844	0.066	0.191	BM	n.a.
11	i-Hexanoic Acid	21.597	0.023	0.049	MB	0.5000
12	Hexanoic Acid	24.550	0.023	0.046	BMB	0.4778



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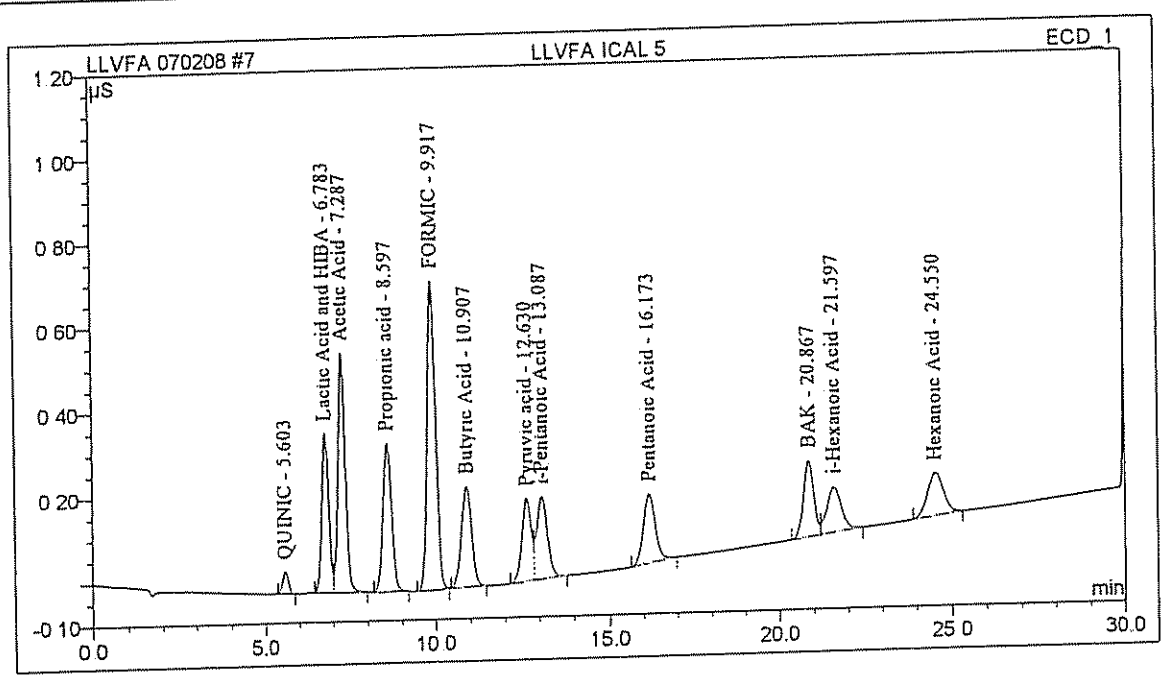
Sample Analysis Report

Sample Name:	LLVFA ICAL 5	**Sequence No:**	7
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1 0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 2:12 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.603	0.010	0.052	BMB	n.a.
2	Lactic Acid and HIBA	6.783	0.086	0.375	BM	0.9298
3	Acetic Acid	7.287	0.137	0.562	MB	1.0047
4	Propionic acid	8.597	0.101	0.350	BMB	0.9966
5	FORMIC	9.917	0.211	0.730	BMB	n.a.
6	Butyric Acid	10.907	0.081	0.237	BMB	0.9749
7	Pyruvic acid	12.630	0.064	0.195	BM	0.9502
8	i-Pentanoic Acid	13.087	0.070	0.193	MB	0.9950
9	Pentanoic Acid	16.173	0.066	0.163	BMB	0.9763
10	BAK	20.867	0.062	0.180	BM	n.a.
11	i-Hexanoic Acid	21.597	0.052	0.107	MB	1.0000
12	Hexanoic Acid	24.550	0.053	0.100	BMB	0.9835



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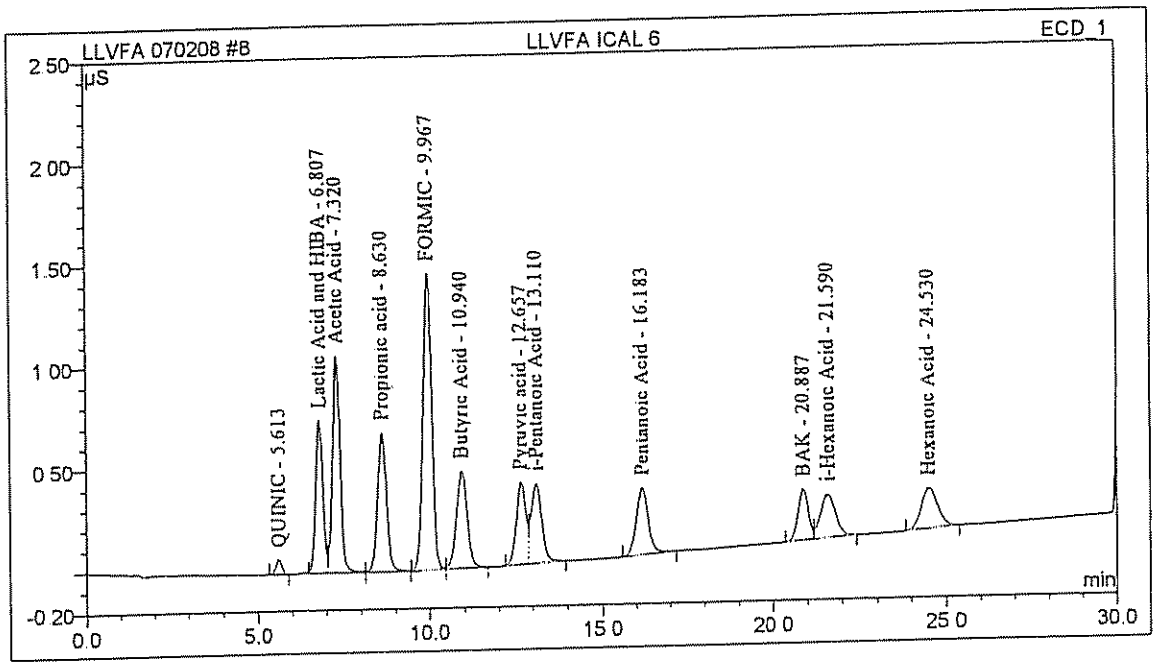
Sample Analysis Report

Sample Name:	LLVFA ICAL 6	**Sequence No:**	8
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1 0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1 0000
Date Time Collected:	7/2/2008 2:53 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.613	0.014	0.073	BMB	n.a.
2	Lactic Acid and HIBA	6.807	0.175	0.745	BM	1.7595
3	Acetic Acid	7.320	0.268	1.059	M	1.9494
4	Propionic acid	8.630	0.203	0.679	MB	1.9770
5	FORMIC	9.967	0.433	1.453	BM	n.a.
6	Butyric Acid	10.940	0.168	0.476	MB	1.9524
7	Pyruvic acid	12.657	0.133	0.405	BM	1.7996
8	i-Pentanoic Acid	13.110	0.141	0.389	MB	1.9464
9	Pentanoic Acid	16.183	0.135	0.329	BMB	1.9259
10	BAK	20.887	0.086	0.251	BM	n.a.
11	i-Hexanoic Acid	21.590	0.105	0.212	MB	2.0000
12	Hexanoic Acid	24.530	0.108	0.198	BMB	1.8849



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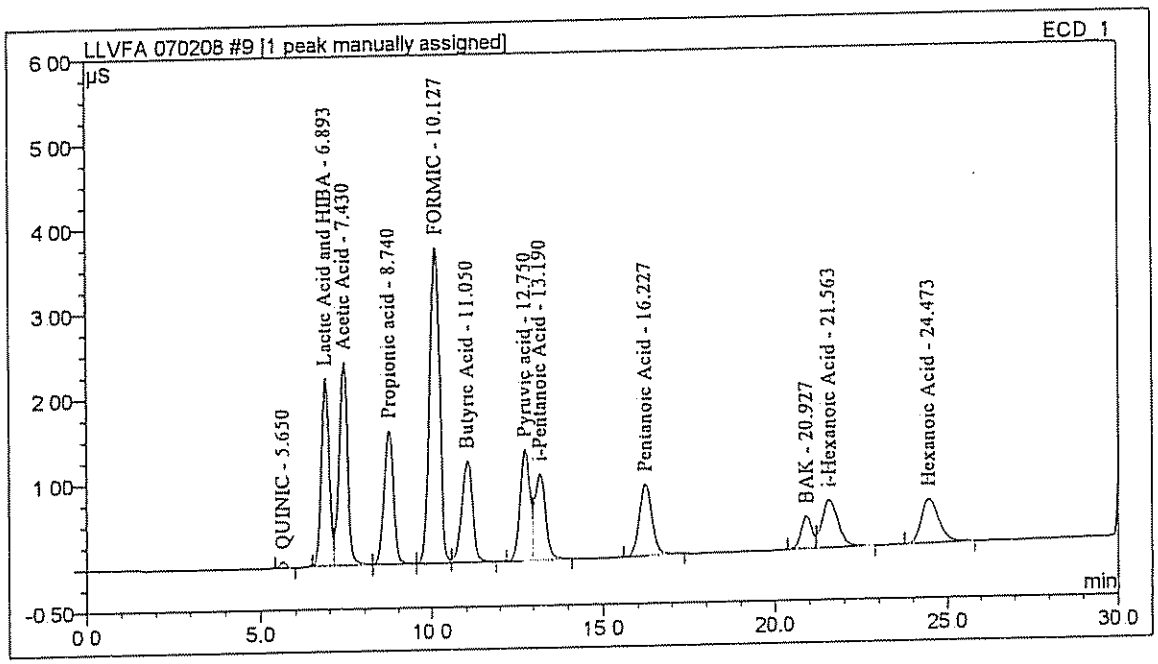
Sample Analysis Report

Sample Name:	LLVFA ICAL 7	**Sequence No:**	9
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 3:34 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.650	0.016	0.074	BMB	n.a.
2	Lactic Acid and HIBA	6.893	0.583	2.205	BM	5.1469
3	Acetic Acid	7.430	0.691	2.381	M	5.0343
4	Propionic acid	8.740	0.519	1.573	MB	5.0180
5	FORMIC	10.127	1.246	3.714	BM	n.a.
6	Butyric Acid	11.050	0.446	1.195	MB	5.0390
7	Pyruvic acid	12.750	0.447	1.309	BM	5.1066
8	i-Pentanoic Acid	13.190	0.369	1.013	MB	5.0408
9	Pentanoic Acid	16.227	0.369	0.850	BMB	5.0563
10	BAK	20.927	0.135	0.391	BM ^	n.a.
11	i-Hexanoic Acid	21.563	0.302	0.565	MB	n.a.
12	Hexanoic Acid	24.473	0.312	0.521	BMB	5.0725



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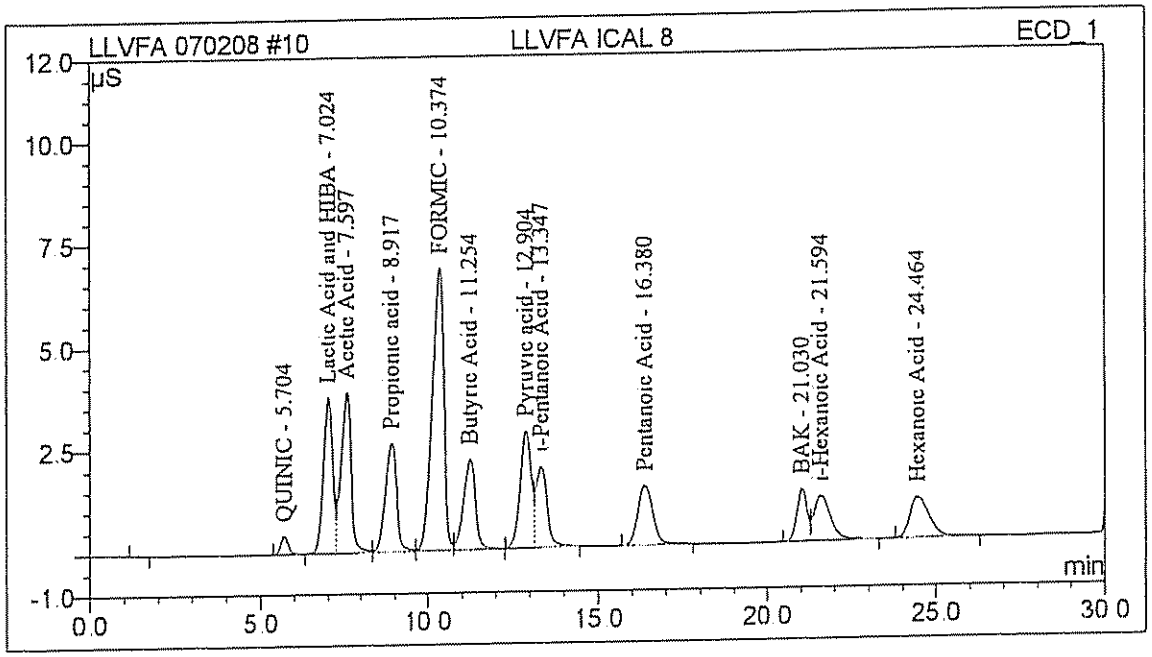
Sample Analysis Report

Sample Name:	LLVFA ICAL 8	**Sequence No:**	10
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 4:58 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	QUINIC	5.704	0.118	0.450	Ru	n.a.
3	Lactic Acid and HIBA	7.024	1.271	3.775	BM	9.9750
4	Acetic Acid	7.597	1.379	3.882	M	9.9956
5	Propionic acid	8.917	1.029	2.633	M	9.9960
6	FORMIC	10.374	2.754	6.842	M	n.a.
7	Butyric Acid	11.254	0.888	2.194	MB	9.9895
8	Pyruvic acid	12.904	1.072	2.836	BM	9.9864
9	i-Pentanoic Acid	13.347	0.751	1.961	MB	9.9947
10	Pentanoic Acid	16.380	0.750	1.450	BMB	9.9892
11	BAK	21.030	0.446	1.281	BM	n.a.
12	i-Hexanoic Acid	21.594	0.625	1.091	MB	9.9850
13	Hexanoic Acid	24.464	0.659	0.987	BMB	9.9861



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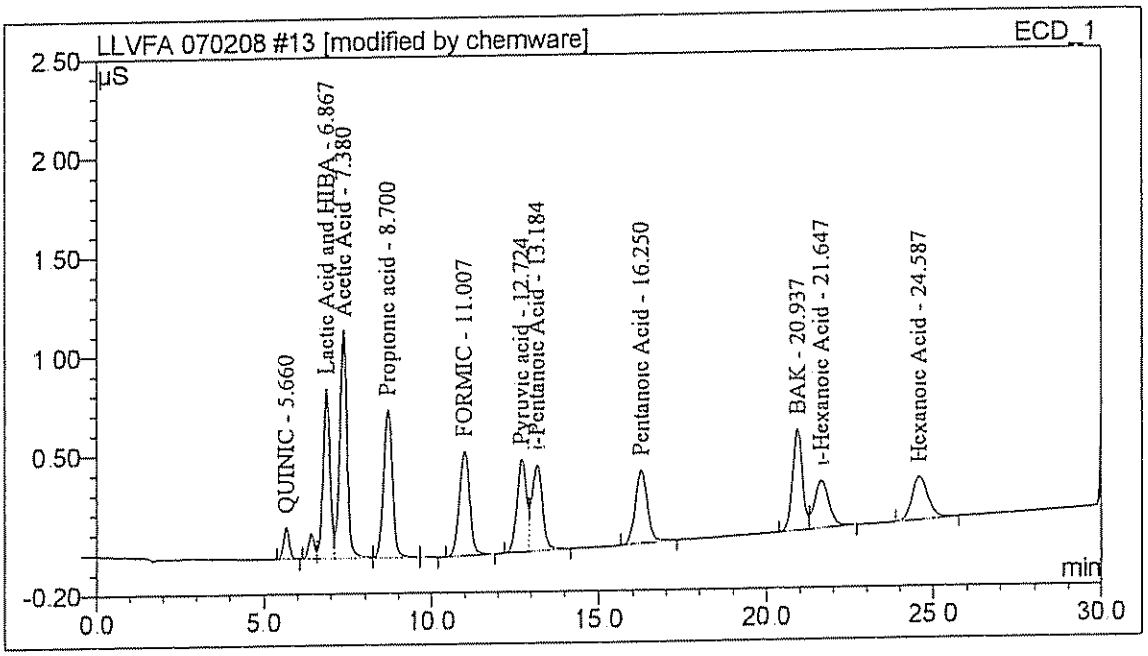
Sample Analysis Report

Sample Name:	ICV	**Sequence No:**	13
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 7:42 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.660	0.033	0.162	BMB	n.a.
3	Lactic Acid and HIBA	6.867	0.209	0.855	M *	2.0521
4	Acetic Acid	7.380	0.299	1.148	M	2.1872
5	Propionic acid	8.700	0.228	0.743	M	2.2145
7	FORMIC	11.007	0.188	0.524	BMB	n.a.
8	Pyruvic acid	12.724	0.155	0.467	BM	2.0778
9	i-Pentanoic Acid	13.184	0.158	0.431	MB	2.2013
10	Pentanoic Acid	16.250	0.151	0.364	BMB	2.1313
11	BAK	20.937	0.175	0.508	BM	n.a.
12	i-Hexanoic Acid	21.647	0.120	0.239	MB	2.1197
13	Hexanoic Acid	24.587	0.120	0.215	BMB	2.0819



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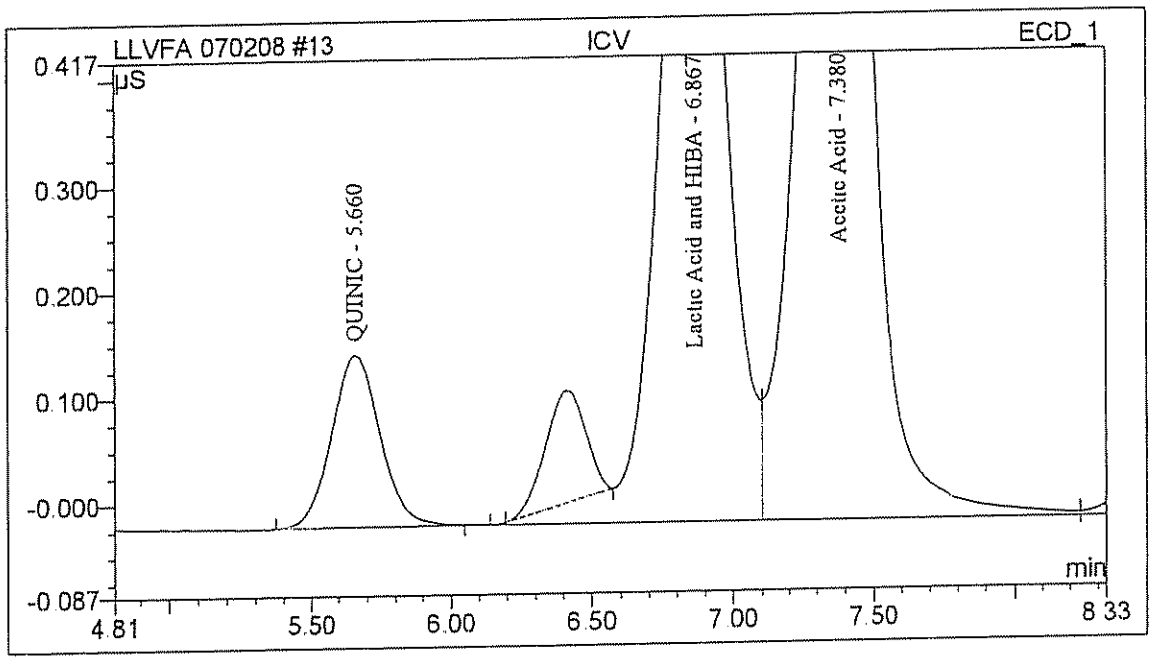
Sample Analysis Report

Sample Name:	ICV	**Sequence No:**	13
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 7:42 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.660	0.033	0.162	BMB	n.a.
3	Lactic Acid and HIBA	6.867	0.215	0.855	BM	2.1108
4	Acetic Acid	7.380	0.299	1.148	M	2.1872
5	Propionic acid	8.700	0.228	0.743	M	2.2145
6	FORMIC	9.974	0.002	0.005	MB	n.a.
7	Butyric Acid	11.007	0.188	0.524	BMB	2.1638
8	Pyruvic acid	12.724	0.155	0.467	BM	2.0778
9	i-Pentanoic Acid	13.184	0.158	0.431	MB	2.2013
10	Pentanoic Acid	16.250	0.151	0.364	BMB	2.1313
11	BAK	20.937	0.175	0.508	BM	n.a.
12	i-Hexanoic Acid	21.647	0.120	0.239	MB	2.1197
13	Hexanoic Acid	24.587	0.120	0.215	BMB	2.0819



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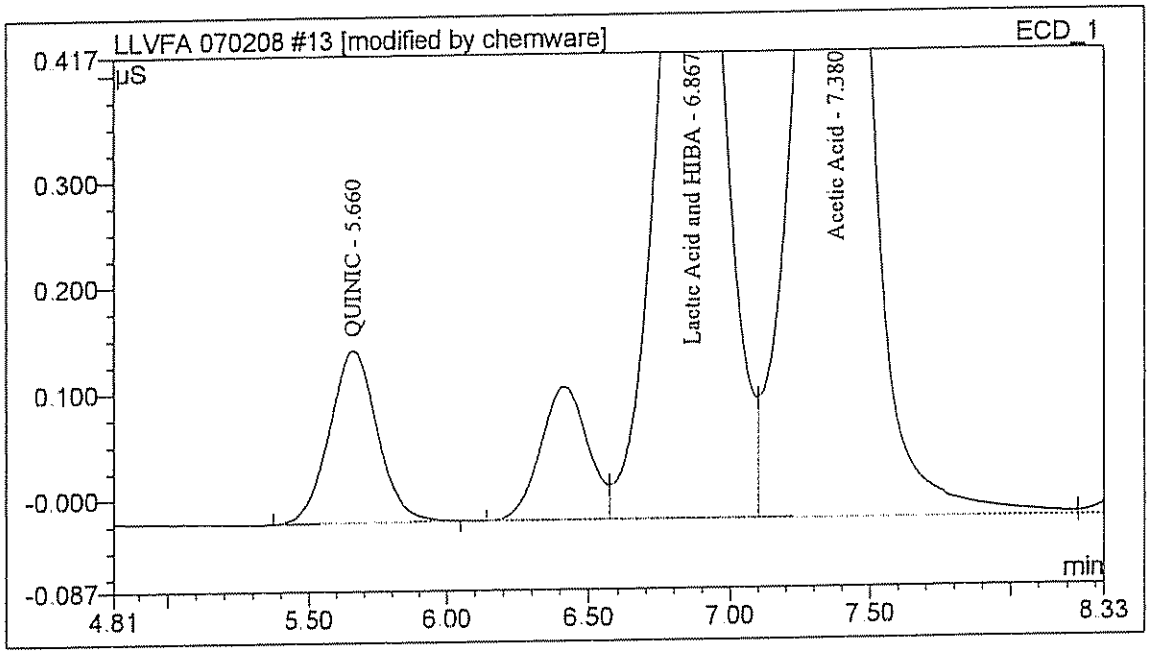
Sample Analysis Report

Sample Name:	ICV	**Sequence No:**	13
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 7:42 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.660	0.033	0.162	BMB	n.a.
3	Lactic Acid and HIBA	6.867	0.209	0.855	M *	2.0521
4	Acetic Acid	7.380	0.299	1.148	M	2.1872
5	Propionic acid	8.700	0.228	0.743	M	2.2145
7	FORMIC	11.007	0.188	0.524	BMB	n.a.
8	Pyruvic acid	12.724	0.155	0.467	BM	2.0778
9	i-Pentanoic Acid	13.184	0.158	0.431	MB	2.2013
10	Pentanoic Acid	16.250	0.151	0.364	BMB	2.1313
11	BAK	20.937	0.175	0.508	BM	n.a.
12	i-Hexanoic Acid	21.647	0.120	0.239	MB	2.1197
13	Hexanoic Acid	24.587	0.120	0.215	BMB	2.0819



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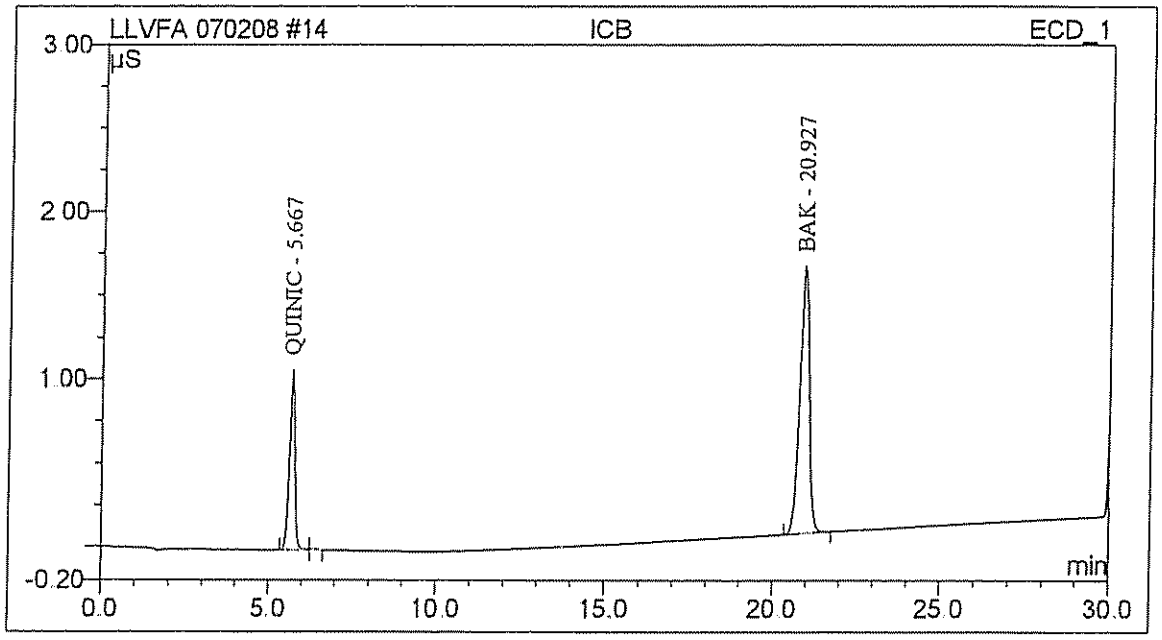
Sample Analysis Report

Sample Name:	ICB	**Sequence No:**	14
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/2/2008 8:23 PM	**Analytical Method:**	AM23G
System Operator:	chemware	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.667	0.217	1.079	BM	n.a.
3	BAK	20.927	0.544	1.595	BMB	n.a.



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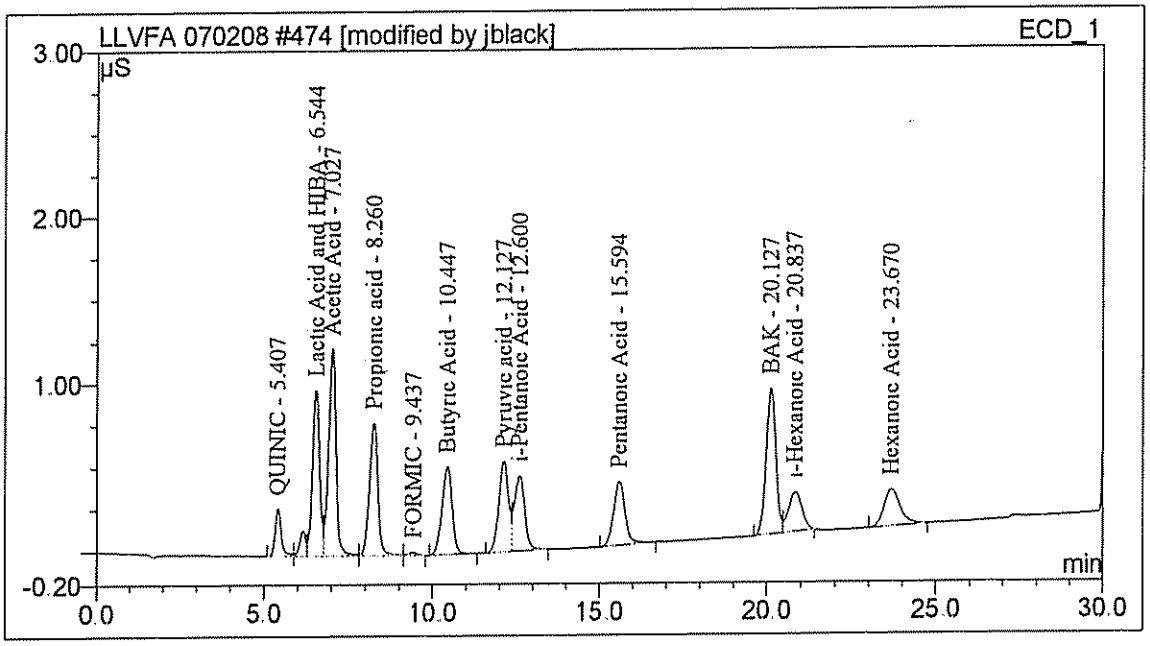
Sample Analysis Report

Sample Name:	CCV 073108 1	**Sequence No:**	474
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 11:25 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.407	0.062	0.282	BM	n.a.
3	Lactic Acid and HIBA	6.544	0.243	0.991	M *	2.3588
4	Acetic Acid	7.027	0.320	1.240	M	2.3370
5	Propionic acid	8.260	0.234	0.793	M	2.2722
6	FORMIC	9.437	0.006	0.020	MB	n.a.
7	Butyric Acid	10.447	0.187	0.525	BMB	2.1499
8	Pyruvic acid	12.127	0.181	0.540	BM	2.3847
9	i-Pentanoic Acid	12.600	0.164	0.449	MB	2.2842
10	Pentanoic Acid	15.594	0.151	0.378	BMB	2.1413
11	BAK	20.127	0.288	0.870	BM *	n.a.
12	i-Hexanoic Acid	20.837	0.109	0.234	MB*	1.9372
13	Hexanoic Acid	23.670	0.121	0.218	BMB	2.0910



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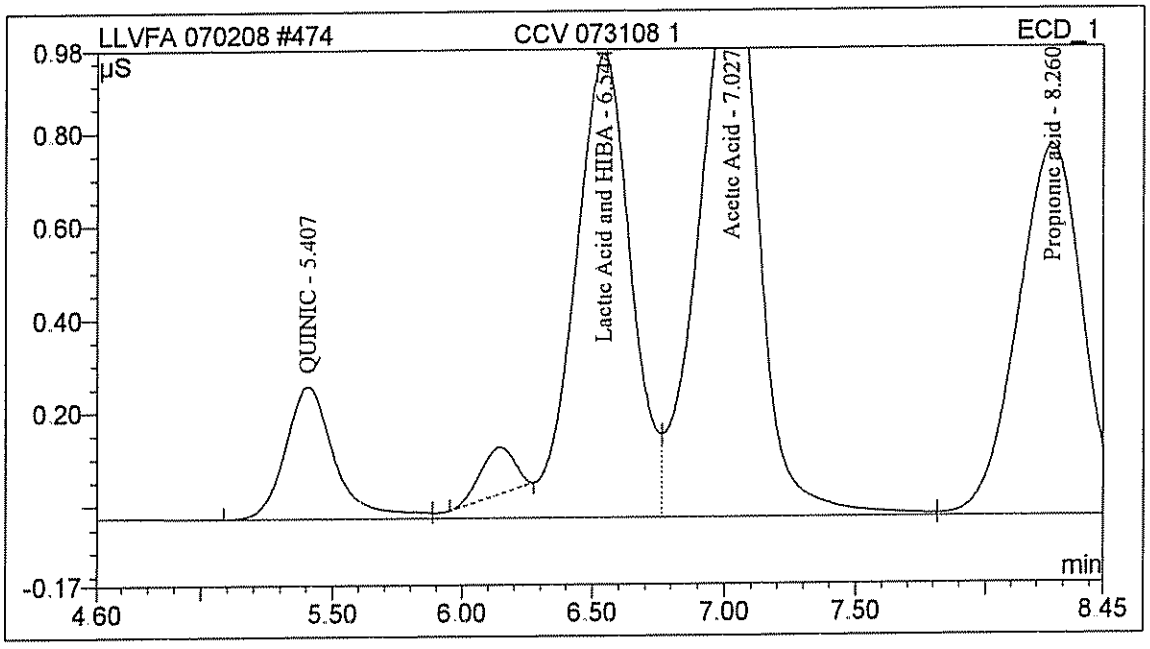
Sample Analysis Report

Sample Name:	CCV 073108 1	**Sequence No:**	474
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 11:25 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.407	0.062	0.282	BM	n.a.
3	Lactic Acid and HIBA	6.544	0.259	0.991	M	2.4933
4	Acetic Acid	7.027	0.320	1.240	M	2.3370
5	Propionic acid	8.260	0.234	0.793	M	2.2722
6	FORMIC	9.437	0.006	0.020	MB	n.a.
7	Butyric Acid	10.447	0.187	0.525	BMB	2.1499
8	Pyruvic acid	12.127	0.181	0.540	BM	2.3847
9	i-Pentanoic Acid	12.600	0.164	0.449	MB	2.2842
10	Pentanoic Acid	15.594	0.151	0.378	BMB	2.1413
11	BAK	20.147	0.101	0.481	BMB	n.a.
12	i-Hexanoic Acid	20.850	0.078	0.194	BMB	1.4150
13	Hexanoic Acid	23.670	0.121	0.218	BMB	2.0910



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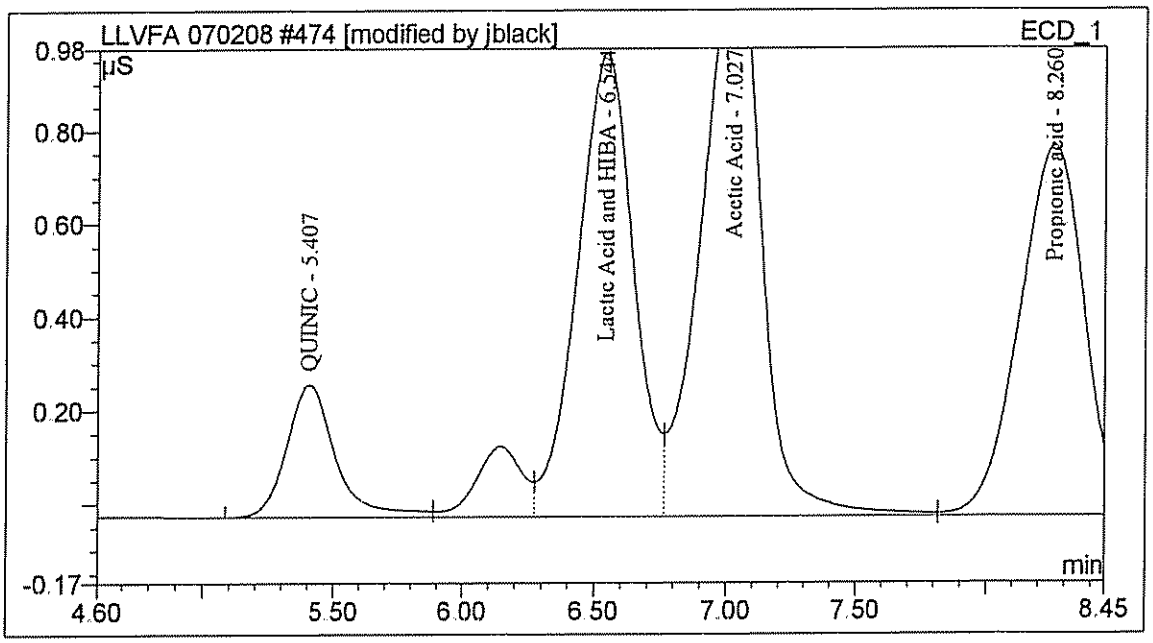
Sample Analysis Report

Sample Name:	CCV 073108 1	**Sequence No:**	474
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 11:25 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.407	0.062	0.282	BM	n.a.
3	Lactic Acid and HIBA	6.544	0.243	0.991	M *	2.3588
4	Acetic Acid	7.027	0.320	1.240	M	2.3370
5	Propionic acid	8.260	0.234	0.793	M	2.2722
6	FORMIC	9.437	0.006	0.020	MB	n.a.
7	Butyric Acid	10.447	0.187	0.525	BMB	2.1499
8	Pyruvic acid	12.127	0.181	0.540	BM	2.3847
9	i-Pentanoic Acid	12.600	0.164	0.449	MB	2.2842
10	Pentanoic Acid	15.594	0.151	0.378	BMB	2.1413
11	BAK	20.147	0.101	0.481	BMB	n.a.
12	i-Hexanoic Acid	20.850	0.078	0.194	BMB	1.4150
13	Hexanoic Acid	23.670	0.121	0.218	BMB	2.0910



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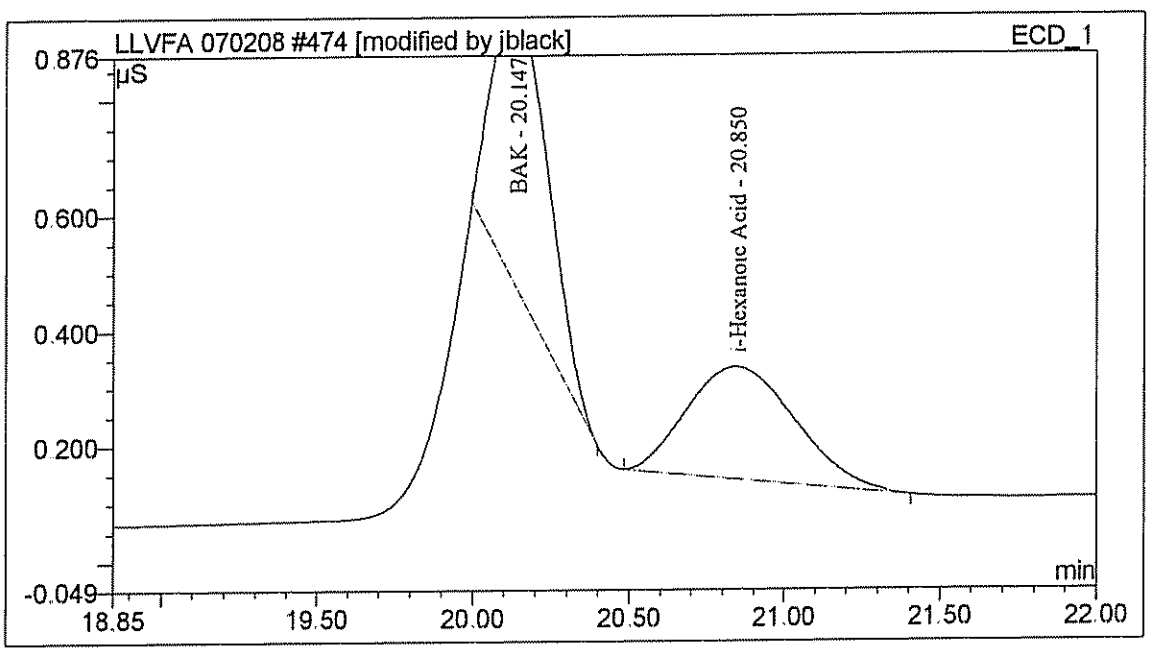
Sample Analysis Report

Sample Name:	CCV 073108 1	**Sequence No:**	474
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 11:25 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.407	0.062	0.282	BM	n.a.
3	Lactic Acid and HIBA	6.544	0.243	0.991	M *	2.3588
4	Acetic Acid	7.027	0.320	1.240	M	2.3370
5	Propionic acid	8.260	0.234	0.793	M	2.2722
6	FORMIC	9.437	0.006	0.020	MB	n.a.
7	Butyric Acid	10.447	0.187	0.525	BMB	2.1499
8	Pyruvic acid	12.127	0.181	0.540	BM	2.3847
9	i-Pentanoic Acid	12.600	0.164	0.449	MB	2.2842
10	Pentanoic Acid	15.594	0.151	0.378	BMB	2.1413
11	BAK	20.147	0.101	0.481	BMB	n.a.
12	i-Hexanoic Acid	20.850	0.078	0.194	BMB	1.4150
13	Hexanoic Acid	23.670	0.121	0.218	BMB	2.0910

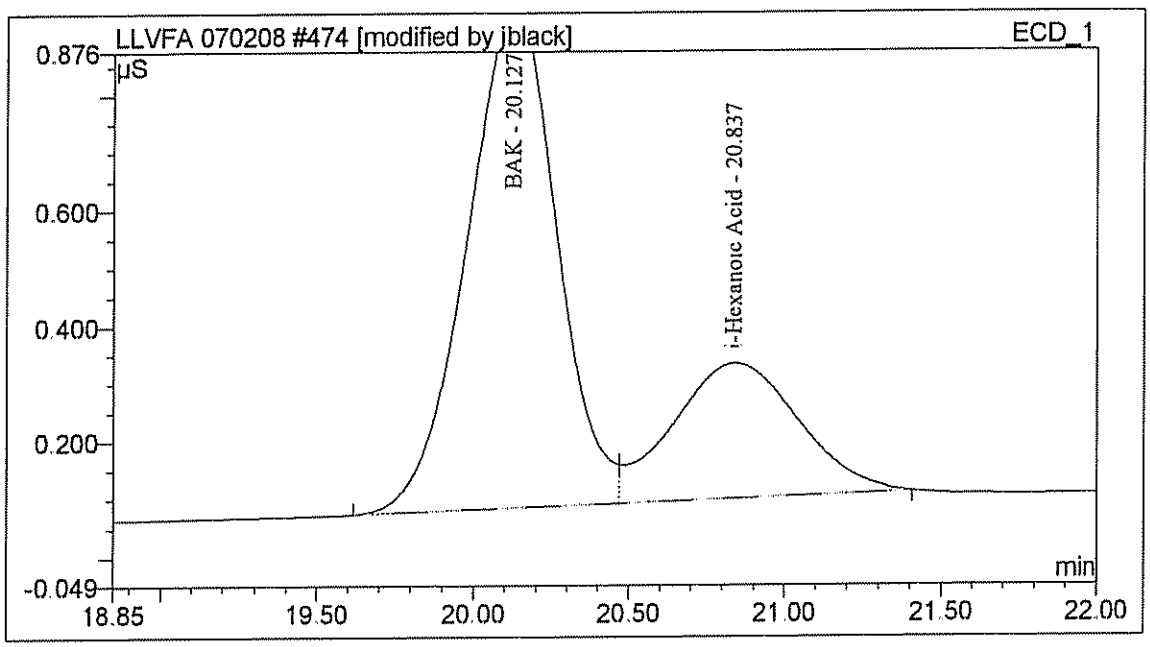


MICROSEEPS

Sample Analysis Report

Sample Name:	CCV 073108 1	**Sequence No:**	474
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 11:25 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.407	0.062	0.282	BM	n.a.
3	Lactic Acid and HIBA	6.544	0.243	0.991	M *	2.3588
4	Acetic Acid	7.027	0.320	1.240	M	2.3370
5	Propionic acid	8.260	0.234	0.793	M	2.2722
6	FORMIC	9.437	0.006	0.020	MB	n.a.
7	Butyric Acid	10.447	0.187	0.525	BMB	2.1499
8	Pyruvic acid	12.127	0.181	0.540	BM	2.3847
9	i-Pentanoic Acid	12.600	0.164	0.449	MB	2.2842
10	Pentanoic Acid	15.594	0.151	0.378	BMB	2.1413
11	BAK	20.127	0.288	0.870	BM *	n.a.
12	i-Hexanoic Acid	20.837	0.109	0.234	MB*	1.9372
13	Hexanoic Acid	23.670	0.121	0.218	BMB	2.0910

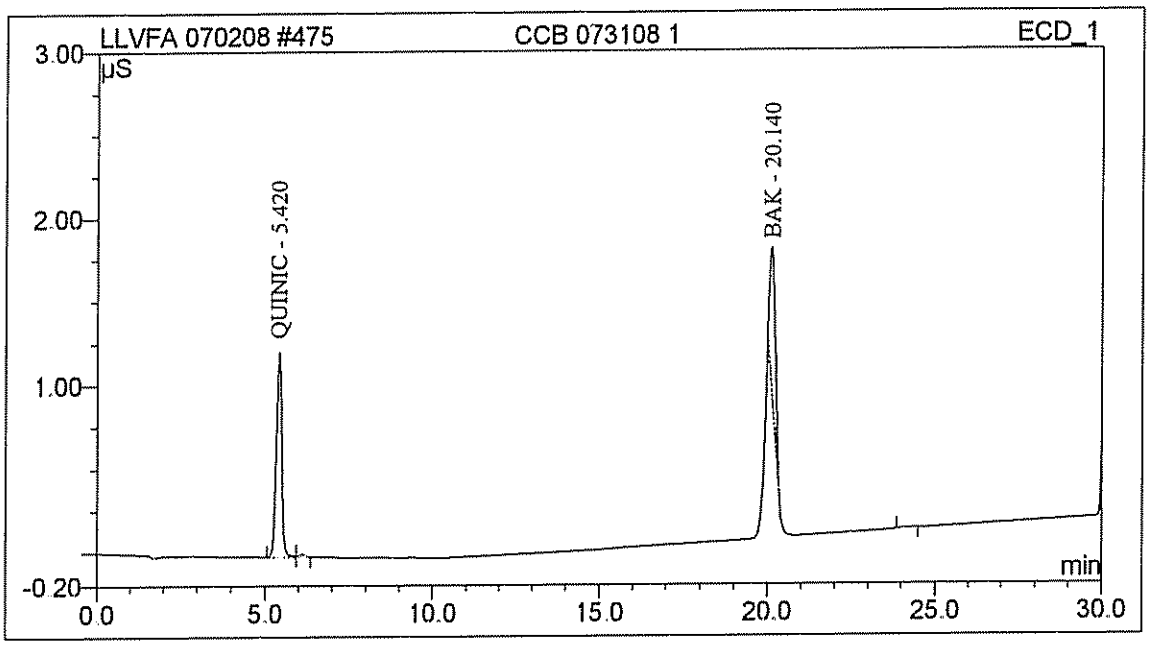


MICROSEEPS

Sample Analysis Report

Sample Name:	CCB 073108 1	**Sequence No:**	475
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 12:06 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.420	0.237	1.225	BM	n.a.
3	BAK	20.140	0.173	0.874	BMB	n.a.

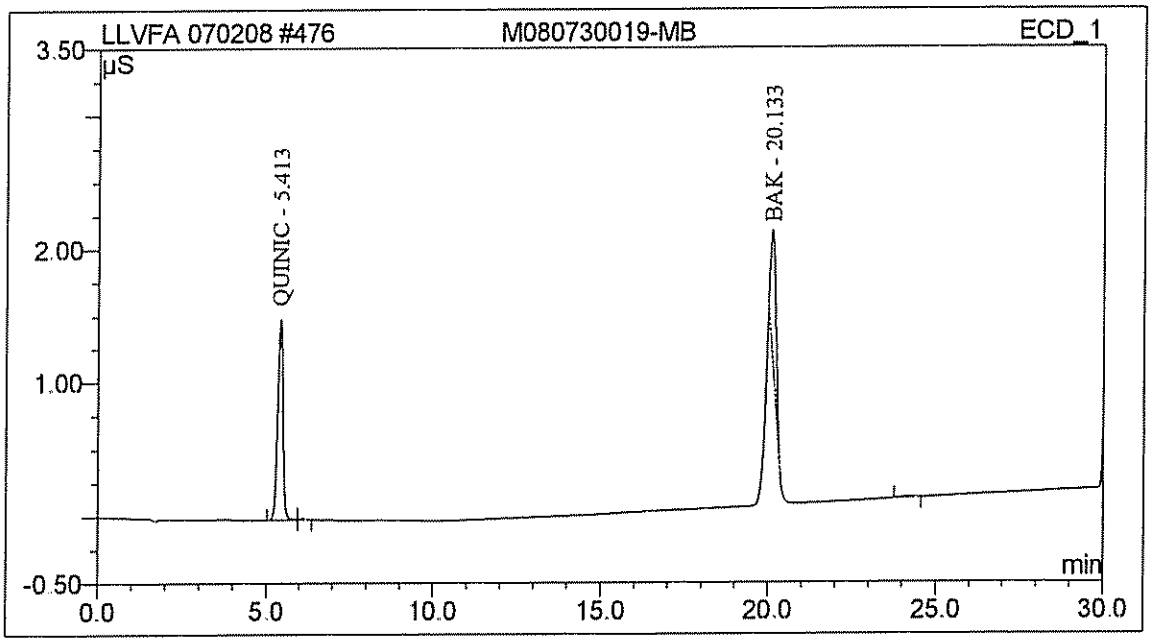


MICROSEEPS

Sample Analysis Report

Sample Name:	M080730019-MB	**Sequence No:**	476
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 12:47 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.413	0.288	1.503	BM	n.a.
3	BAK	20.133	0.186	0.975	BMB	n.a.

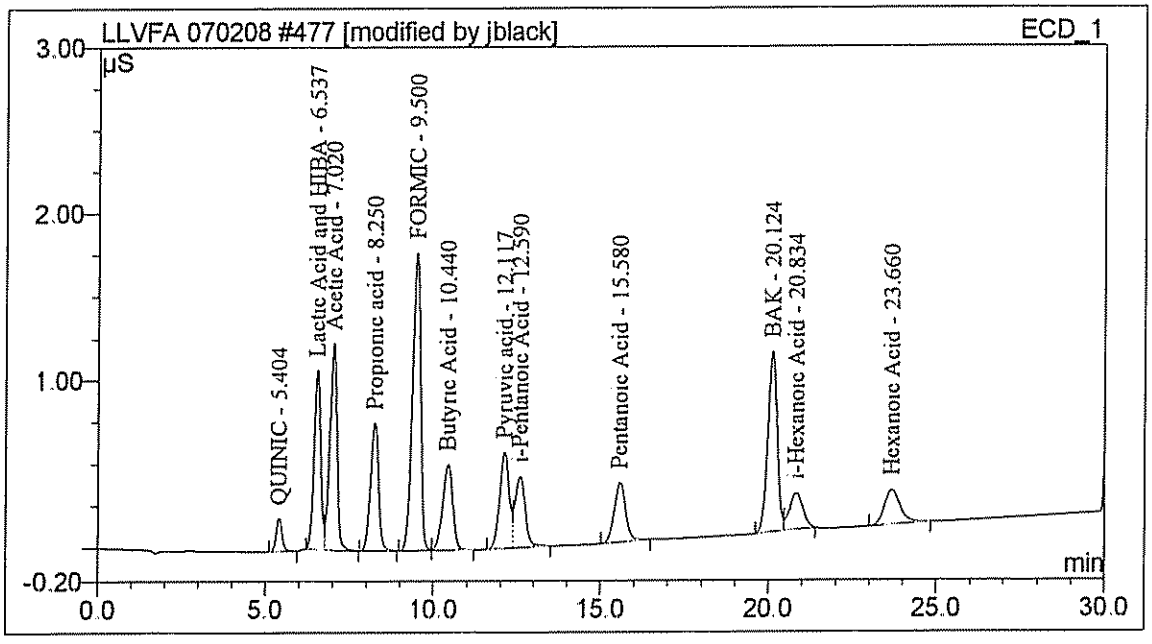


MICROSEEPS

Sample Analysis Report

Sample Name:	M080730019-LCS	**Sequence No:**	477
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 1:28 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.404	0.042	0.198	BMB	n.a.
2	Lactic Acid and HIBA	6.537	0.252	1.071	BM	2.4332
3	Acetic Acid	7.020	0.306	1.237	MB	2.2360
4	Propionic acid	8.250	0.218	0.763	BMB	2.1181
5	FORMIC	9.500	0.509	1.781	BM	n.a.
6	Butyric Acid	10.440	0.178	0.509	MB	2.0489
7	Pyruvic acid	12.117	0.190	0.572	BM	2.4882
8	i-Pentanoic Acid	12.590	0.153	0.424	MB	2.1327
9	Pentanoic Acid	15.580	0.139	0.354	BMB	1.9771
10	BAK	20.124	0.355	1.081	BM *	n.a.
11	i-Hexanoic Acid	20.834	0.100	0.217	MB*	1.7946
12	Hexanoic Acid	23.660	0.114	0.206	BMB	1.9787

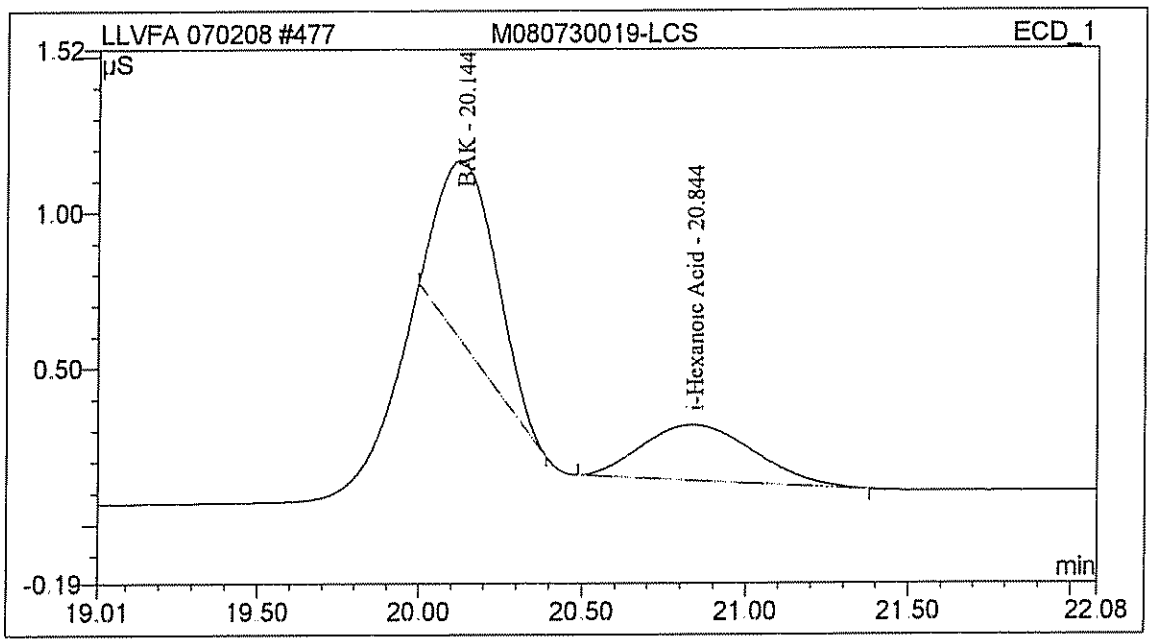


MICROSEEPS

Sample Analysis Report

Sample Name:	M080730019-LCS	**Sequence No:**	477
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 1:28 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.404	0.042	0.198	BMB	n.a.
2	Lactic Acid and HIBA	6.537	0.252	1.071	BM	2.4332
3	Acetic Acid	7.020	0.306	1.237	MB	2.2360
4	Propionic acid	8.250	0.218	0.763	BMB	2.1181
5	FORMIC	9.500	0.509	1.781	BM	n.a.
6	Butyric Acid	10.440	0.178	0.509	MB	2.0489
7	Pyruvic acid	12.117	0.190	0.572	BM	2.4882
8	i-Pentanoic Acid	12.590	0.153	0.424	MB	2.1327
9	Pentanoic Acid	15.580	0.139	0.354	BMB	1.9771
10	BAK	20.144	0.122	0.588	BMB	n.a.
11	i-Hexanoic Acid	20.844	0.070	0.177	BMB	1.2811
12	Hexanoic Acid	23.660	0.114	0.206	BMB	1.9787

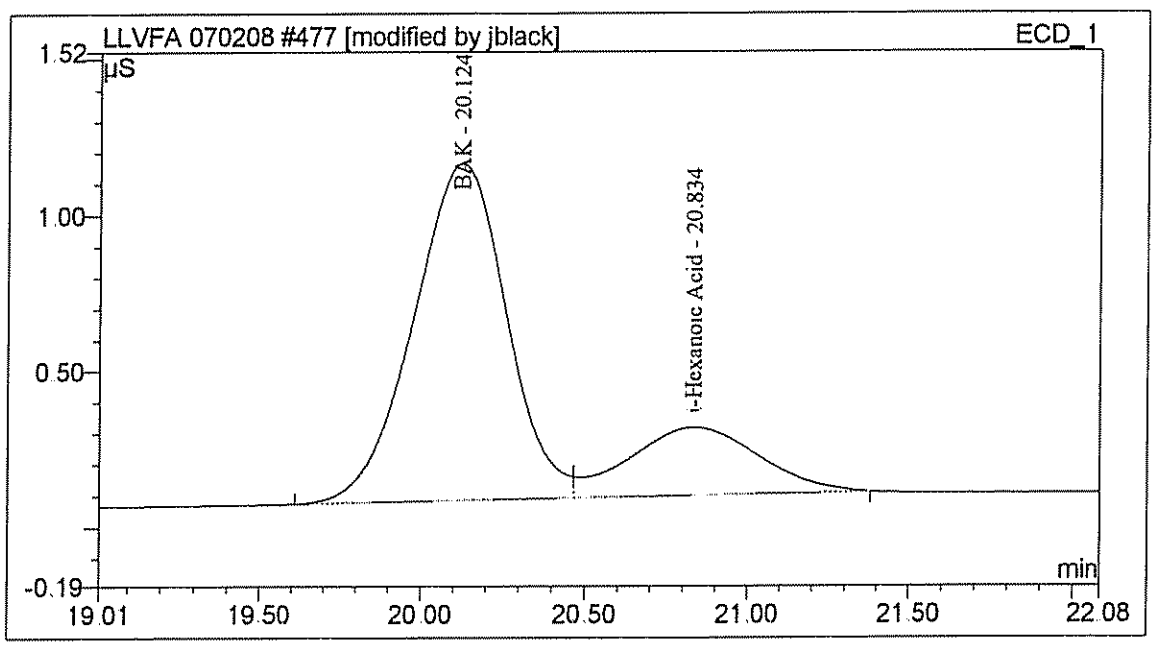


MICROSEEPS

Sample Analysis Report

Sample Name:	M080730019-LCS	**Sequence No:**	477
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1 0000
Date Time Collected:	7/31/2008 1:28 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.404	0.042	0.198	BMB	n.a.
2	Lactic Acid and HIBA	6.537	0.252	1.071	BM	2.4332
3	Acetic Acid	7.020	0.306	1.237	MB	2.2360
4	Propionic acid	8.250	0.218	0.763	BMB	2.1181
5	FORMIC	9.500	0.509	1.781	BM	n.a.
6	Butyric Acid	10.440	0.178	0.509	MB	2.0489
7	Pyruvic acid	12.117	0.190	0.572	BM	2.4882
8	i-Pentanoic Acid	12.590	0.153	0.424	MB	2.1327
9	Pentanoic Acid	15.580	0.139	0.354	BMB	1.9771
10	BAK	20.124	0.355	1.081	BM *	n.a.
11	i-Hexanoic Acid	20.834	0.100	0.217	MB*	1.7946
12	Hexanoic Acid	23.660	0.114	0.206	BMB	1.9787

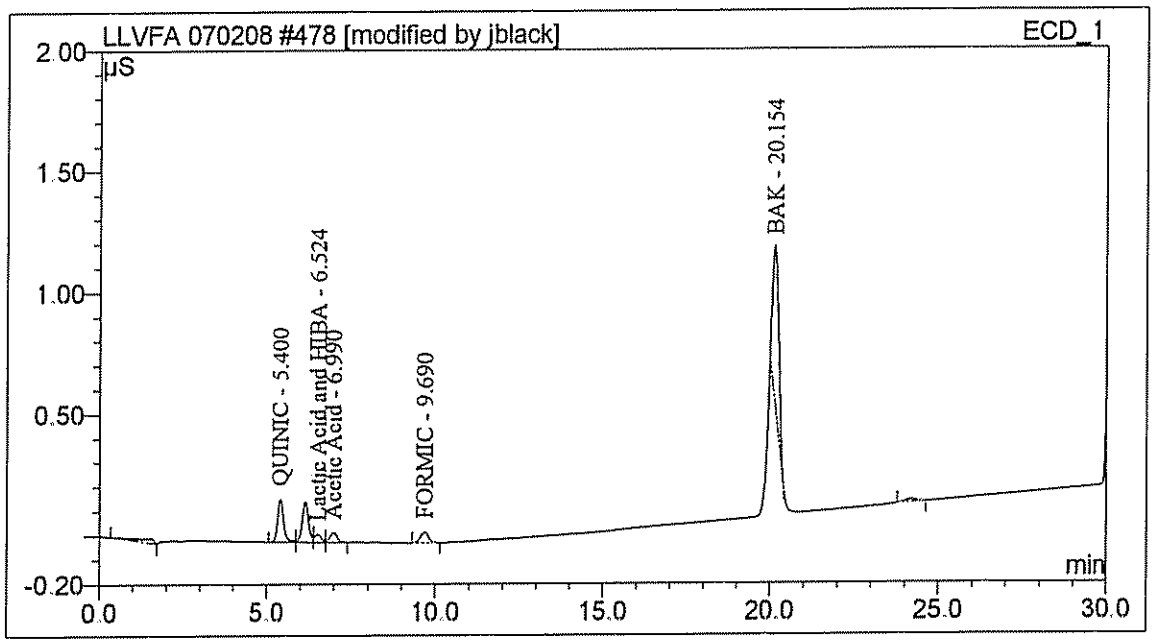


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A	**Sequence No:**	478
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 2:09 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	QUINIC	5.400	0.037	0.175	BM	n.a.
4	Lactic Acid and HIBA	6.524	0.008	0.032	M *	0.1578
5	Acetic Acid	6.990	0.010	0.040	MB	0.0893
6	FORMIC	9.690	0.012	0.045	BMB	n.a.
7	BAK	20.154	0.141	0.653	BMB	n.a.

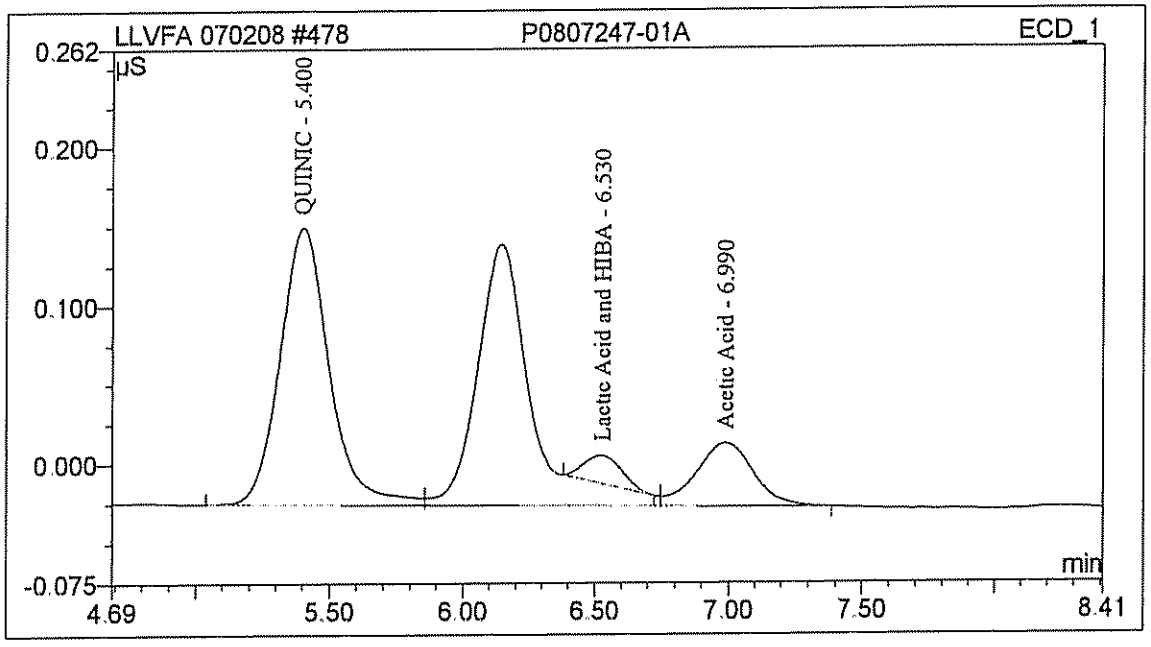


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A	**Sequence No:**	478
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 2:09 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	QUINIC	5.400	0.037	0.175	BM	n.a.
4	Lactic Acid and HIBA	6.530	0.003	0.018	Rd	0.1117
5	Acetic Acid	6.990	0.010	0.040	MB	0.0893
6	FORMIC	9.690	0.012	0.045	BMB	n.a.
7	BAK	20.154	0.141	0.653	BMB	n.a.

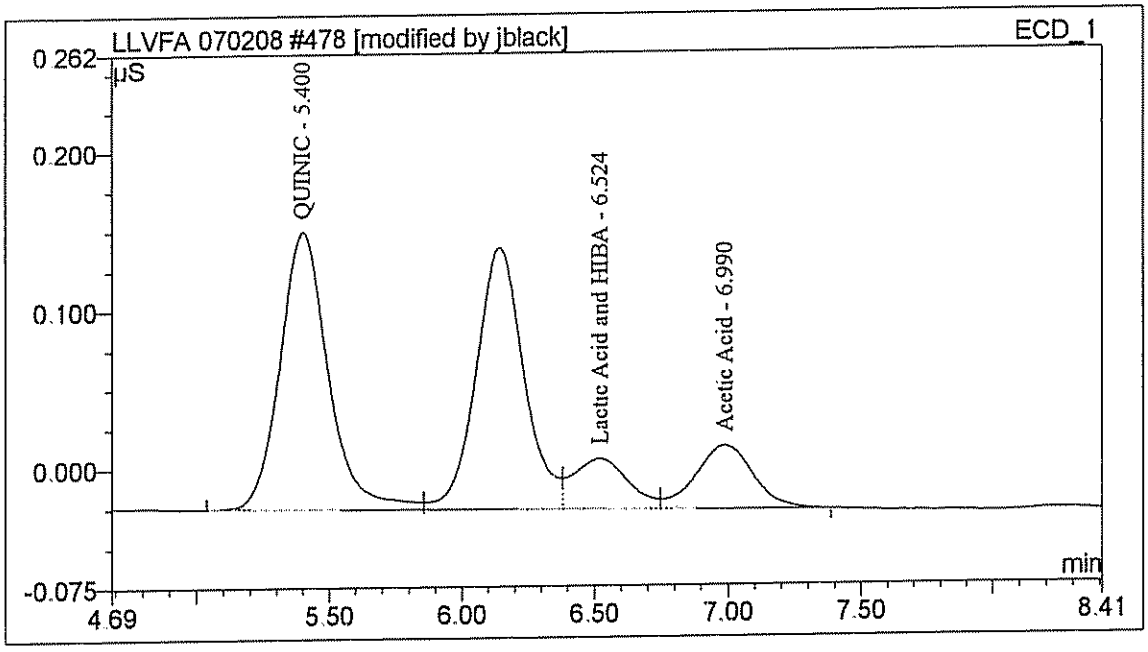


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A	**Sequence No:**	478
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 2:09 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	QUINIC	5.400	0.037	0.175	BM	n.a.
4	Lactic Acid and HIBA	6.524	0.008	0.032	M *	0.1578
5	Acetic Acid	6.990	0.010	0.040	MB	0.0893
6	FORMIC	9.690	0.012	0.045	BMB	n.a.
7	BAK	20.154	0.141	0.653	BMB	n.a.

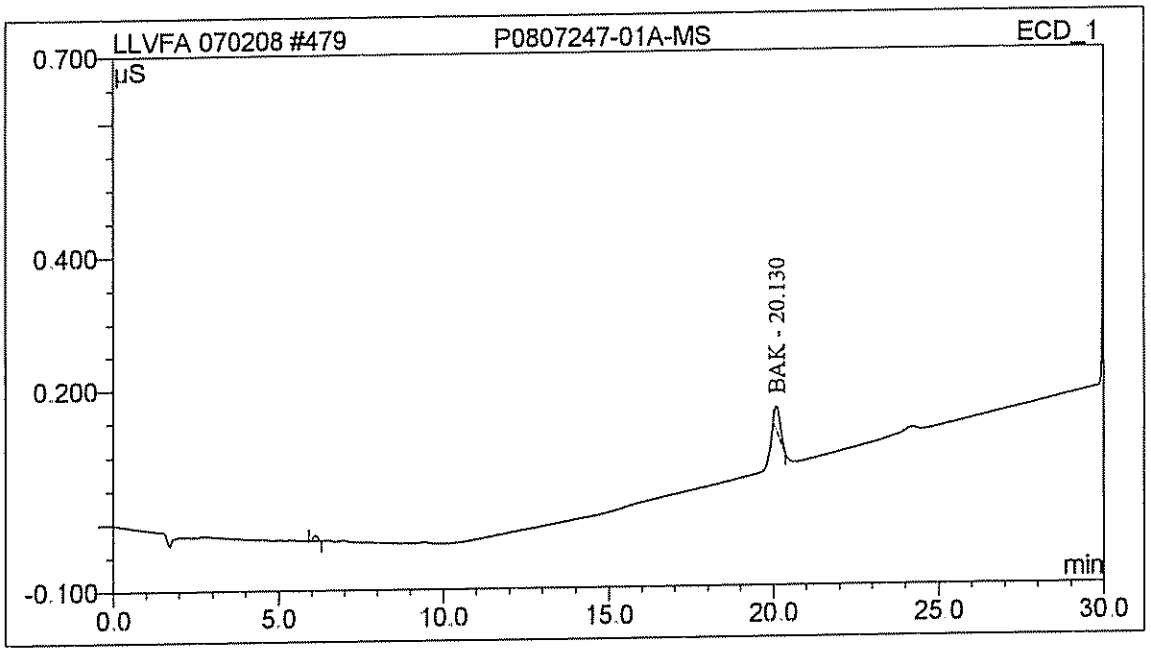


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A-MS	**Sequence No:**	479
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 2:50 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	BAK	20.130	0.008	0.039	BMB	n.a.



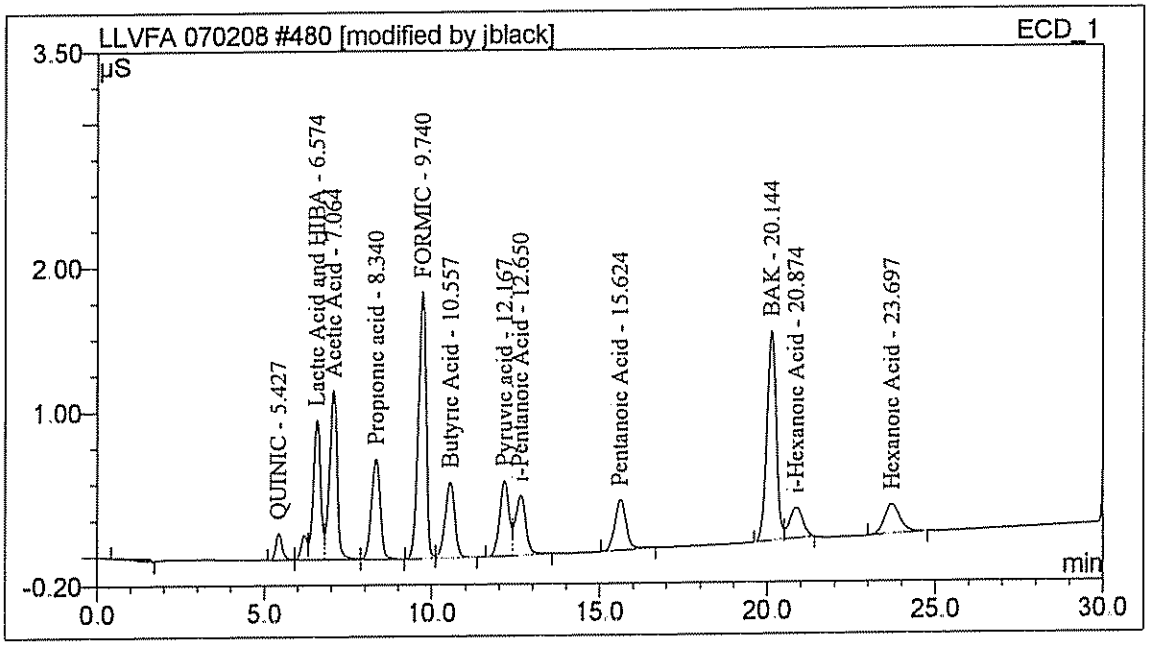
Sample was rerun See Seq. No. 513

MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A-MSD	**Sequence No:**	480
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 3:31 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	QUINIC	5.427	0.042	0.184	BM *	n.a.
4	Lactic Acid and HIBA	6.574	0.244	0.964	M *	2.3691
5	Acetic Acid	7.064	0.308	1.168	M	2.2489
6	Propionic acid	8.340	0.216	0.695	MB	2.0945
7	FORMIC	9.740	0.493	1.845	BM	n.a.
8	Butyric Acid	10.557	0.175	0.524	MB	2.0132
9	Pyruvic acid	12.167	0.170	0.522	BM	2.2529
10	i-Pentanoic Acid	12.650	0.149	0.414	MB	2.0786
11	Pentanoic Acid	15.624	0.138	0.348	BMB	1.9532
12	BAK	20.144	0.476	1.449	BM *	n.a.
13	i-Hexanoic Acid	20.874	0.098	0.212	MB*	1.7473
14	Hexanoic Acid	23.697	0.112	0.206	BMB	1.9413

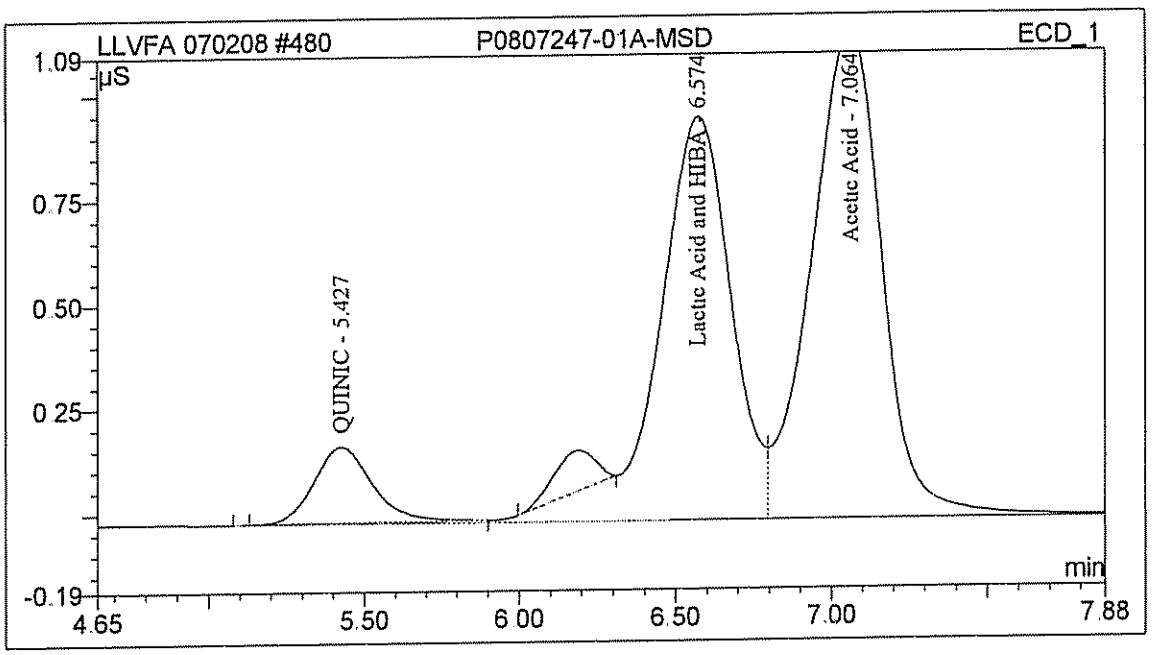


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A-MSD	**Sequence No:**	480
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1 0000
Date Time Collected:	7/31/2008 3:31 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	QUINIC	5.427	0.040	0.182	Ru	n.a.
4	Lactic Acid and HIBA	6.574	0.267	0.964	BM	2.5657
5	Acetic Acid	7.064	0.308	1.168	M	2.2489
6	Propionic acid	8.340	0.216	0.695	MB	2.0945
7	FORMIC	9.740	0.493	1.845	BM	n.a.
8	Butyric Acid	10.557	0.175	0.524	MB	2.0132
9	Pyruvic acid	12.167	0.170	0.522	BM	2.2529
10	i-Pentanoic Acid	12.650	0.149	0.414	MB	2.0786
11	Pentanoic Acid	15.624	0.138	0.348	BMB	1.9532
12	BAK	20.160	0.197	0.891	BMB	n.a.
13	i-Hexanoic Acid	20.880	0.069	0.174	BMB	1.2549
14	Hexanoic Acid	23.697	0.112	0.206	BMB	1.9413

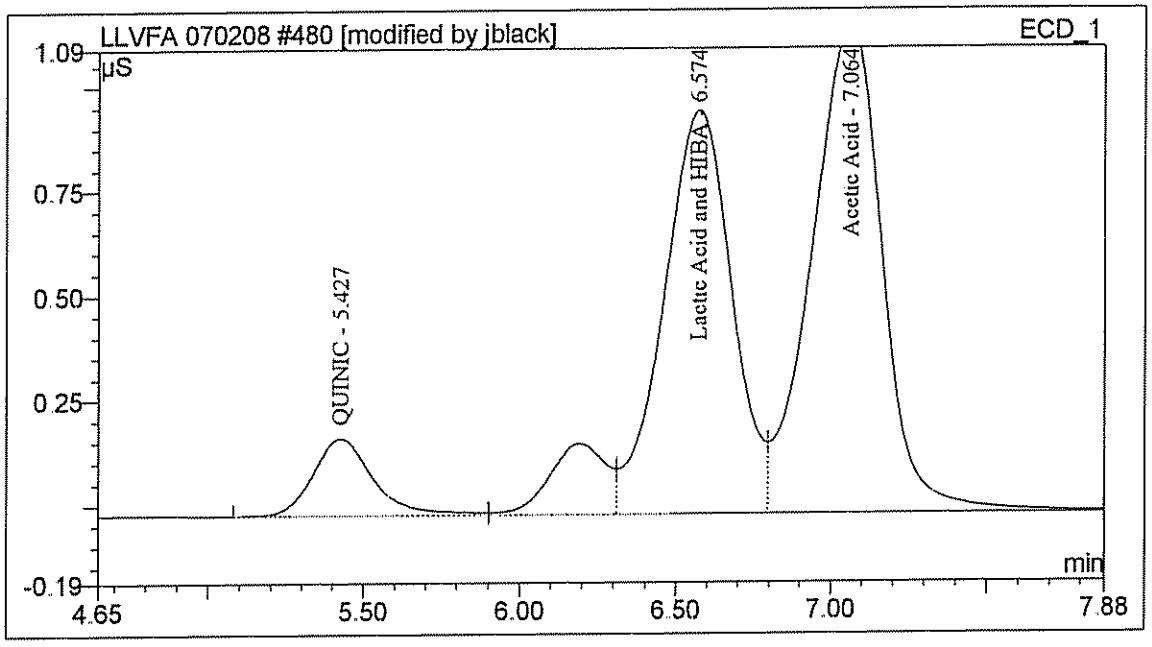


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A-MSD	**Sequence No:**	480
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 3:31 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	QUINIC	5.427	0.042	0.184	BM *	n.a.
4	Lactic Acid and HIBA	6.574	0.244	0.964	M *	2.3691
5	Acetic Acid	7.064	0.308	1.168	M	2.2489
6	Propionic acid	8.340	0.216	0.695	MB	2.0945
7	FORMIC	9.740	0.493	1.845	BM	n.a.
8	Butyric Acid	10.557	0.175	0.524	MB	2.0132
9	Pyruvic acid	12.167	0.170	0.522	BM	2.2529
10	i-Pentanoic Acid	12.650	0.149	0.414	MB	2.0786
11	Pentanoic Acid	15.624	0.138	0.348	BMB	1.9532
12	BAK	20.160	0.197	0.891	BMB	n.a.
13	i-Hexanoic Acid	20.880	0.069	0.174	BMB	1.2549
14	Hexanoic Acid	23.697	0.112	0.206	BMB	1.9413

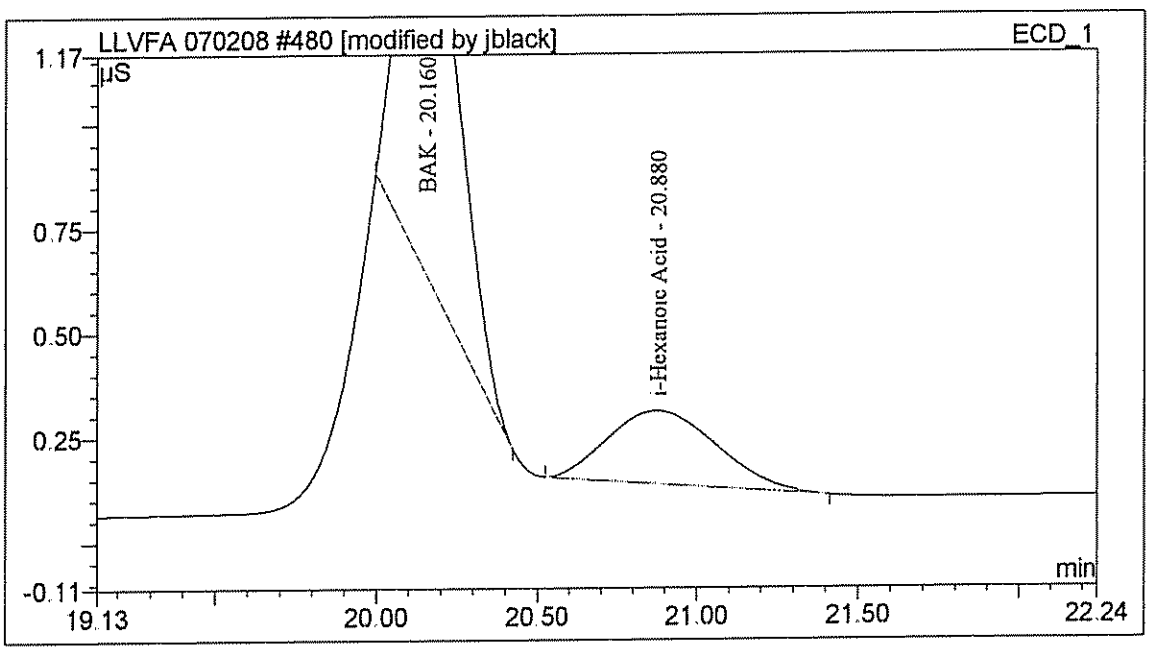


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A-MSD	**Sequence No:**	480
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 3:31 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	QUINIC	5.427	0.042	0.184	BM *	n.a.
4	Lactic Acid and HIBA	6.574	0.244	0.964	M *	2.3691
5	Acetic Acid	7.064	0.308	1.168	M	2.2489
6	Propionic acid	8.340	0.216	0.695	MB	2.0945
7	FORMIC	9.740	0.493	1.845	BM	n.a.
8	Butyric Acid	10.557	0.175	0.524	MB	2.0132
9	Pyruvic acid	12.167	0.170	0.522	BM	2.2529
10	i-Pentanoic Acid	12.650	0.149	0.414	MB	2.0786
11	Pentanoic Acid	15.624	0.138	0.348	BMB	1.9532
12	BAK	20.160	0.197	0.891	BMB	n.a.
13	i-Hexanoic Acid	20.880	0.069	0.174	BMB	1.2549
14	Hexanoic Acid	23.697	0.112	0.206	BMB	1.9413

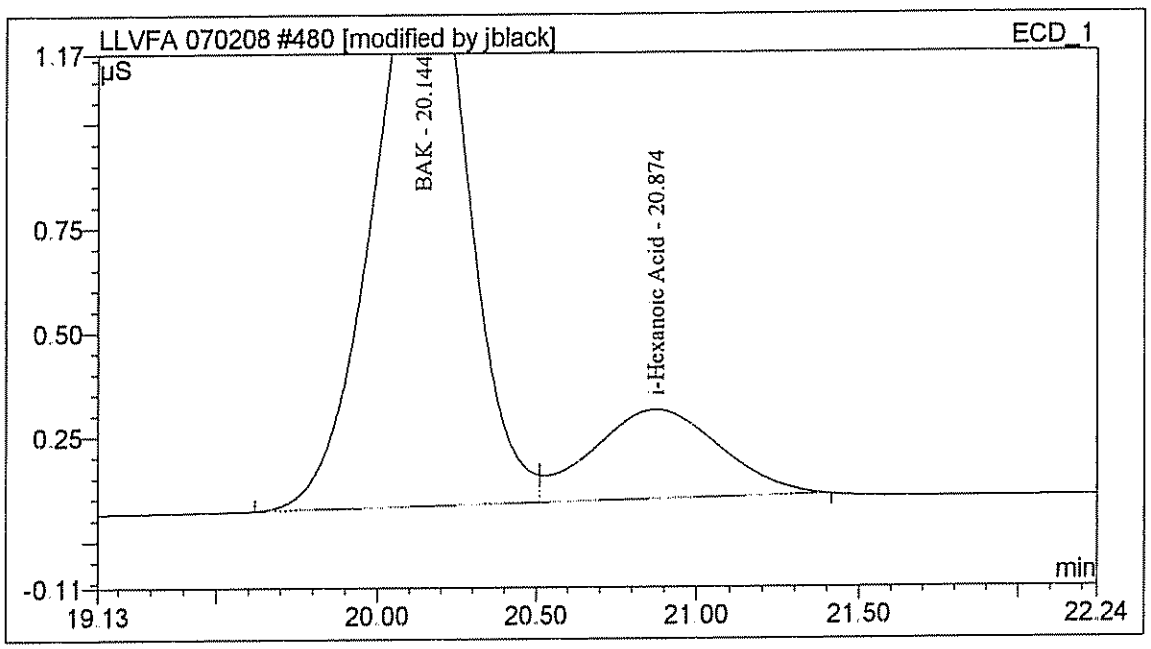


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A-MSD	**Sequence No:**	480
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 3:31 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	QUINIC	5.427	0.042	0.184	BM *	n.a.
4	Lactic Acid and HIBA	6.574	0.244	0.964	M *	2.3691
5	Acetic Acid	7.064	0.308	1.168	M	2.2489
6	Propionic acid	8.340	0.216	0.695	MB	2.0945
7	FORMIC	9.740	0.493	1.845	BM	n.a.
8	Butyric Acid	10.557	0.175	0.524	MB	2.0132
9	Pyruvic acid	12.167	0.170	0.522	BM	2.2529
10	i-Pentanoic Acid	12.650	0.149	0.414	MB	2.0786
11	Pentanoic Acid	15.624	0.138	0.348	BMB	1.9532
12	BAK	20.144	0.476	1.449	BM *	n.a.
13	i-Hexanoic Acid	20.874	0.098	0.212	MB*	1.7473
14	Hexanoic Acid	23.697	0.112	0.206	BMB	1.9413

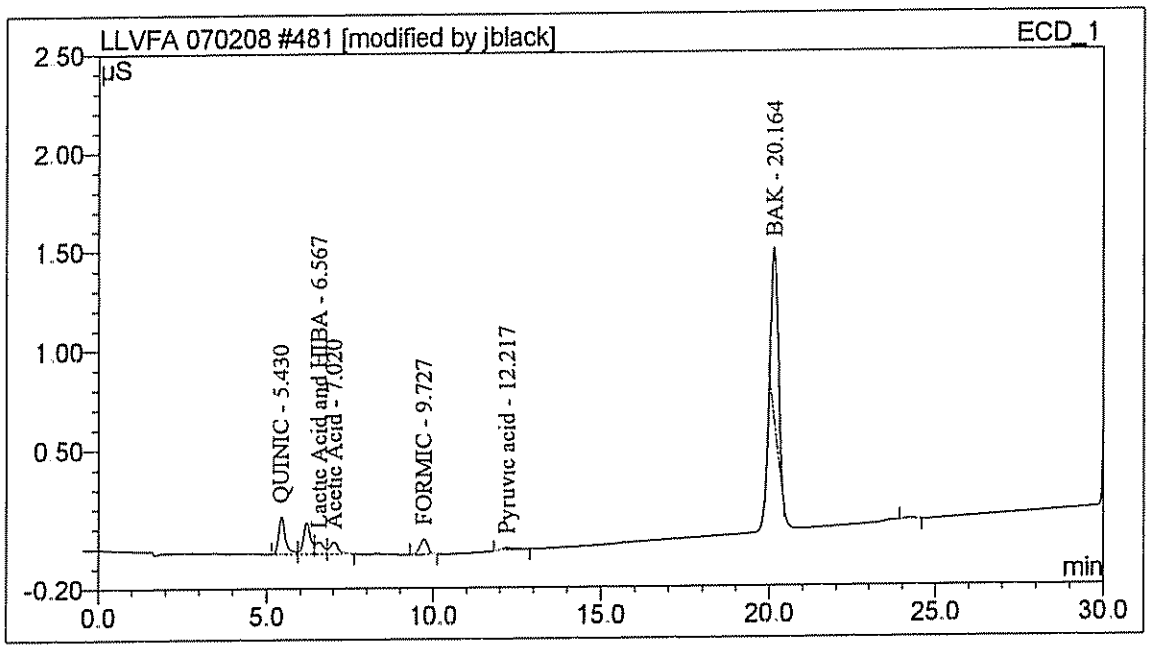


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-02A	**Sequence No:**	481
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 4:13 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.430	0.046	0.188	BM	n.a.
3	Lactic Acid and HIBA	6.567	0.017	0.061	M *	0.2529
4	Acetic Acid	7.020	0.019	0.061	MB	0.1521
5	FORMIC	9.727	0.020	0.078	BMB	n.a.
6	Pyruvic acid	12.217	0.007	0.014	BMB	0.1695
7	BAK	20.164	0.198	0.881	BMB	n.a.

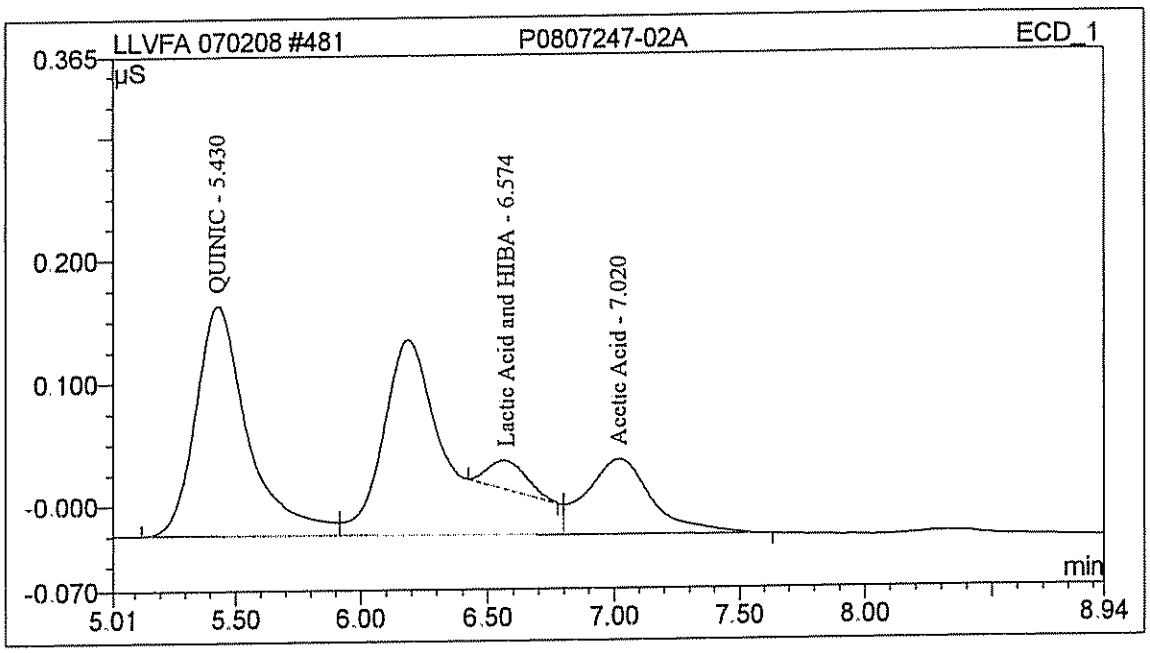


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-02A	**Sequence No:**	481
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 4:13 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.430	0.046	0.188	BM	n.a.
3	Lactic Acid and HIBA	6.574	0.004	0.024	Rd	0.1235
4	Acetic Acid	7.020	0.019	0.061	MB	0.1521
5	FORMIC	9.727	0.020	0.078	BMB	n.a.
6	Pyruvic acid	12.217	0.007	0.014	BMB	0.1695
7	BAK	20.164	0.198	0.881	BMB	n.a.



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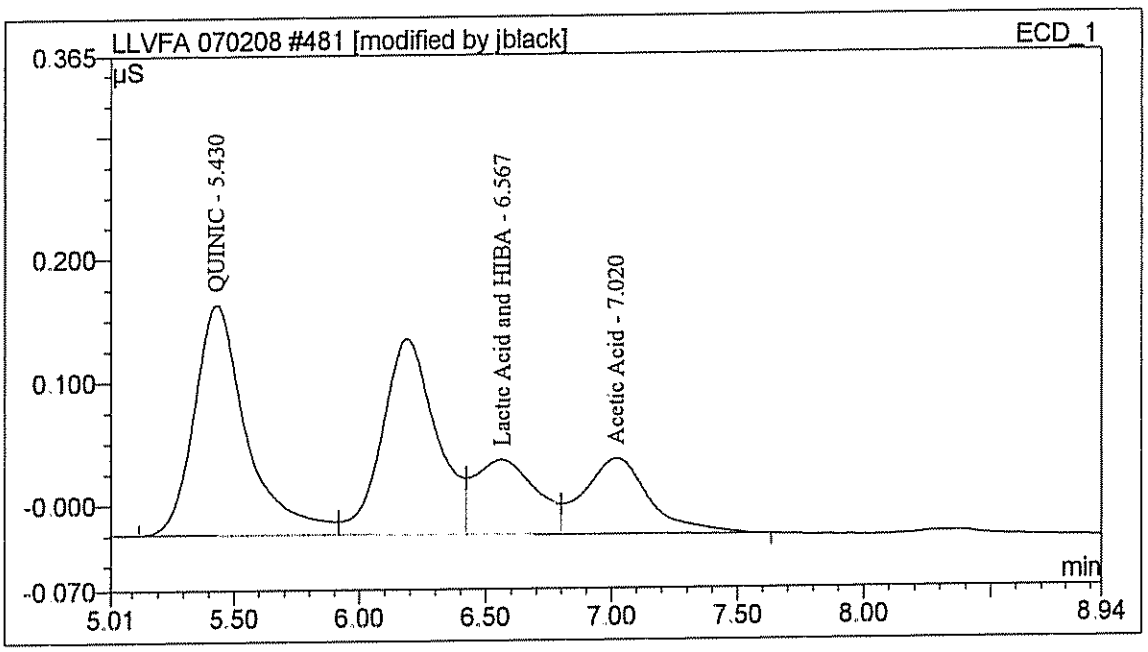
Sample Analysis Report

Sample Name:	P0807247-02A	**Sequence No:**	481
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/31/2008 4:13 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.430	0.046	0.188	BM	n.a.
3	Lactic Acid and HIBA	6.567	0.017	0.061	M *	0.2529
4	Acetic Acid	7.020	0.019	0.061	MB	0.1521
5	FORMIC	9.727	0.020	0.078	BMB	n.a.
6	Pyruvic acid	12.217	0.007	0.014	BMB	0.1695
7	BAK	20.164	0.198	0.881	BMB	n.a.

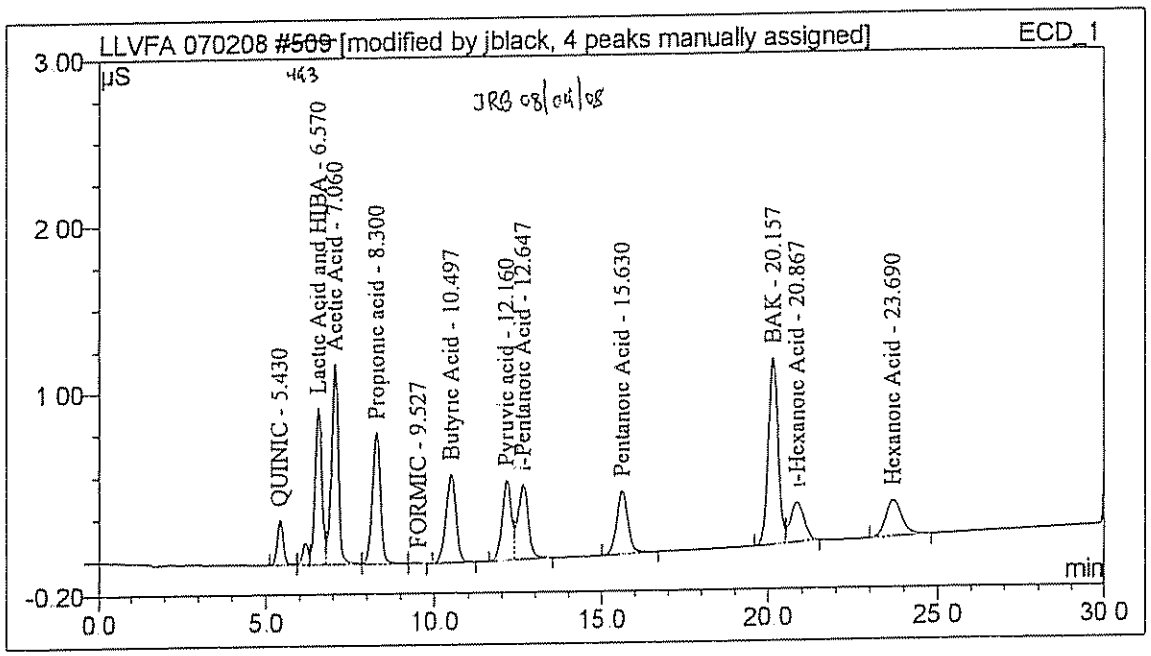


MICROSEEPS

Sample Analysis Report

Sample Name:	CCV	**Sequence No:**	~~509~~ 443 JRB 08/05/08
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/1/2008 11:38 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM	% recovery
1	QUINIC	5.430	0.054	0.267	BM	n.a.	
3	Lactic Acid and HIBA	6.570	0.219	0.932	M *^	2.1474	107
4	Acetic Acid	7.060	0.297	1.192	M ^	2.1684	108
5	Propionic acid	8.300	0.226	0.777	M	2.1943	110
6	FORMIC	9.527	0.002	0.008	MB^	n.a.	
7	Butyric Acid	10.497	0.183	0.525	BMB	2.1137	106
8	Pyruvic acid	12.160	0.154	0.474	BM ^	2.0706	104
9	i-Pentanoic Acid	12.647	0.159	0.441	MB	2.2124	111
10	Pentanoic Acid	15.630	0.147	0.375	BMB	2.0804	104
11	BAK	20.157	0.368	1.109	BM *	n.a.	
12	i-Hexanoic Acid	20.867	0.111	0.236	MB*	1.9661	98
13	Hexanoic Acid	23.690	0.117	0.216	BMB	2.0320	102



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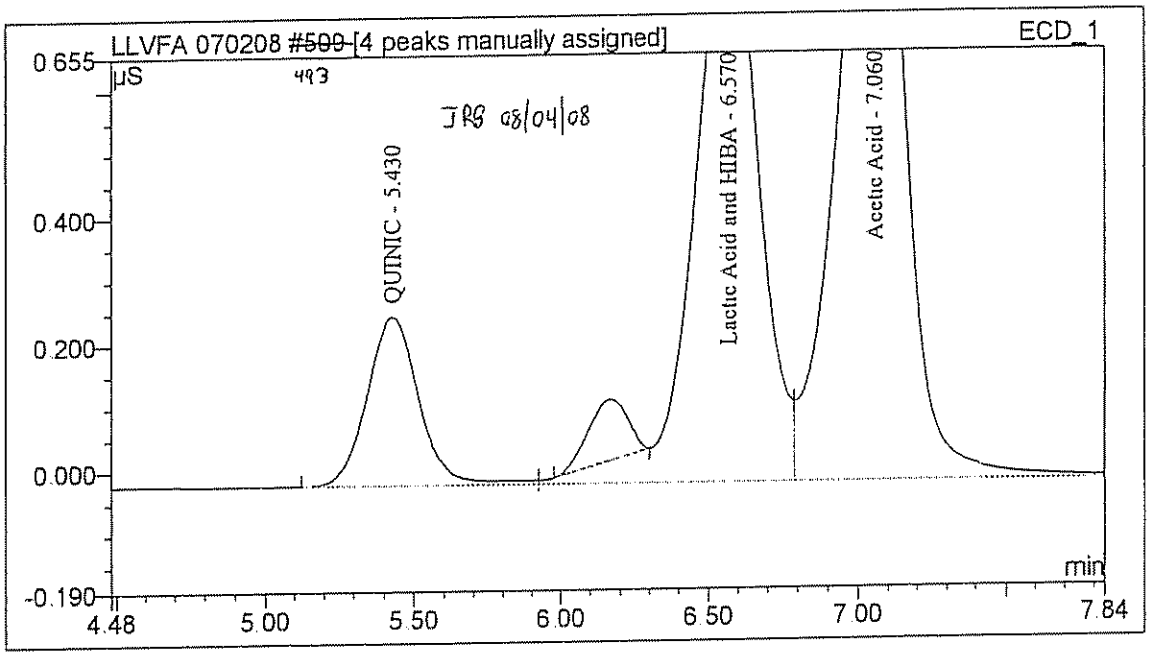
Sample Analysis Report

Sample Name:	CCV	**Sequence No:**	~~500~~ 493 JRB 08/05/08
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/1/2008 11:38 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.430	0.054	0.267	BM	n.a.
3	Lactic Acid and HIBA	6.570	0.230	0.932	M ^	2.2413
4	Acetic Acid	7.060	0.297	1.192	M ^	2.1684
5	Propionic acid	8.300	0.226	0.777	M	2.1943
6	FORMIC	9.527	0.002	0.008	MB^	n.a.
7	Butyric Acid	10.497	0.183	0.525	BMB	2.1137
8	Pyruvic acid	12.160	0.154	0.474	BM ^	2.0706
9	i-Pentanoic Acid	12.647	0.159	0.441	MB	2.2124
10	Pentanoic Acid	15.630	0.147	0.375	BMB	2.0804
11	BAK	20.170	0.162	0.710	BMB	n.a.
12	i-Hexanoic Acid	20.877	0.072	0.186	BMB	1.3126
13	Hexanoic Acid	23.690	0.117	0.216	BMB	2.0320



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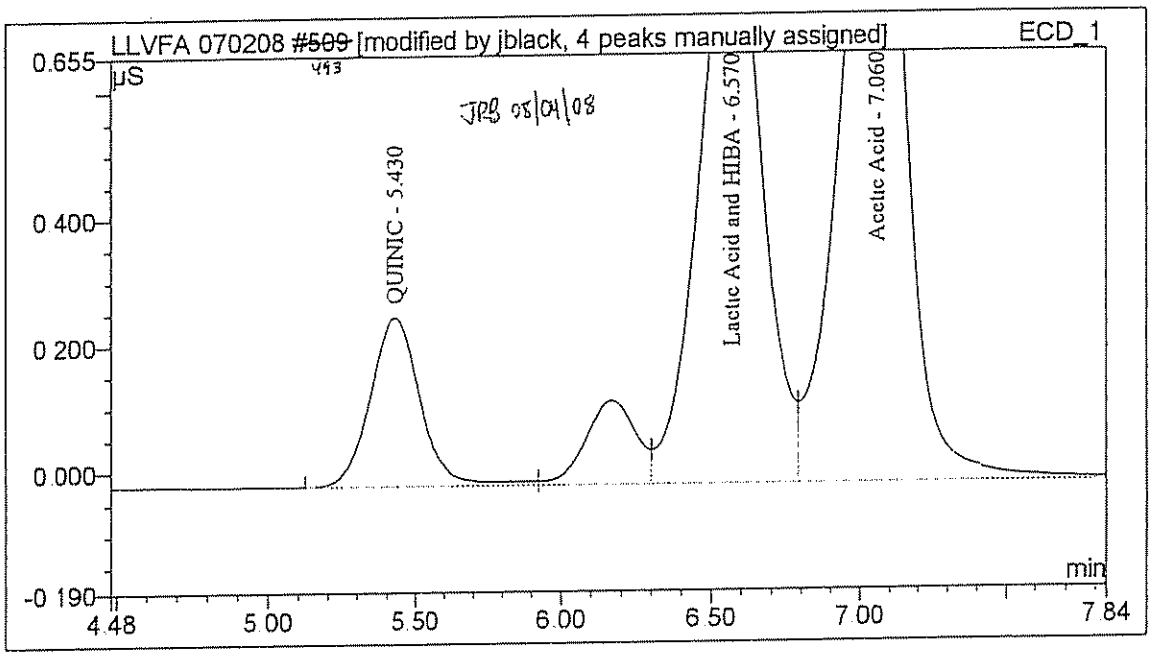
Sample Analysis Report

Sample Name:	CCV	**Sequence No:**	~~509~~ 493 JRB 08/04/08
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/1/2008 11:38 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.430	0.054	0.267	BM	n.a.
3	Lactic Acid and HIBA	6.570	0.219	0.932	M *^	2.1474
4	Acetic Acid	7.060	0.297	1.192	M ^	2.1684
5	Propionic acid	8.300	0.226	0.777	M	2.1943
6	FORMIC	9.527	0.002	0.008	MB^	n.a.
7	Butyric Acid	10.497	0.183	0.525	BMB	2.1137
8	Pyruvic acid	12.160	0.154	0.474	BM ^	2.0706
9	i-Pentanoic Acid	12.647	0.159	0.441	MB	2.2124
10	Pentanoic Acid	15.630	0.147	0.375	BMB	2.0804
11	BAK	20.170	0.162	0.710	BMB	n.a.
12	i-Hexanoic Acid	20.877	0.072	0.186	BMB	1.3126
13	Hexanoic Acid	23.690	0.117	0.216	BMB	2.0320



current date: 8/4/2008
current time: 9:58 AM

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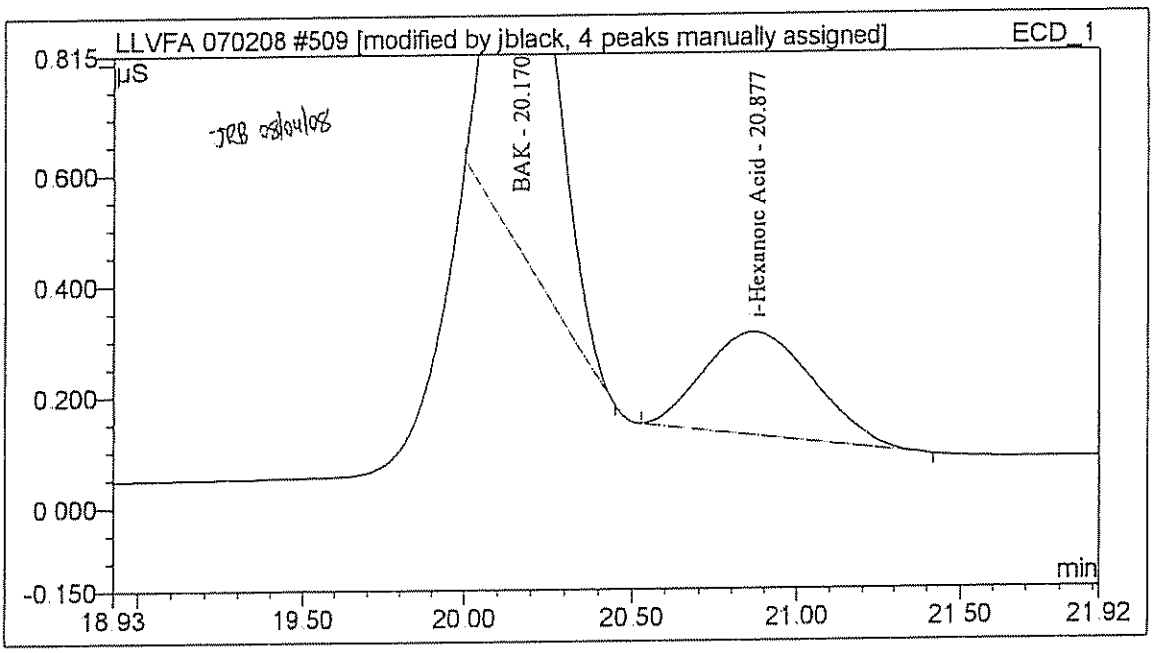
Sample Analysis Report

Sample Name:	CCV	**Sequence No:**	~~509~~ 493 JCB 08/04/08
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/1/2008 11:38 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.430	0.054	0.267	BM	n.a.
3	Lactic Acid and HIBA	6.570	0.219	0.932	M *^	2.1474
4	Acetic Acid	7.060	0.297	1.192	M ^	2.1684
5	Propionic acid	8.300	0.226	0.777	M	2.1943
6	FORMIC	9.527	0.002	0.008	MB^	n.a.
7	Butyric Acid	10.497	0.183	0.525	BMB	2.1137
8	Pyruvic acid	12.160	0.154	0.474	BM ^	2.0706
9	i-Pentanoic Acid	12.647	0.159	0.441	MB	2.2124
10	Pentanoic Acid	15.630	0.147	0.375	BMB	2.0804
11	BAK	20.170	0.162	0.710	BMB	n.a.
12	i-Hexanoic Acid	20.877	0.072	0.186	BMB	1.3126
13	Hexanoic Acid	23.690	0.117	0.216	BMB	2.0320



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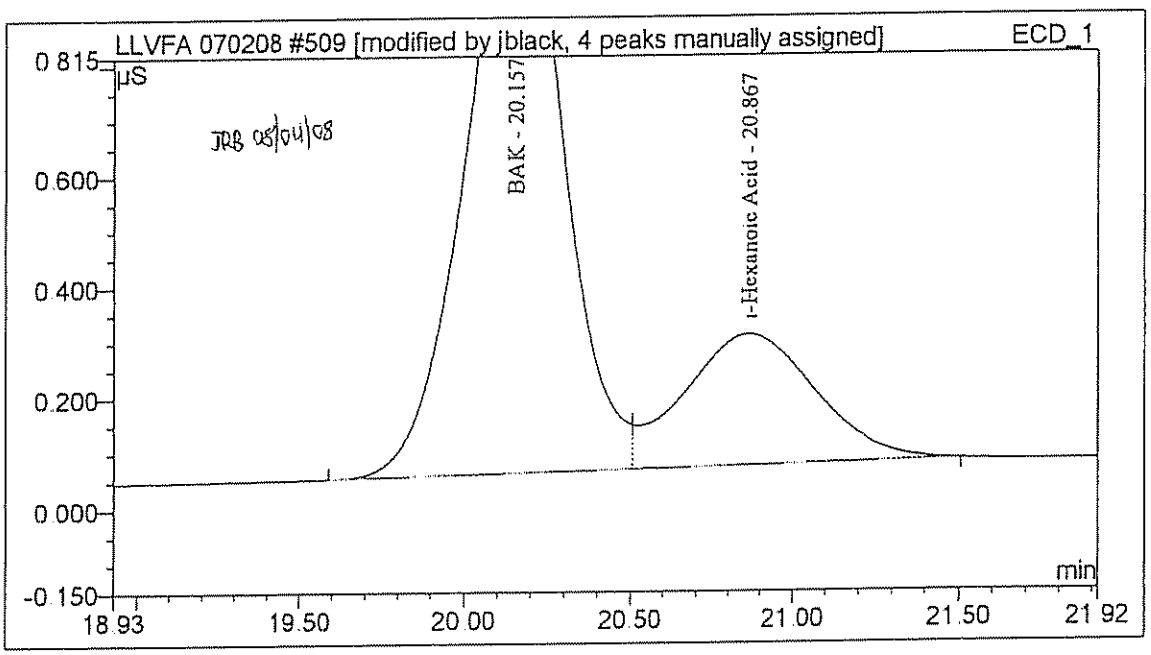
Sample Analysis Report

Sample Name:	CCV	**Sequence No:**	~~509~~ 493 JRB 08/05/08
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/1/2008 11:38 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.430	0.054	0.267	BM	n.a.
3	Lactic Acid and HIBA	6.570	0.219	0.932	M *^	2.1474
4	Acetic Acid	7.060	0.297	1.192	M ^	2.1684
5	Propionic acid	8.300	0.226	0.777	M	2.1943
6	FORMIC	9.527	0.002	0.008	MB^	n.a.
7	Butyric Acid	10.497	0.183	0.525	BMB	2.1137
8	Pyruvic acid	12.160	0.154	0.474	BM ^	2.0706
9	i-Pentanoic Acid	12.647	0.159	0.441	MB	2.2124
10	Pentanoic Acid	15.630	0.147	0.375	BMB	2.0804
11	BAK	20.157	0.368	1.109	BM *	n.a.
12	i-Hexanoic Acid	20.867	0.111	0.236	MB*	1.9661
13	Hexanoic Acid	23.690	0.117	0.216	BMB	2.0320



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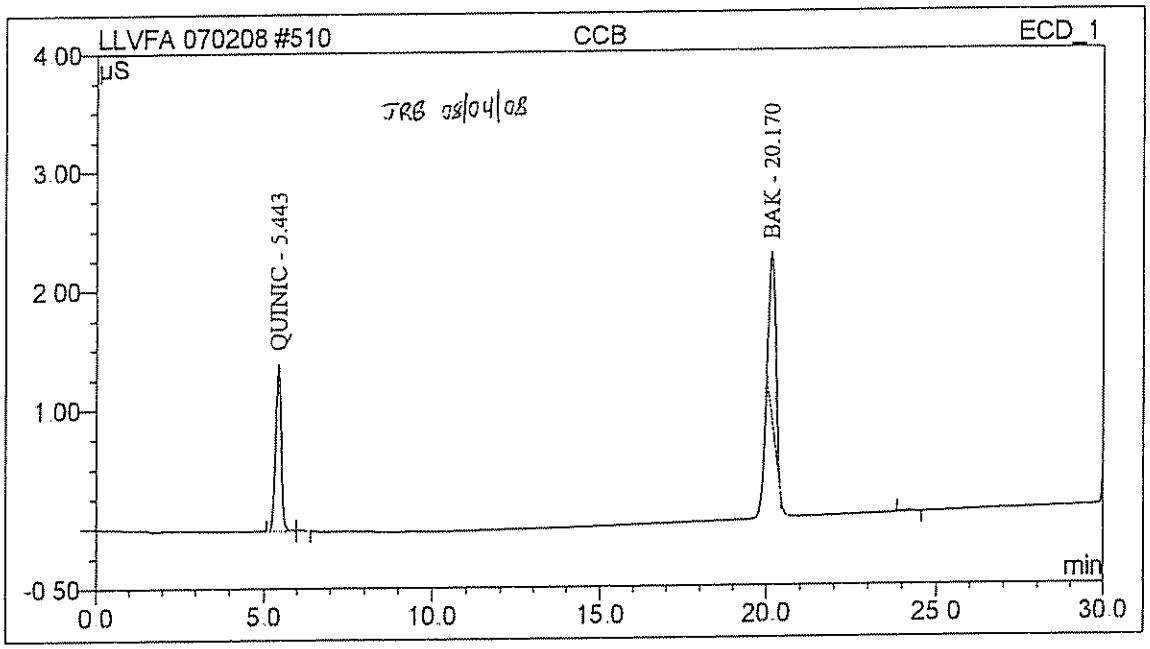
Sample Analysis Report

Sample Name:	CCB	**Sequence No:**	~~510~~ 444 JRB 08/07/08
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/1/2008 1:00 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.443	0.272	1.403	BM	n.a.
3	BAK	20.170	0.318	1.415	BMB	n.a.



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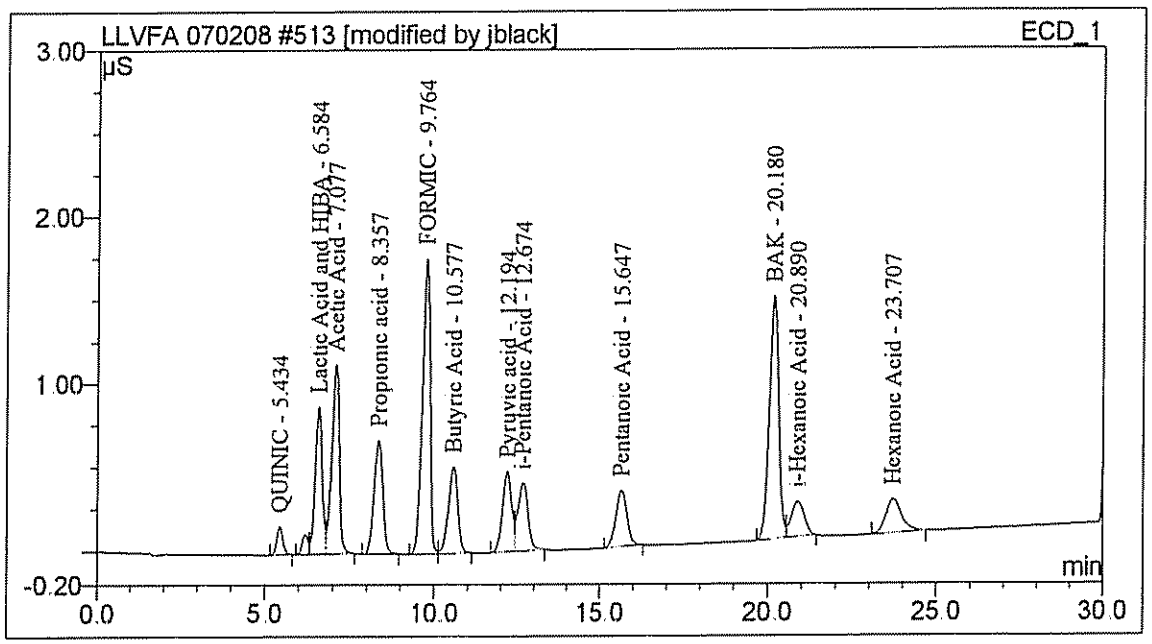
Sample Analysis Report

Sample Name:	P0807247-01A-MS RERUN	**Sequence No:**	513
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/2/2008 2:14 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.434	0.035	0.168	BMB	n.a.
3	Lactic Acid and HIBA	6.584	0.218	0.880	M *	2.1332
4	Acetic Acid	7.077	0.290	1.131	MB	2.1234
5	Propionic acid	8.357	0.206	0.677	BMB	2.0052
6	FORMIC	9.764	0.467	1.766	BM	n.a.
7	Butyric Acid	10.577	0.169	0.513	MB	1.9504
8	Pyruvic acid	12.194	0.154	0.477	BM	2.0651
9	i-Pentanoic Acid	12.674	0.141	0.402	MB	1.9687
10	Pentanoic Acid	15.647	0.127	0.333	BMB	1.8031
11	BAK	20.180	0.473	1.452	BM *	n.a.
12	i-Hexanoic Acid	20.890	0.094	0.208	MB*	1.6804
13	Hexanoic Acid	23.707	0.108	0.198	BMB	1.8822

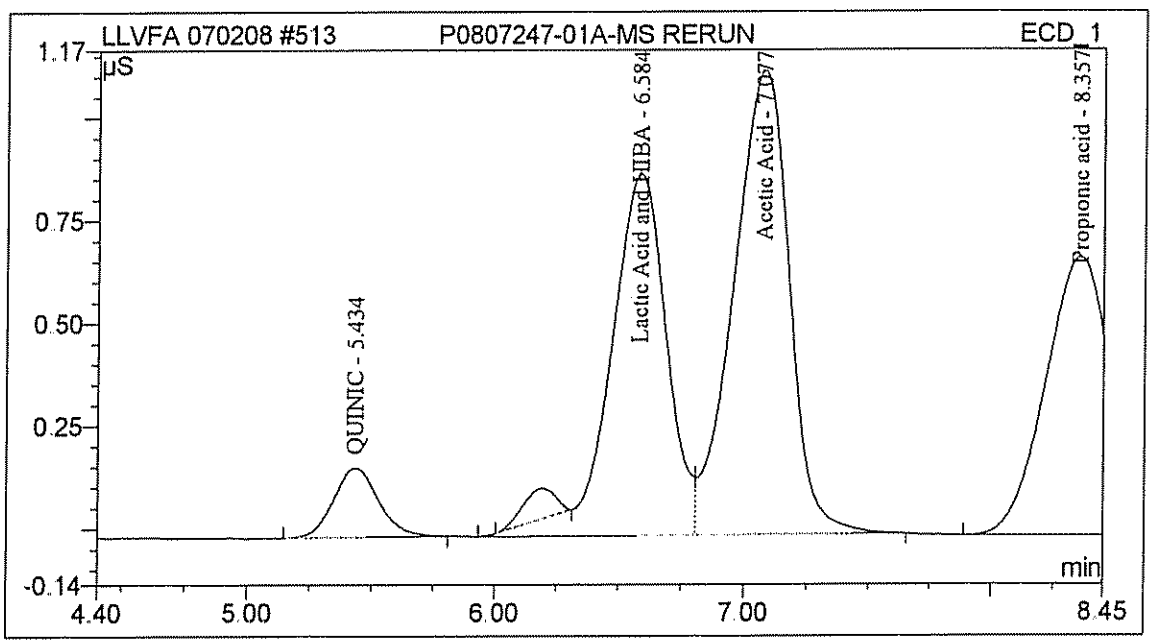


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807247-01A-MS RERUN	**Sequence No:**	513
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/2/2008 2:14 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.434	0.035	0.168	BMB	n.a.
3	Lactic Acid and HIBA	6.584	0.229	0.880	BM	2.2331
4	Acetic Acid	7.077	0.290	1.131	MB	2.1234
5	Propionic acid	8.357	0.206	0.677	BMB	2.0052
6	FORMIC	9.764	0.467	1.766	BM	n.a.
7	Butyric Acid	10.577	0.169	0.513	MB	1.9504
8	Pyruvic acid	12.194	0.154	0.477	BM	2.0651
9	i-Pentanoic Acid	12.674	0.141	0.402	MB	1.9687
10	Pentanoic Acid	15.647	0.127	0.333	BMB	1.8031
11	BAK	20.190	0.257	1.058	BMB	n.a.
12	i-Hexanoic Acid	20.904	0.065	0.169	BMB	1.1938
13	Hexanoic Acid	23.707	0.108	0.198	BMB	1.8822



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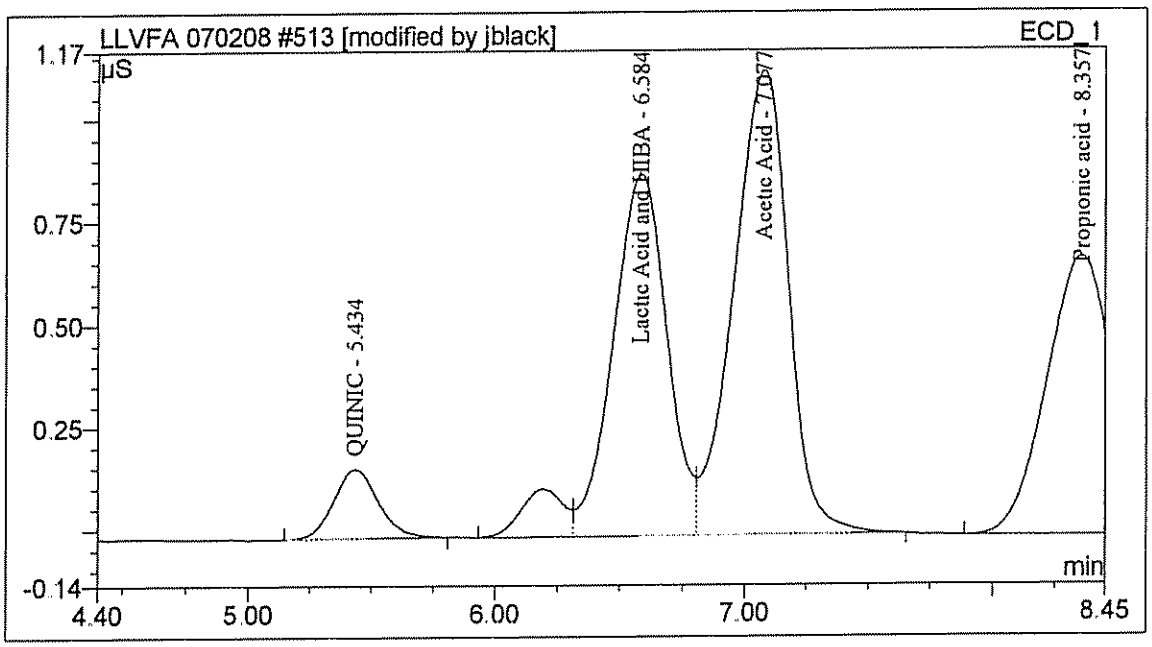
Sample Analysis Report

Sample Name:	P0807247-01A-MS RERUN	**Sequence No:**	513
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/2/2008 2:14 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.434	0.035	0.168	BMB	n.a.
3	Lactic Acid and HIBA	6.584	0.218	0.880	M *	2.1332
4	Acetic Acid	7.077	0.290	1.131	MB	2.1234
5	Propionic acid	8.357	0.206	0.677	BMB	2.0052
6	FORMIC	9.764	0.467	1.766	BM	n.a.
7	Butyric Acid	10.577	0.169	0.513	MB	1.9504
8	Pyruvic acid	12.194	0.154	0.477	BM	2.0651
9	i-Pentanoic Acid	12.674	0.141	0.402	MB	1.9687
10	Pentanoic Acid	15.647	0.127	0.333	BMB	1.8031
11	BAK	20.190	0.257	1.058	BMB	n.a.
12	i-Hexanoic Acid	20.904	0.065	0.169	BMB	1.1938
13	Hexanoic Acid	23.707	0.108	0.198	BMB	1.8822



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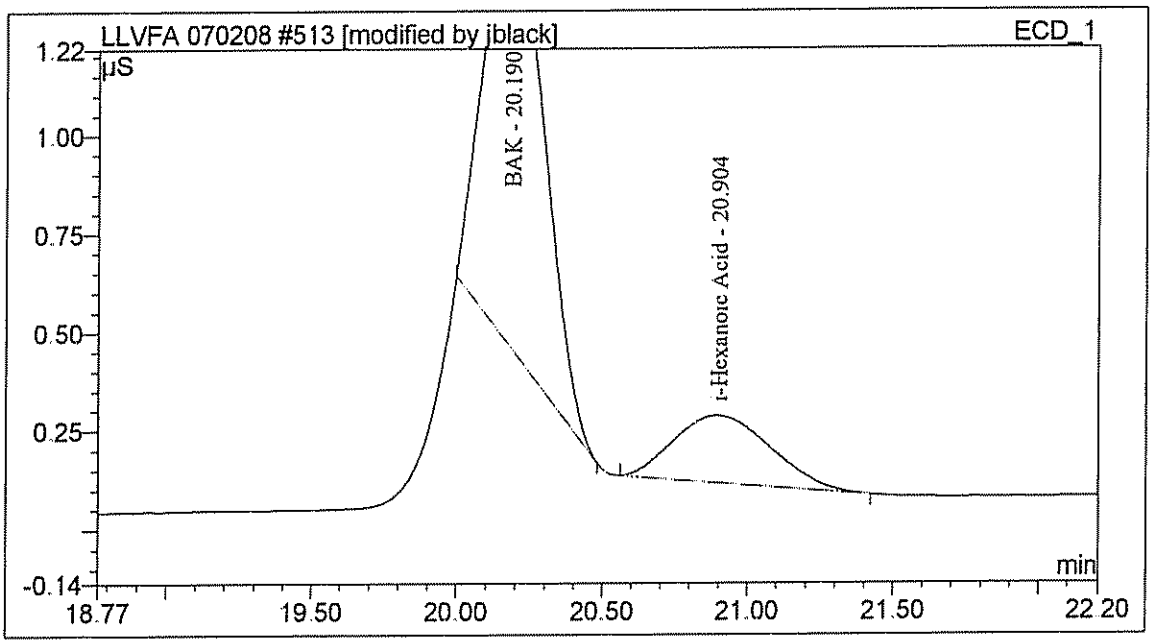
Sample Analysis Report

Sample Name:	P0807247-01A-MS RERUN	**Sequence No:**	513
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/2/2008 2:14 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.434	0.035	0.168	BMB	n.a.
3	Lactic Acid and HIBA	6.584	0.218	0.880	M *	2.1332
4	Acetic Acid	7.077	0.290	1.131	MB	2.1234
5	Propionic acid	8.357	0.206	0.677	BMB	2.0052
6	FORMIC	9.764	0.467	1.766	BM	n.a.
7	Butyric Acid	10.577	0.169	0.513	MB	1.9504
8	Pyruvic acid	12.194	0.154	0.477	BM	2.0651
9	i-Pentanoic Acid	12.674	0.141	0.402	MB	1.9687
10	Pentanoic Acid	15.647	0.127	0.333	BMB	1.8031
11	BAK	20.190	0.257	1.058	BMB	n.a.
12	i-Hexanoic Acid	20.904	0.065	0.169	BMB	1.1938
13	Hexanoic Acid	23.707	0.108	0.198	BMB	1.8822



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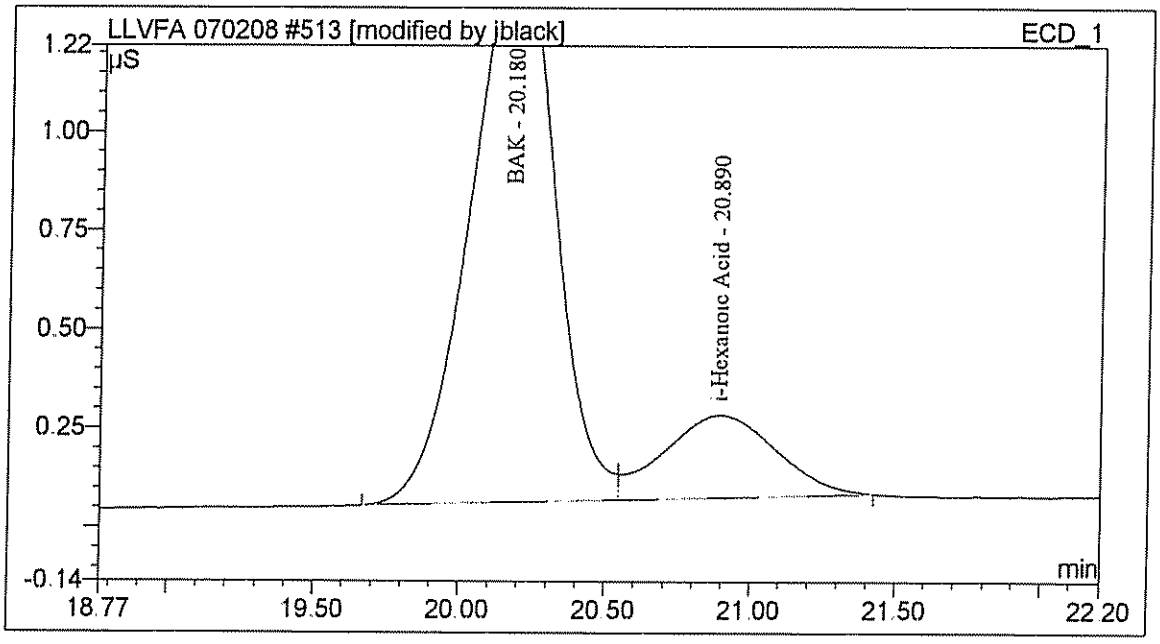
Sample Analysis Report

Sample Name:	P0807247-01A-MS RERUN	**Sequence No:**	513
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	8/2/2008 2:14 AM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
1	QUINIC	5.434	0.035	0.168	BMB	n.a.
3	Lactic Acid and HIBA	6.584	0.218	0.880	M *	2.1332
4	Acetic Acid	7.077	0.290	1.131	MB	2.1234
5	Propionic acid	8.357	0.206	0.677	BMB	2.0052
6	FORMIC	9.764	0.467	1.766	BM	n.a.
7	Butyric Acid	10.577	0.169	0.513	MB	1.9504
8	Pyruvic acid	12.194	0.154	0.477	BM	2.0651
9	i-Pentanoic Acid	12.674	0.141	0.402	MB	1.9687
10	Pentanoic Acid	15.647	0.127	0.333	BMB	1.8031
11	BAK	20.180	0.473	1.452	BM *	n.a.
12	i-Hexanoic Acid	20.890	0.094	0.208	MB*	1.6804
13	Hexanoic Acid	23.707	0.108	0.198	BMB	1.8822