CASE NARRATIVE
Client: TetraTech NUS, Inc.
Project Number: 112G00910 0380
SDG: 05MW18I-GW-01
Microseeps Project No.: P0807222

Sample Receipt

Microseeps, Inc. received the sample shipment on 7/17/2008. 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
05MW18S-GW-01	P0807222-01
05MW18I-GW-01	P0807222-02

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
I
OTHER ANALYSIS DATA SHEET

EPASampleNo: 05MW18S-GW-01

Lab Name: Microseeps, Inc
Contract: 112G009100380
SDG No : 05MW18I-GW-0

Lab Code: P0807222 Case No.: _____
SAS No : _____

Lab Sample ID: P0807222-01A

Matrix (soil / water): Water

Date Received: 7/17/2008

Level (low/med): _____

% Solids: _____

Concentration Units : _____

CAS No.	Analyte	Concentration	Units	C	Q	M
	Total Organic Carbon	1.8	mg/L	J		
64-19-7	Acetic Acid	0.14	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	0.032	ug/L			
74-85-1	Ethene	0.046	ug/L			
74-82-8	Methane	0.860	ug/L			

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

EPASampleNo: 05MW18I-GW-01

Lab Name: Microseeps, Inc
Contract: 112G009100380
SDG No.: 05MW18I-GW-0

Lab Code: P0807222 Case No.:
SAS No.:

Matrix (soil / water): Water
Lab Sample ID: P0807222-02A

Level (low/med):
Date Received: 7/17/2008

% Solids:

Concentration Units:

CAS No.	Analyte	Concentration	Units	C	Q	M
	Total Organic Carbon	5.0	mg/L	U		
64-19-7	Acetic Acid	0.11	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	0.009	ug/L	J		
74-85-1	Ethene	0.01	ug/L	J		
74-82-8	Methane	0.830	ug/L			

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

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807222 Case No.: _____
SAS No.: _____
SDG No.: 05MW18I-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: P0807222
Case No.:
SAS No.:
SDG No.: 05MW18I-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	109						
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: P0807222 Case No.: SAS No.: SDG No.: 05MW18I-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	79.07	107						
Methane	24.79	25.17	102						
Ethane	48.14	47.89	99.5						
Ethene	53.03	54.13	102						
Methane	6075	5984	98.5						
Ethane	11824	11820	100						
Ethene	13204	13331	101						
Methane	10984	10544	96.0						

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

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807222
Case No.:
SAS No.:
SDG No.: 05MW18I-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	52.61	105	51.02	102	

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

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807222 Case No.: _____ SAS No.: _____ SDG No.: 05MW18I-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
Acetylene				14.80	15.00	101			
Methane				4.957	4.95	99.8			
Ethane				9.63	9.41	97.7			
Ethene				10.61	10.66	100			
Methane				2440	2244	92.0			

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

EPA Sample No.
05MW18S-GW-01

Lab Name: Microseeps, Inc
Contract: 112G009100380
SDG No.: 05MW18I-GW-0

Lab Code: P0807222 Case No.:
SAS No.:

Level (low/med):

Matrix (soil/water): Water

% 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	2.32		0.14		2.00	109		
Propionic Acid	70-130	2.15		0.07	U	2.00	108		
Butyric Acid	70-130	2.05		0.07	U	2.00	102		
Lactic Acid and HIBA	70-130	2.44		0.16		2.00	114		
Pyruvic Acid	70-130	2.34		0.07	U	2.00	117		
i-Pentanoic Acid	70-130	2.08		0.07	U	2.00	104		
Pentanoic Acid	70-130	1.98		0.07	U	2.00	99.0		
i-Hexanoic Acid	70-130	1.78		0.10	U	2.00	89.0		
Hexanoic Acid	70-130	2.06		0.10	U	2.00	103		

Comments:

U.S. EPA - CLP
6
DUPLICATES

EPA Sample No.
LCS

Lab Name: Microseeps, Inc
Contract: 112G009100380
SDG No.: 05MW18I-GW-0
Lab Code: P0807222 Case No.:
SAS No.:
Level (low/med):
Matrix (soil/water): Water
% Solids for Duplicate:
% Solids for Sample:
Concentration Units: ug/L

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Acetylene	0-20	37.60		39.19		4.14		
Methane	0-20	837.2		847.7		1.25		
Ethane	0-20	47.21		47.73		1.09		
Ethene	0-20	43.23		43.45		0.51		

U S EPA - CLP
6
DUPLICATES

EPA Sample No.
05MW18S-GW-01 MS

Lab Name: Microseeps, Inc
Contract: 112G009100380
SAS No.:
SDG No.: 05MW18I-GW-0

Lab Code: P0807222 Case No.:

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

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Lactic Acid and HIBA	0-30	2.44		2.38		2.49		
Acetic Acid	0-30	2.32		2.26		2.62		
Propionic Acid	0-30	2.15		2.10		2.35		
Butyric Acid	0-30	2.05		1.99		2.97		
Pyruvic Acid	0-30	2.34		2.24		4.37		
i-Pentanoic Acid	0-30	2.08		2.08		0.0		
Pentanoic Acid	0-30	1.98		1.96		1.01		
i-Hexanoic Acid	0-30	1.78		1.84		3.33		
Hexanoic Acid	0-30	2.06		1.98		3.96		

U S EPA - CLP
7
LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807222 Case No.:
SAS No.:
SDG No.: 05MW18I-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	57.72	104						

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

Lab Name: Microseeps, Inc Contract: 112G009100380
Lab Code: P0807222 Case No.: SAS No.: SDG No.: 05MW18I-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
Acetylene				74.02	82.48	111			
Methane				24.79	25.15	101			
Ethane				48.14	47.84	99.4			
Ethene				53.03	54.08	102			
Methane				6075	5758.5	94.8			

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

Lab Name: Microseeps, Inc Contract: 112G009100380

Lab Code: P0807222 Case No.: _____ SAS No.: _____ SDG No.: 05MW18I-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	1.95	97.5			
Acetic Acid				2.00	1.89	94.5			
Propionic Acid				2.00	1.98	99.0			
Butyric Acid				2.00	1.99	99.5			
Pyruvic Acid				2.00	1.92	96.0			
i-Pentanoic Acid				2.00	2.13	106			
Pentanoic Acid				2.00	2.00	100			
i-Hexanoic Acid				2.00	1.90	95.0			
Hexanoic Acid				2.00	2.09	104			

U.S EPA - CLP
3
BLANKS

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807222 Case No.:
SAS No.:
SDG No.: 05MW18I-GW-0

Preparation blank Matrix (soil/water)

Preparation Blank Concentration Units

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: P0807222 Case No.:
SAS No.:
SDG No.: 05MW18I-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			0.500	U	
Ethane	0.025	U	0.025	U	0.025	U			0.025	U	
Ethene	0.025	U	0.025	U	0.025	U			0.025	U	
Methane	0.100	U	0.100	U	0.100	U			0.100	U	

U.S. EPA - CLP
3
BLANKS

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807222 Case No.:
SAS No.:
SDG No.: 05MW18I-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	
Propionic Acid	0.07	U	0.07	U					0.07	U	
Butyric Acid	0.07	U	0.07	U					0.07	U	
Lactic Acid and HIBA	0.10	U	0.10	U					0.10	U	
Pyruvic Acid	0.07	U	0.07	U					0.07	U	
i-Pentanoic Acid	0.07	U	0.07	U					0.07	U	
Pentanoic Acid	0.07	U	0.07	U					0.07	U	
i-Hexanoic Acid	0.10	U	0.10	U					0.10	U	
Hexanoic Acid	0.10	U	0.10	U					0.10	U	

U.S. EPA - CLP
7
LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807222 Case No.: _____
SAS No.: _____
SDG No.: 05MW18I-GW-0

Solid LCS Source: _____
Aqueous LCS Source: Spectra

Analyte	Aqueous				Solid (mg/Kg)					
	Units	True	Found	%R	True	Found	C	Limits		%R
Acetylene	ug/L	36.1	37.60	104						
Ethane	ug/L	41.68	47.21	113						
Ethene	ug/L	38.89	43.23	111						
Methane	ug/L	822.8	837.2	102						

U.S EPA - CLP
7
LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc
Contract: 112G009100380
Lab Code: P0807222 Case No.:
SAS No.:
SDG No.: 05MW18I-GW-0

Solid LCS Source:
Aqueous LCS Source: Restek

Analyte	Aqueous Units	True	Found	%R	Solid (mg/Kg) True	Found	C	Limits		%R
Acetic Acid	mg/L	2.00	2.14	107						
Propionic Acid	mg/L	2.00	2.03	102						
Butyric Acid	mg/L	2.00	1.96	98.0						
Lactic Acid and HIBA	mg/L	2.00	2.31	116						
Pyruvic Acid	mg/L	2.00	2.37	118						
i-Pentanoic Acid	mg/L	2.00	2.03	102						
Pentanoic Acid	mg/L	2.00	1.91	95.5						
i-Hexanoic Acid	mg/L	2.00	1.71	85.5						
Hexanoic Acid	mg/L	2.00	1.91	95.5						

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 #: P0807222
Report Date: 08/04/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

Laboratory Results

Total pages in data package: 137

Lab Sample #	Client Sample ID
P0807222-01	05MW18S-GW-01
P0807222-02	05MW18I-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:*** 8/4/08

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 #: P0807222
Report Date: 08/04/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
05MW18S-GW-01	Water	P0807222-01	16 Jul. 08	17 Jul. 08 9:11

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
WetChem							
N Total Organic Carbon	J	1.8	5.0	mg/L	9060	7/20/08	md
RiskAnalysis							
N Acetylene	U	< 0.500	0.500	ug/L	AM20GAX	7/25/08	rw
N Ethane		0.032	0.025	ug/L	AM20GAX	7/25/08	rw
N Ethene		0.046	0.025	ug/L	AM20GAX	7/25/08	rw
N Methane		0.860	0.100	ug/L	AM20GAX	7/25/08	rw
SemiVolatiles							
N Acetic Acid		0.14	0.07	mg/L	AM23G	7/30/08	jb
N Butyric Acid	U	< 0.07	0.07	mg/L	AM23G	7/30/08	jb
N Hexanoic Acid	U	< 0.10	0.10	mg/L	AM23G	7/30/08	jb
N i-Hexanoic Acid	U	< 0.10	0.10	mg/L	AM23G	7/30/08	jb
N i-Pentanoic Acid	U	< 0.07	0.07	mg/L	AM23G	7/30/08	jb
N Lactic Acid and HIBA		0.16	0.10	mg/L	AM23G	7/30/08	jb
N Pentanoic Acid	U	< 0.07	0.07	mg/L	AM23G	7/30/08	jb
N Propionic Acid	U	< 0.07	0.07	mg/L	AM23G	7/30/08	jb
N Pyruvic Acid	U	< 0.07	0.07	mg/L	AM23G	7/30/08	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 #: P0807222
Report Date: 08/04/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

Sample Description	Matrix	Lab Sample #	Sampled Date/Time	Received
05MW18I-GW-01	Water	P0807222-02	16 Jul. 08	17 Jul. 08 9:11

Analyte(s)	Flag	Result	PQL	Units	Method #	Analysis Date	By
WetChem							
N Total Organic Carbon	U	< 5.0	5.0	mg/L	9060	7/20/08	md
RiskAnalysis							
N Acetylene	U	< 0.500	0.500	ug/L	AM20GAX	7/25/08	rw
N Ethane	J	0.009	0.025	ug/L	AM20GAX	7/25/08	rw
N Ethene	J	0.01	0.025	ug/L	AM20GAX	7/25/08	rw
N Methane		0.830	0.100	ug/L	AM20GAX	7/25/08	rw
SemiVolatiles							
N Acetic Acid		0.11	0.07	mg/L	AM23G	7/30/08	jb
N Butyric Acid	U	< 0.07	0.07	mg/L	AM23G	7/30/08	jb
N Hexanoic Acid	U	< 0.10	0.10	mg/L	AM23G	7/30/08	jb
N i-Hexanoic Acid	U	< 0.10	0.10	mg/L	AM23G	7/30/08	jb
N i-Pentanoic Acid	U	< 0.07	0.07	mg/L	AM23G	7/30/08	jb
N Lactic Acid and HIBA		0.16	0.10	mg/L	AM23G	7/30/08	jb
N Pentanoic Acid	U	< 0.07	0.07	mg/L	AM23G	7/30/08	jb
N Propionic Acid	U	< 0.07	0.07	mg/L	AM23G	7/30/08	jb
N Pyruvic Acid	U	< 0.07	0.07	mg/L	AM23G	7/30/08	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
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Page: Page 4 of 7
Lab Proj #: P0807222
Report Date: 08/04/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

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

M080721014-MB

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

M080721014-LCS

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

P0807088-01A-DUP

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Total Organic Carbon	71.0	mg/L			- NA	0.00	0 - 20

P0807219-01A-DUP

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Total Organic Carbon	2.8	mg/L			- NA	0.00	0 - 20

P0807088-02A-MS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Total Organic Carbon	58.0	mg/L	50.00	105.00	70 - 130

P0807219-02A-MS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Total Organic Carbon	55.0	mg/L	50.00	108.00	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
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Page: Page 5 of 7
Lab Proj #: P0807222
Report Date: 08/04/08
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

M080725001-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

M080725001-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Acetylene	38.000	ug/L	36.10	105.00	70 - 130
Ethane	47.000	ug/L	41.68	113.00	75 - 125
Ethene	43.000	ug/L	38.89	111.00	75 - 125
Methane	840.000	ug/L	822.80	102.00	75 - 125

M080725001-LCSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Acetylene	39.000	ug/L	36.10	108.00	70 - 130	2.60	0 - 20
Ethane	48.000	ug/L	41.68	115.00	75 - 125	2.11	0 - 20
Ethene	43.000	ug/L	38.89	111.00	75 - 125	0.00	0 - 20
Methane	850.000	ug/L	822.80	103.00	75 - 125	1.18	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

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

Page. Page 6 of 7
Lab Proj #: P0807222
Report Date: 08/04/08
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

M080730018-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

M080730018-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Acetic Acid	2.10	mg/L	2.00	105.00	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	2.30	mg/L	2.00	115.00	70 - 130
Pyruvic Acid	2.40	mg/L	2.00	120.00	70 - 130
i-Pentanoic Acid	2.00	mg/L	2.00	100.00	70 - 130
Pentanoic Acid	1.90	mg/L	2.00	95.00	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

P0807222-01A-MS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Acetic Acid	2.30	mg/L	2.00	108.00	70 - 130
Propionic Acid	2.20	mg/L	2.00	110 00	70 - 130
Butyric Acid	2.10	mg/L	2.00	105.00	70 - 130
Lactic Acid and HIBA	2.40	mg/L	2.00	112.00	70 - 130
Pyruvic Acid	2.30	mg/L	2.00	115.00	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	2.10	mg/L	2.00	105 00	70 - 130

P0807222-01A-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

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

Page: Page 7 of 7
Lab Proj #: P0807222
Report Date: 08/04/08
Client Proj Name: CTO 411 Willow Grove
Client Proj #: 112G00910 0380

P0807222-01A-MSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Acetic Acid	2.30	mg/L	2.00	108.00	70 - 130	0.00	0 - 30
Propionic Acid	2.10	mg/L	2.00	105.00	70 - 130	4.65	0 - 30
Butyric Acid	2.00	mg/L	2.00	100.00	70 - 130	4.88	0 - 30
Lactic Acid and HIBA	2.40	mg/L	2.00	112.00	70 - 130	0.00	0 - 30
Pyruvic Acid	2.20	mg/L	2.00	110.00	70 - 130	4.44	0 - 30
i-Pentanoic Acid	2.10	mg/L	2.00	105.00	70 - 130	0.00	0 - 30
Pentanoic Acid	2.00	mg/L	2.00	100.00	70 - 130	0.00	0 - 30
i-Hexanoic Acid	1.80	mg/L	2.00	90.00	70 - 130	0.00	0 - 30
Hexanoic Acid	2.00	mg/L	2.00	100.00	70 - 130	4.88	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

Microseeps Lab. Proj. # PO 807222

CHAIN - OF - CUSTODY RECORD

Microseeps COC cont. # 562

Phone: (412) 826-5245 | Microseeps, Inc. - 220 William Pitt Way - Pittsburgh, PA 15238 | Fax No. : (412) 826-3433

Company : Tetra Tech NUS

Co. Address : 234 Mall Blvd.

Phone # : 610-491-9688 Fax # : 610-491-9645

Proj. Manager : Kevin Kilmartin

Proj. Name/Number : Site 5 Pilot Test / 00910

Sampler's signature : Donald Whalen

Cooler Temp.

Results to :

Invoice to :

Sample ID	Sample Description	Sample Type: Water	Vapor	Solid	Date	Time	# bottles	Dissolved gases Na_3PO_4 40 ml	Metabolic acids BAK 40 ml	TOC H_2SO_4 100 ml poly								Remarks :
05MW18S-GW-01		✓			7/16/08		5	2	2	1								
05MW18I-GW-01		✓			7/16/08		5	2	2	1								

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Donald Whalen	T+NUS	7/16/08	1800			7/17	
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

PO 807222

28

WHITE COPY : Accompany Samples YELLOW COPY : Laboratory File PINK COPY : Submitter

561

200

FedEx Express US Airbill

FedEx Tracking Number 8646 0966 9705

Form ID No. 0215

Recipient Copy

RECIPIENT: PEEL HERE

fedex.com 1800 GoFedEx 1800 463 3339

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

Date

FedEx Tracking Number 864609669705

Sender's Name

Phone

Company

Address

Dept/Floor/Suite/Room

City

State

ZIP

2 Your Internal Billing Reference

3 To

Recipient's Name

Phone

Company

Recipient's Address

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

State PA

ZIP

8646 0966 9705

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 J.

- [ ] 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 _____ = _____ kg

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

- [ ] Cargo Aircraft Only

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 10

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 CUSTOMER TRANSACTION RECEIPT

P0807222

TOC Data

041708MD-CAL

Signal 1 (C)

Ir.	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 12:34:08 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 12:48:58 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 1:04:56 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	128.0			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	4.76	5.00	mg/L	286.2			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

P0807222

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	25.39	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	24.85	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	25.05	25.00	mg/L	1055.7	25.07	0.89	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	50.85	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	100.76	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	150.78	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	-0.05	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	-0.15	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

P0807222

32

041708MD-CAL

Signal : 1 (C)

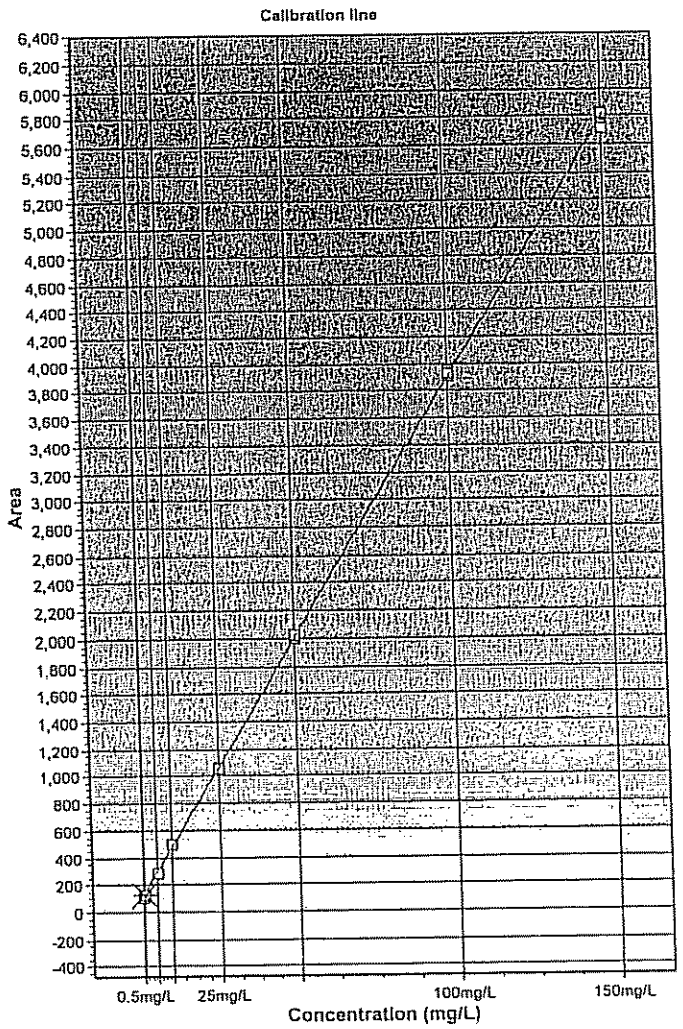
Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
59	ICV 50ppm	sample	1000	µL	51.60	0	mg/L	2063.5			UV_NPOC_II	TC Low-041708MD-C	13	1	1	4/17/2008 7:01:58 PM
60	ICV 50ppm	sample	1000	µL	51.05	0	mg/L	2042.9	51.62	0.99	UV_NPOC_II	TC Low-041708MD-C	13	1	1	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	62.84	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	61.84	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	61.83	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	10.73	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	5.80	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

P0807222


Calibration line
Area
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6,200
6,000
5,800
5,600
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5,200
5,000
4,800
4,600
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4,200
4,000
3,800
3,600
3,400
3,200
3,000
2,800
2,600
2,400
2,200
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)

P0807222

CASE NARRATIVE

Batch Number: M080721014

Original Run Date: 7-20-08

Sample Numbers: P0807088-1->3, P0807106-1, P0807122-3
P0807219-1->3, P0807222-1+2

Out of Control Event: Samples P0807106-3,4+5, P0807122-1 were over the calibration range.

Corrective Action Taken: Dilutions will be analyzed at a later date

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:	MD	Date:	7-21-08
Manual Integration Conducted?		YES	NO
Reviewed by:		Date:	
Reviewed and Entered by:	RW	Date:	7/21/08
Reviewed by:		Date:	
Corrected by:		Date:	

Queue report

072008MD

Maureen Donlin
7-21-08

M08072101 4

Signal : 1 (C)

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	7/20/2008 11:02:25 AM
2	blank	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	1	1	1	7/20/2008 11:10:46 AM
3	blank	sample	1000	µL	0.11	0	mg/L	108.9			UV_NPOC_II	TC Low-041708MD-C	1	1	1	7/20/2008 11:19:45 AM
4	blank	sample	1000	µL	0.13	0	mg/L	109.8	0.12	12.35	UV_NPOC_II	TC Low-041708MD-C	1	1	1	7/20/2008 11:26:55 AM
5	blank2	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	2	1	1	7/20/2008 11:35:12 AM
6	blank2	sample	1000	µL	0.27	0	mg/L	115.0			UV_NPOC_II	TC Low-041708MD-C	2	1	1	7/20/2008 11:44:17 AM
7	blank2	sample	1000	µL	0.30	0	mg/L	116.2	0.29	8.25	UV_NPOC_II	TC Low-041708MD-C	2	1	1	7/20/2008 11:51:32 AM
8	CCB	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	3	1	1	7/20/2008 11:59:55 AM
9	CCB	sample	1000	µL	0.23	0	mg/L	113.3			UV_NPOC_II	TC Low-041708MD-C	3	1	1	7/20/2008 12:09:06 PM
10	CCB	sample	1000	µL	0.17	0	mg/L	111.2			UV_NPOC_II	TC Low-041708MD-C	3	1	1	7/20/2008 12:16:24 PM
11	CCB	sample	1000	µL	0.20	0	mg/L	112.2			UV_NPOC_II	TC Low-041708MD-C	3	1	1	7/20/2008 12:23:45 PM
12	CCB	sample	1000	µL	0.20	0	mg/L	112.2	0.20	11.46	UV_NPOC_II	TC Low-041708MD-C	3	1	1	7/20/2008 12:31:04 PM
13	CCV 50ppm	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	4	1	1	7/20/2008 12:39:33 PM
14	CCV 50ppm	sample	1000	µL	52.91	0	mg/L	2113.4			UV_NPOC_II	TC Low-041708MD-C	4	1	1	7/20/2008 12:49:14 PM
15	CCV 50ppm	sample	1000	µL	52.48	0	mg/L	2097.3		107%	UV_NPOC_II	TC Low-041708MD-C	4	1	1	7/20/2008 12:56:57 PM
16	CCV 50ppm	sample	1000	µL	52.34	0	mg/L	2091.9			UV_NPOC_II	TC Low-041708MD-C	4	1	1	7/20/2008 1:04:50 PM
17	CCV 50ppm	sample	1000	µL	56.30	0	mg/L	2242.2	53.51	3.51	UV_NPOC_II	TC Low-041708MD-C	4	1	1	7/20/2008 1:12:57 PM
18	PBW	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	5	1	1	7/20/2008 1:21:28 PM
19	PBW	sample	1000	µL	0.32	0	mg/L	116.6			UV_NPOC_II	TC Low-041708MD-C	5	1	1	7/20/2008 1:30:45 PM
20	PBW	sample	1000	µL	0.18	0	mg/L	111.6			UV_NPOC_II	TC Low-041708MD-C	5	1	1	7/20/2008 1:38:13 PM
21	PBW	sample	1000	µL	0.18	0	mg/L	111.5			UV_NPOC_II	TC Low-041708MD-C	5	1	1	7/20/2008 1:45:39 PM
22	PBW	sample	1000	µL	0.30	0	mg/L	116.0	0.24	29.43	UV_NPOC_II	TC Low-041708MD-C	5	1	1	7/20/2008 1:53:06 PM
23	LCSW 55.3ppm	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	6	1	1	7/20/2008 2:01:36 PM
24	LCSW 55.3ppm	sample	1000	µL	57.18	0	mg/L	2275.4			UV_NPOC_II	TC Low-041708MD-C	6	1	1	7/20/2008 2:11:41 PM
25	LCSW 55.3ppm	sample	1000	µL	56.74	0	mg/L	2258.7			UV_NPOC_II	TC Low-041708MD-C	6	1	1	7/20/2008 2:19:40 PM
26	LCSW 55.3ppm	sample	1000	µL	56.95	0	mg/L	2267.0		103%	UV_NPOC_II	TC Low-041708MD-C	6	1	1	7/20/2008 2:27:40 PM
27	LCSW 55.3ppm	sample	1000	µL	56.75	0	mg/L	2259.2	56.90	0.36	UV_NPOC_II	TC Low-041708MD-C	6	1	1	7/20/2008 2:35:38 PM
28	~~P0807088-01A~~	~~sample~~	~~0~~	~~µL~~		~~0~~	~~mg/L~~	~~0~~			~~Ext_sparge_UV~~	~~TC Low-041708MD-C~~	~~7~~	~~1~~	~~1~~	~~7/20/2008 2:44:11 PM~~
29	~~P0807088-01A~~	~~sample~~	~~1000~~	~~µL~~	~~71.82~~	~~0~~	~~mg/L~~	~~2831.4~~			~~UV_NPOC_II~~	~~TC Low-041708MD-C~~	~~7~~	~~1~~	~~1~~	~~7/20/2008 2:54:28 PM~~

Analyst name : Maureen Donlin

Print date : 7/21/2008

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

P0807222

36

072008MD

Signal : 1 (C)

Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
30	P0807088-01A	sample	1000	µL	70.54	0	mg/L	2782.9			UV_NPOC_II	TC Low-041708MD-C	7	1	1	7/20/2008 3:02:36 PM
31	P0807088-01A	sample	1000	µL	71.21	0	mg/L	2808.2			UV_NPOC_II	TC Low-041708MD-C	7	1	1	7/20/2008 3:10:51 PM
32	P0807088-01A	sample	1000	µL	71.36	0	mg/L	2814.5	71.24	0.74	UV_NPOC_II	TC Low-041708MD-C	7	1	1	7/20/2008 3:19:02 PM
33	P0807088-01A DUP	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	8	1	1	7/20/2008 3:27:27 PM
34	P0807088-01A DUP	sample	1000	µL	70.10	0	mg/L	2765.9			UV_NPOC_II	TC Low-041708MD-C	8	1	1	7/20/2008 3:37:05 PM
35	P0807088-01A DUP	sample	1000	µL	74.41	0	mg/L	2929.8			UV_NPOC_II	TC Low-041708MD-C	8	1	1	7/20/2008 3:45:06 PM
36	P0807088-01A DUP	sample	1000	µL	69.34	0	mg/L	2737.4			UV_NPOC_II	TC Low-041708MD-C	8	1	1	7/20/2008 3:52:53 PM
37	P0807088-01A DUP	sample	1000	µL	69.02	0	mg/L	2725.1	70.72	3.54	UV_NPOC_II	TC Low-041708MD-C	8	1	1	7/20/2008 4:00:44 PM
38	P0807088-02A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	9	1	1	7/20/2008 4:09:01 PM
39	P0807088-02A	sample	1000	µL	6.25	0	mg/L	341.8			UV_NPOC_II	TC Low-041708MD-C	9	1	1	7/20/2008 4:16:08 PM
40	P0807088-02A	sample	1000	µL	5.45	0	mg/L	311.4			UV_NPOC_II	TC Low-041708MD-C	9	1	1	7/20/2008 4:25:33 PM
41	P0807088-02A	sample	1000	µL	5.35	0	mg/L	307.7			UV_NPOC_II	TC Low-041708MD-C	9	1	1	7/20/2008 4:32:54 PM
42	P0807088-02A	sample	1000	µL	5.20	0	mg/L	302.2	5.56	8.42	UV_NPOC_II	TC Low-041708MD-C	9	1	1	7/20/2008 4:40:17 PM
43	P0807088-02A MS	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	10	1	1	7/20/2008 4:48:37 PM
44	P0807088-02A MS	sample	1000	µL	58.38	0	mg/L	2321.1			UV_NPOC_II	TC Low-041708MD-C	10	1	1	7/20/2008 4:58:12 PM
45	P0807088-02A MS	sample	1000	µL	58.24	0	mg/L	2315.8			UV_NPOC_II	TC Low-041708MD-C	10	1	1	7/20/2008 5:06:02 PM
46	P0807088-02A MS	sample	1000	µL	58.10	0	mg/L	2310.4			UV_NPOC_II	TC Low-041708MD-C	10	1	1	7/20/2008 5:13:51 PM
47	P0807088-02A MS	sample	1000	µL	57.69	0	mg/L	2294.9	58.10	0.51	UV_NPOC_II	TC Low-041708MD-C	10	1	1	7/20/2008 5:21:40 PM
48	P0807088-03A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	11	1	1	7/20/2008 5:30:04 PM
49	P0807088-03A	sample	1000	µL	7.76	0	mg/L	399.2			UV_NPOC_II	TC Low-041708MD-C	11	1	1	7/20/2008 5:39:37 PM
50	P0807088-03A	sample	1000	µL	7.69	0	mg/L	396.7			UV_NPOC_II	TC Low-041708MD-C	11	1	1	7/20/2008 5:47:16 PM
51	P0807088-03A	sample	1000	µL	7.57	0	mg/L	392.2			UV_NPOC_II	TC Low-041708MD-C	11	1	1	7/20/2008 5:54:54 PM
52	P0807088-03A	sample	1000	µL	7.48	0	mg/L	388.5	7.62	1.65	UV_NPOC_II	TC Low-041708MD-C	11	1	1	7/20/2008 6:02:34 PM
53	P0807088-03A IC MS	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	12	1	1	7/20/2008 6:11:00 PM
54	P0807088-03A IC MS	sample	1000	µL	7.37	0	mg/L	384.4			UV_NPOC_II	TC Low-041708MD-C	12	1	1	7/20/2008 6:20:36 PM
55	P0807088-03A IC MS	sample	1000	µL	7.26	0	mg/L	380.5			UV_NPOC_II	TC Low-041708MD-C	12	1	1	7/20/2008 6:28:17 PM
56	P0807088-03A IC MS	sample	1000	µL	7.15	0	mg/L	376.0			UV_NPOC_II	TC Low-041708MD-C	12	1	1	7/20/2008 6:35:57 PM
57	P0807088-03A IC MS	sample	1000	µL	7.18	0	mg/L	377.4	7.24	1.35	UV_NPOC_II	TC Low-041708MD-C	12	1	1	7/20/2008 6:43:38 PM
58	P0807106-01A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	13	1	1	7/20/2008 6:52:08 PM

RPD 0.7%

105%

Analyst name : Maureen Donlin

Print date : 7/21/2008

Sample blanco : 0

Calibration blanco : 0

Yield (%) : 100

37

P0807222

072008MD

Signal 1 (C)

Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
59	P0807106-01A	sample	1000	µL	50.01	0	mg/L	2037.7			UV_NPOC_II	TC Low-041708MD-C	13	1	1	7/20/2008 7:02:05 PM
60	P0807106-01A	sample	1000	µL	50.33	0	mg/L	2015.6			UV_NPOC_II	TC Low-041708MD-C	13	1	1	7/20/2008 7:10:04 PM
61	P0807106-01A	sample	1000	µL	50.51	0	mg/L	2022.4			UV_NPOC_II	TC Low-041708MD-C	13	1	1	7/20/2008 7:18:01 PM
62	P0807106-01A	sample	1000	µL	50.44	0	mg/L	2019.7	50.55	0.50	UV_NPOC_II	TC Low-041708MD-C	13	1	1	7/20/2008 7:25:57 PM
63	P0807106-03A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	14	1	1	7/20/2008 7:34:32 PM
64	P0807106-03A	sample	1000	µL	1217.83	0	mg/L	46340.2			UV_NPOC_II	TC Low-041708MD-C	14	1	1	7/20/2008 7:50:19 PM
65	P0807106-03A	sample	1000	µL	1721.71	0	mg/L	65470.2			UV_NPOC_II	TC Low-041708MD-C	14	1	1	7/20/2008 8:02:37 PM
66	P0807106-03A	sample	1000	µL	1686.42	0	mg/L	64130.5			UV_NPOC_II	TC Low-041708MD-C	14	1	1	7/20/2008 8:15:26 PM
67	P0807106-03A	sample	1000	µL	1708.43	0	mg/L	64966.1	1683.60	15.43	UV_NPOC_II	TC Low-041708MD-C	14	1	1	7/20/2008 8:28:06 PM
68	CCB	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	15	1	1	7/20/2008 8:36:45 PM
69	CCB	sample	1000	µL	0.95	0	mg/L	140.8			UV_NPOC_II	TC Low-041708MD-C	15	1	1	7/20/2008 8:46:33 PM
70	CCB	sample	1000	µL	0.16	0	mg/L	110.9			UV_NPOC_II	TC Low-041708MD-C	15	1	1	7/20/2008 8:54:16 PM
71	CCB	sample	1000	µL	0.05	0	mg/L	106.6			UV_NPOC_II	TC Low-041708MD-C	15	1	1	7/20/2008 9:02:01 PM
72	CCB	sample	1000	µL	-0.26	0	mg/L	94.9	0.23	226.56	UV_NPOC_II	TC Low-041708MD-C	15	1	1	7/20/2008 9:09:44 PM
73	CCV 50ppm	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	16	1	1	7/20/2008 9:18:15 PM
74	CCV 50ppm	sample	1000	µL	53.85	0	mg/L	2149.1			UV_NPOC_II	TC Low-041708MD-C	16	1	1	7/20/2008 9:27:47 PM
75	CCV 50ppm	sample	1000	µL	53.72	0	mg/L	2144.0			UV_NPOC_II	TC Low-041708MD-C	16	1	1	7/20/2008 9:35:31 PM
76	CCV 50ppm	sample	1000	µL	52.94	0	mg/L	2114.7			UV_NPOC_II	TC Low-041708MD-C	16	1	1	7/20/2008 9:43:16 PM
77	CCV 50ppm	sample	1000	µL	53.27	0	mg/L	2127.2	53.45	0.78	UV_NPOC_II	TC Low-041708MD-C	16	1	1	7/20/2008 9:51:02 PM
78	PBW	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	17	1	1	7/20/2008 9:59:24 PM
79	PBW	sample	1000	µL	0.63	0	mg/L	128.7			UV_NPOC_II	TC Low-041708MD-C	17	1	1	7/20/2008 10:08:31 PM
80	PBW	sample	1000	µL	0.66	0	mg/L	129.8			UV_NPOC_II	TC Low-041708MD-C	17	1	1	7/20/2008 10:15:50 PM
81	PBW	sample	1000	µL	0.67	0	mg/L	130.1			UV_NPOC_II	TC Low-041708MD-C	17	1	1	7/20/2008 10:23:12 PM
82	PBW	sample	1000	µL	0.66	0	mg/L	129.9	0.66	2.44	UV_NPOC_II	TC Low-041708MD-C	17	1	1	7/20/2008 10:30:32 PM
83	LCSW 55.3ppm	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	18	1	1	7/20/2008 10:38:56 PM
84	LCSW 55.3ppm	sample	1000	µL	57.47	0	mg/L	2286.4			UV_NPOC_II	TC Low-041708MD-C	18	1	1	7/20/2008 10:48:28 PM
85	LCSW 55.3ppm	sample	1000	µL	58.29	0	mg/L	2317.5			UV_NPOC_II	TC Low-041708MD-C	18	1	1	7/20/2008 10:56:20 PM
86	LCSW 55.3ppm	sample	1000	µL	57.76	0	mg/L	2297.4			UV_NPOC_II	TC Low-041708MD-C	18	1	1	7/20/2008 11:04:09 PM
87	LCSW 55.3ppm	sample	1000	µL	57.16	0	mg/L	2274.8	57.67	0.83	UV_NPOC_II	TC Low-041708MD-C	18	1	1	7/20/2008 11:11:57 PM

over range

107%

104%

Analyst name Maureen Donlin

Print date 7/21/2008

Sample blanco 0
Calibration blanco 0
Yield (%) 100

P0807222

38

072008MD

Signal : 1 (C)

Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
88	P0807106-04A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	19	1	1	7/20/2008 11:20:24 PM
89	P0807106-04A	sample	1000	µL	1039.59	0	mg/L	39573.2			UV_NPOC_II	TC Low-041708MD-C	19	1	1	7/20/2008 11:34:06 PM
90	P0807106-04A	sample	1000	µL	1058.26	0	mg/L	40282.0			UV_NPOC_II	TC Low-041708MD-C	19	1	1	7/20/2008 11:45:00 PM
91	P0807106-04A	sample	1000	µL	1051.90	0	mg/L	40040.6			UV_NPOC_II	TC Low-041708MD-C	19	1	1	7/20/2008 11:55:52 PM
92	P0807106-04A	sample	1000	µL	1044.85	0	mg/L	39773.1	1048.65	0.78	UV_NPOC_II	TC Low-041708MD-C	19	1	1	7/21/2008 12:06:13 AM
93	P0807106-05A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	20	1	1	7/21/2008 12:14:39 AM
94	P0807106-05A	sample	1000	µL	724.96	0	mg/L	27628.0			UV_NPOC_II	TC Low-041708MD-C	20	1	1	7/21/2008 12:27:33 AM
95	P0807106-05A	sample	1000	µL	733.14	0	mg/L	27938.7			UV_NPOC_II	TC Low-041708MD-C	20	1	1	7/21/2008 12:37:45 AM
96	P0807106-05A	sample	1000	µL	732.00	0	mg/L	27895.5			UV_NPOC_II	TC Low-041708MD-C	20	1	1	7/21/2008 12:48:01 AM
97	P0807106-05A	sample	1000	µL	732.54	0	mg/L	27916.0	730.66	0.52	UV_NPOC_II	TC Low-041708MD-C	20	1	1	7/21/2008 12:57:42 AM
98	P0807122-01A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	21	1	1	7/21/2008 1:06:27 AM
99	P0807122-01A	sample	1000	µL	386.73	0	mg/L	14787.0			UV_NPOC_II	TC Low-041708MD-C	21	1	1	7/21/2008 1:18:51 AM
100	P0807122-01A	sample	1000	µL	369.41	0	mg/L	14129.7			UV_NPOC_II	TC Low-041708MD-C	21	1	1	7/21/2008 1:28:44 AM
101	P0807122-01A	sample	1000	µL	364.47	0	mg/L	13941.8			UV_NPOC_II	TC Low-041708MD-C	21	1	1	7/21/2008 1:38:08 AM
102	P0807122-01A	sample	1000	µL	369.17	0	mg/L	14120.2	372.44	2.63	UV_NPOC_II	TC Low-041708MD-C	21	1	1	7/21/2008 1:47:04 AM
103	P0807122-03A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	22	1	1	7/21/2008 1:55:41 AM
104	P0807122-03A	sample	1000	µL	10.02	0	mg/L	485.2			UV_NPOC_II	TC Low-041708MD-C	22	1	1	7/21/2008 2:05:30 AM
105	P0807122-03A	sample	1000	µL	8.89	0	mg/L	442.1			UV_NPOC_II	TC Low-041708MD-C	22	1	1	7/21/2008 2:13:13 AM
106	P0807122-03A	sample	1000	µL	8.29	0	mg/L	419.4			UV_NPOC_II	TC Low-041708MD-C	22	1	1	7/21/2008 2:20:52 AM
107	P0807122-03A	sample	1000	µL	8.23	0	mg/L	417.2	8.66	9.39	UV_NPOC_II	TC Low-041708MD-C	22	1	1	7/21/2008 2:28:38 AM
108	P0807219-01A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	23	1	1	7/21/2008 2:37:17 AM
109	P0807219-01A	sample	1000	µL	2.55	0	mg/L	201.6			UV_NPOC_II	TC Low-041708MD-C	23	1	1	7/21/2008 2:47:06 AM
110	P0807219-01A	sample	1000	µL	2.44	0	mg/L	197.1			UV_NPOC_II	TC Low-041708MD-C	23	1	1	7/21/2008 2:54:52 AM
111	P0807219-01A	sample	1000	µL	3.04	0	mg/L	220.0			UV_NPOC_II	TC Low-041708MD-C	23	1	1	7/21/2008 3:02:35 AM
112	P0807219-01A	sample	1000	µL	3.05	0	mg/L	220.3	2.77	11.55	UV_NPOC_II	TC Low-041708MD-C	23	1	1	7/21/2008 3:10:17 AM
113	P0807219-01A DUP	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	24	1	1	7/21/2008 3:18:52 AM
114	P0807219-01A DUP	sample	1000	µL	2.83	0	mg/L	212.1			UV_NPOC_II	TC Low-041708MD-C	24	1	1	7/21/2008 3:28:11 AM
115	P0807219-01A DUP	sample	1000	µL	2.86	0	mg/L	213.3			UV_NPOC_II	TC Low-041708MD-C	24	1	1	7/21/2008 3:35:40 AM
116	P0807219-01A DUP	sample	1000	µL	2.80	0	mg/L	210.8			UV_NPOC_II	TC Low-041708MD-C	24	1	1	7/21/2008 3:43:09 AM

Over range

Analyst name : Maureen Donlin

Print date : 7/21/2008

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

P0807222

39

072008MD

Signal . 1 (C)

Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
117	P0807219-01A DUP	sample	1000	µL	2.76	0	mg/L	209.4	2.81	1.57	UV_NPOC_II	TC Low-041708MD-C	24	1	1	7/21/2008 3:50:40 AM
118	P0807219-02A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	25	1	1	7/21/2008 3:59:08 AM
119	P0807219-02A	sample	1000	µL	1.05	0	mg/L	144.6			UV_NPOC_II	TC Low-041708MD-C	25	1	1	7/21/2008 4:08:22 AM
120	P0807219-02A	sample	1000	µL	1.05	0	mg/L	144.5			UV_NPOC_II	TC Low-041708MD-C	25	1	1	7/21/2008 4:15:49 AM
121	P0807219-02A	sample	1000	µL	1.28	0	mg/L	153.2			UV_NPOC_II	TC Low-041708MD-C	25	1	1	7/21/2008 4:23:15 AM
122	P0807219-02A	sample	1000	µL	1.09	0	mg/L	146.1	1.12	9.76	UV_NPOC_II	TC Low-041708MD-C	25	1	1	7/21/2008 4:30:41 AM
123	P0807219-02A MS 50ppm	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	26	1	1	7/21/2008 4:39:08 AM
124	P0807219-02A MS 50ppm	sample	1000	µL	55.47	0	mg/L	2210.5			UV_NPOC_II	TC Low-041708MD-C	26	1	1	7/21/2008 4:46:49 AM
125	P0807219-02A MS 50ppm	sample	1000	µL	55.00	0	mg/L	2192.8			UV_NPOC_II	TC Low-041708MD-C	26	1	1	7/21/2008 4:56:39 AM
126	P0807219-02A MS 50ppm	sample	1000	µL	54.98	0	mg/L	2191.9			UV_NPOC_II	TC Low-041708MD-C	26	1	1	7/21/2008 5:04:28 AM
127	P0807219-02A MS 50ppm	sample	1000	µL	54.98	0	mg/L	2192.0	55.11	0.44	UV_NPOC_II	TC Low-041708MD-C	26	1	1	7/21/2008 5:12:20 AM
128	CCB	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	27	1	1	7/21/2008 5:20:50 AM
129	CCB	sample	1000	µL	0.11	0	mg/L	108.9			UV_NPOC_II	TC Low-041708MD-C	27	1	1	7/21/2008 5:30:01 AM
130	CCB	sample	1000	µL	0.09	0	mg/L	107.9			UV_NPOC_II	TC Low-041708MD-C	27	1	1	7/21/2008 5:37:26 AM
131	CCB	sample	1000	µL	0.12	0	mg/L	109.1			UV_NPOC_II	TC Low-041708MD-C	27	1	1	7/21/2008 5:44:53 AM
132	CCB	sample	1000	µL	0.04	0	mg/L	106.4	0.09	36.51	UV_NPOC_II	TC Low-041708MD-C	27	1	1	7/21/2008 5:52:16 AM
133	CCV 50ppm	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	28	1	1	7/21/2008 6:00:50 AM
134	CCV 50ppm	sample	1000	µL	52.66	0	mg/L	2104.0			UV_NPOC_II	TC Low-041708MD-C	28	1	1	7/21/2008 6:10:39 AM
135	CCV 50ppm	sample	1000	µL	52.83	0	mg/L	2110.4			UV_NPOC_II	TC Low-041708MD-C	28	1	1	7/21/2008 6:18:35 AM
136	CCV 50ppm	sample	1000	µL	52.81	0	mg/L	2109.7			UV_NPOC_II	TC Low-041708MD-C	28	1	1	7/21/2008 6:26:30 AM
137	CCV 50ppm	sample	1000	µL	52.12	0	mg/L	2083.3	52.61	0.64	UV_NPOC_II	TC Low-041708MD-C	28	1	1	7/21/2008 6:34:26 AM
138	PBW	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	29	1	1	7/21/2008 6:42:58 AM
139	PBW	sample	1000	µL	0.40	0	mg/L	119.8			UV_NPOC_II	TC Low-041708MD-C	29	1	1	7/21/2008 6:52:25 AM
140	PBW	sample	1000	µL	0.44	0	mg/L	121.3			UV_NPOC_II	TC Low-041708MD-C	29	1	1	7/21/2008 6:59:57 AM
141	PBW	sample	1000	µL	0.37	0	mg/L	118.6			UV_NPOC_II	TC Low-041708MD-C	29	1	1	7/21/2008 7:07:30 AM
142	PBW	sample	1000	µL	0.36	0	mg/L	118.3	0.39	9.05	UV_NPOC_II	TC Low-041708MD-C	29	1	1	7/21/2008 7:15:01 AM
143	LCSW 55.3ppm	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	30	1	1	7/21/2008 7:23:39 AM
144	LCSW 55.3ppm	sample	1000	µL	57.79	0	mg/L	2298.9			UV_NPOC_II	TC Low-041708MD-C	30	1	1	7/21/2008 7:33:44 AM
145	LCSW 55.3ppm	sample	1000	µL	58.22	0	mg/L	2314.9			UV_NPOC_II	TC Low-041708MD-C	30	1	1	7/21/2008 7:41:49 AM

Analyst name : Maureen Donlin

Print date : 7/21/2008

Sample blanco	0
Calibration blanco	0
Yield (%)	100

P0807222

40

072008MD

Signal : 1 (C)

Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
146	LCSW 55.3ppm	sample	1000	µL	57.35	0	mg/L	2261.8			UV_NPOC_II	TC Low-041708MD-C	30	1	1	7/21/2008 7:49:53 AM
147	LCSW 55.3ppm	sample	1000	µL	57.52	0	mg/L	2288.3	57.72	0.66	UV_NPOC_II	TC Low-041708MD-C	30	1	1	7/21/2008 7:57:59 AM
148	P0807219-03A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	31	1	1	7/21/2008 8:05:39 AM
149	P0807219-03A	sample	1000	µL	0.59	0	mg/L	127.1			UV_NPOC_II	TC Low-041708MD-C	31	1	1	7/21/2008 8:16:22 AM
150	P0807219-03A	sample	1000	µL	0.53	0	mg/L	124.9			UV_NPOC_II	TC Low-041708MD-C	31	1	1	7/21/2008 8:24:01 AM
151	P0807219-03A	sample	1000	µL	0.65	0	mg/L	129.2			UV_NPOC_II	TC Low-041708MD-C	31	1	1	7/21/2008 8:31:40 AM
152	P0807219-03A	sample	1000	µL	0.62	0	mg/L	128.0	0.60	8.17	UV_NPOC_II	TC Low-041708MD-C	31	1	1	7/21/2008 8:39:20 AM
153	P0807219-03A IC MS	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	32	1	1	7/21/2008 8:47:57 AM
154	P0807219-03A IC MS	sample	1000	µL	0.50	0	mg/L	123.6			UV_NPOC_II	TC Low-041708MD-C	32	1	1	7/21/2008 8:57:16 AM
155	P0807219-03A IC MS	sample	1000	µL	0.57	0	mg/L	126.2			UV_NPOC_II	TC Low-041708MD-C	32	1	1	7/21/2008 9:04:32 AM
156	P0807219-03A IC MS	sample	1000	µL	0.50	0	mg/L	123.5			UV_NPOC_II	TC Low-041708MD-C	32	1	1	7/21/2008 9:11:53 AM
157	P0807219-03A IC MS	sample	1000	µL	0.44	0	mg/L	121.6	0.50	9.92	UV_NPOC_II	TC Low-041708MD-C	32	1	1	7/21/2008 9:19:17 AM
158	P0807222-01A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	33	1	1	7/21/2008 9:27:45 AM
159	P0807222-01A	sample	1000	µL	1.80	0	mg/L	172.9			UV_NPOC_II	TC Low-041708MD-C	33	1	1	7/21/2008 9:37:06 AM
160	P0807222-01A	sample	1000	µL	1.80	0	mg/L	172.9			UV_NPOC_II	TC Low-041708MD-C	33	1	1	7/21/2008 9:44:36 AM
161	P0807222-01A	sample	1000	µL	1.80	0	mg/L	173.2			UV_NPOC_II	TC Low-041708MD-C	33	1	1	7/21/2008 9:52:06 AM
162	P0807222-01A	sample	1000	µL	1.77	0	mg/L	171.7	1.79	0.94	UV_NPOC_II	TC Low-041708MD-C	33	1	1	7/21/2008 9:59:31 AM
163	P0807222-02A	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	34	1	1	7/21/2008 10:07:58 AM
164	P0807222-02A	sample	1000	µL	0.17	0	mg/L	111.0			UV_NPOC_II	TC Low-041708MD-C	34	1	1	7/21/2008 10:17:14 AM
165	P0807222-02A	sample	1000	µL	0.20	0	mg/L	112.2			UV_NPOC_II	TC Low-041708MD-C	34	1	1	7/21/2008 10:24:39 AM
166	P0807222-02A	sample	1000	µL	0.24	0	mg/L	113.8			UV_NPOC_II	TC Low-041708MD-C	34	1	1	7/21/2008 10:32:04 AM
167	P0807222-02A	sample	1000	µL	0.15	0	mg/L	110.5	0.19	20.34	UV_NPOC_II	TC Low-041708MD-C	34	1	1	7/21/2008 10:39:28 AM
168	CCB	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	35	1	1	7/21/2008 10:47:56 AM
169	CCB	sample	1000	µL	0.05	0	mg/L	106.4			UV_NPOC_II	TC Low-041708MD-C	35	1	1	7/21/2008 10:57:11 AM
170	CCB	sample	1000	µL	-0.07	0	mg/L	102.1			UV_NPOC_II	TC Low-041708MD-C	35	1	1	7/21/2008 11:04:36 AM
171	CCB	sample	1000	µL	-0.05	0	mg/L	102.8			UV_NPOC_II	TC Low-041708MD-C	35	1	1	7/21/2008 11:11:59 AM
172	CCB	sample	1000	µL	0.00	0	mg/L	104.8	-0.02	306.97	UV_NPOC_II	TC Low-041708MD-C	35	1	1	7/21/2008 11:19:25 AM
173	CCV 50ppm	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	36	1	1	7/21/2008 11:27:52 AM
174	CCV 50ppm	sample	1000	µL	50.91	0	mg/L	2037.5			UV_NPOC_II	TC Low-041708MD-C	36	1	1	7/21/2008 11:37:31 AM

Analyst name : Maureen Donlin

Print date : 7/21/2008

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

P0807222

41

072008MD

Signal : 1 (C)

Nr.	Name	Type	Size	Unit	Conc.	Cal. Conc.	Unit	Area	Mean	RSD %	Method	Cal. line	Pos.	Dil.	Dens.	Date
175	CCV 50ppm	sample	1000	µL	51.15	0	mg/L	2046.7			UV_NPOC_II	TC Low-041708MD-C	36	1	1	7/21/2008 11:45:22 AM
176	CCV 50ppm	sample	1000	µL	50.97	0	mg/L	2039.6			UV_NPOC_II	TC Low-041708MD-C	36	1	1	7/21/2008 11:53:12 AM
177	CCV 50ppm	sample	1000	µL	51.03	0	mg/L	2042.1	51.02	0.20	UV_NPOC_II	TC Low-041708MD-C	36	1	1	7/21/2008 12:01:04 PM
178	CCB	sample	0	µL		0	mg/L	0			Ext_sparge_UV	TC Low-041708MD-C	37	1	1	7/21/2008 12:09:33 PM
179	CCB	sample	1000	µL	-0.24	0	mg/L	95.4			UV_NPOC_II	TC Low-041708MD-C	37	1	1	7/21/2008 12:18:57 PM
180	CCB	sample	1000	µL	-0.25	0	mg/L	95.3			UV_NPOC_II	TC Low-041708MD-C	37	1	1	7/21/2008 12:26:23 PM
181	CCB	sample	1000	µL	-0.30	0	mg/L	93.2			UV_NPOC_II	TC Low-041708MD-C	37	1	1	7/21/2008 12:33:49 PM
182	CCB	sample	1000	µL	-0.26	0	mg/L	94.8	-0.26	10.19	UV_NPOC_II	TC Low-041708MD-C	37	1	1	7/21/2008 12:41:16 PM
183	stby	sample	1000	µL		0	mg/L	0			Standby_UV_HT_II	TC Low-041708MD-C	38	1	1	7/21/2008 1:34:50 PM

10%

End of queue

Analyst name : Maureen Donlin

Print date : 7/21/2008

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

42

P0807222

Light Hydrocarbons
Methane, Ethane, Ethene

Method File: WATER 071708 LHCC
Operator: RWilliams

Printed: 7/17/2008 4:41:10 PM

Title: WATER-LHC's/Acetylene/Carbon Dioxide
Datasource: BIOREM12_local
Location: BIOREM_12\WATER 071708 LHCC.SEQ

Created: 7/17/2008 9:10:43 AM by RWilliams
Last Update: 7/17/2008 4:39:55 PM by RWilliams

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	Window	Standard	Int.Type	Cal.Type	Peak Type	Group
1	*Methane*	*0.458 min*	*0.458 min*		*0.050 AG*	*External*	*Area*	*Quad*	*Auto*	
2	Ethane	0.750 min	0.750 min		0.100 AN	External	Area	Quad	Auto	
3	Ethene	1.042 min	1.042 min		0.100 AN	External	Area	Quad	Auto	
4	Methane	1.630 min		1.630 min	0.200 AN	External	Area	Lin	Auto	
5	Propane	1.960 min	1.960 min		0.200 AN	External	Area	Quad	Auto	
6	Carbon Dioxide	2.210 min		2.210 min	0.200 AN	External	Area	Lin	Auto	
7	Ethene	3.170 min		3.170 min	0.200 AN	External	Area	Lin	Auto	
8	Ethane	3.900 min		3.900 min	0.200 AN	External	Area	Lin	Auto	
9	Propene	4.080 min	4.080 min		0.500 AG	External	Area	Quad	Auto	
10	iso-Butane	6.350 min	6.500 min		0.600 AG	External	Area	Quad	Auto	
11	n-Butane	7.540 min	8.000 min		0.700 AG	External	Area	Quad	Auto	
12	Acetylene	9.420 min	9.420 min		1.000 AG	External	Area	Quad	Auto	

Method File: WATER 071708 LHCC
Operator: RWilliams

Printed: 7/17/2008 4:41:10 PM

Title: WATER-LHC's/Acetylene/Carbon Dioxide
Datasource: BIOREM12_local
Location: BIOREM_12\WATER 071708 LHCC SEQ

Created: 7/17/2008 9:10:43 AM by RWilliams
Last Update: 7/17/2008 4:39:55 PM by RWilliams

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 16
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Amount ICAL LHC L6	Amount ICAL LHC L5	Amount ICAL LHC L4	Amount ICAL LHC L3	Amount ICAL LHC L2	Amount ICAL LHC L1	Amount ICAL ACETYLENE L5
1	*Methane*	*0.012150*	*0.048600*	*0.486000*	*4.860000*	*24.300000*	*121.500000*	
2	Ethane	0 023789	0 095155	0 951552	9 515520	47 577600	237 888000	
3	Ethene	0 026302	0 105210	1 052100	10 521000	52 605000	263 025000	
4	Methane							
5	Propane	0 033600	0 134400	1 344000	13 440000	67 200000	336 000000	
6	Carbon Dioxide							
7	Ethene							
8	Ethane							
9	Propene	0 039256	0 157026	1 570256	15 702560	78 512800	392 564000	
10	iso-Butane	0 042871	0 171483	1 714832	17 148320	85 741600	428 708000	
11	n-Butane	0 043423	0 173692	1 736920	17 369200	86 846000	434 230000	
12	Acetylene							0.295000

Method File: WATER 071708 LHCC
Operator: RWilliams

Printed: 7/17/2008 4:41:10 PM

Title: WATER-LHC's/Acetylene/Carbon Dioxide
Datasource: BIOREM12_local
Location: BIOREM_12\WATER 071708 LHCC.SEQ

Created: 7/17/2008 9:10:43 AM by RWilliams
Last Update: 7/17/2008 4:39:55 PM by RWilliams

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 16
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Amount ICAL ACETYLENE L4	Amount ICAL ACETYLENE L3	Amount ICAL ACETYLENE L2	Amount ICAL ACETYLENE L1	Amount ICAL TCD L5
1	*Methane*					
2	Ethane					96.200000
3	Ethene					
4	Methane					0 850000
5	Propane					209 000000
6	Carbon Dioxide					187 000000
7	Ethene					
8	Ethane					
9	Propene					
10	iso-Butane					
11	n-Butane					
12	Acetylene	1 470000	7 370000	36 870000	147 460000	

Method File: WATER 071708 LHCC
Operator: RWilliams

Printed: 7/17/2008 4:41:11 PM

Title: WATER-LHC's/Acetylene/Carbon Dioxide
Datasource: BIOREM12_local
Location: BIOREM_12\WATER 071708 LHCC SEQ

Created: 7/17/2008 9:10:43 AM by RWilliams
Last Update: 7/17/2008 4:39:55 PM by RWilliams

Amount Table:

Dimension of Amounts:
Reference volume for amounts: Use inject volume of first standard
Number of Amount Columns: 16
Sample column used for amount column assignment: Sample Name

No.	Peak Name	Amount ICAL TCD L4	Amount ICAL TCD L3	Amount ICAL TCD L2	Amount ICAL TCD L1
1	*Methane*				
2	Ethane				
3	Ethene				
4	Methane	481 000000	2406 000000	12029 000000	24057 000000
5	Propane				
6	Carbon Dioxide	4 250000	21 300000	106 000000	425 000000
7	Ethene	1045 000000	5224 000000	26119 000000	52238 000000
8	Ethane	935 000000	4673 000000	23364 000000	46728 000000
9	Propene				
10	iso-Butane				
11	n-Butane				
12	Acetylene				

Method File: WATER 071708 LHCC
Operator: RWilliams

Printed: 7/18/2008 9:02:04 AM

Title: WATER-LHC's/Acetylene/Carbon Dioxide
Datasource: BIOREM12_local
Location: BIOREM_12\WATER 071708 LHCC.SEQ

Created: 7/17/2008 9:10:43 AM by RWilliams
Last Update: 7/17/2008 4:39:55 PM by RWilliams

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 LHC L6	2	4	1 0	1.0000	1 0000	1 0000	7/17/2008 7:44:48 AM
2	☒	ICAL LHC L5	3	5	1 0	1 0000	1 0000	1 0000	7/17/2008 8:01:37 AM
3	☒	ICAL LHC L4	4	5	1 0	1.0000	1.0000	1 0000	7/17/2008 8:15:05 AM
4	☒	ICAL LHC L3	5	6	1 0	1 0000	1 0000	1.0000	7/17/2008 8:27:16 AM
5	☒	ICAL LHC L2	6	7	1 0	1.0000	1 0000	1.0000	7/17/2008 8:41:32 AM
6	☒	ICAL LHC L1	7	8	1 0	1 0000	1 0000	1 0000	7/17/2008 8:53:54 AM
7	☒	ICAL ACETYLENE L5	9	11	1.0	1.0000	1 0000	1 0000	7/17/2008 9:19:13 AM
8	☒	ICAL ACETYLENE L4	10	12	1 0	1.0000	1 0000	1 0000	7/17/2008 9:31:54 AM
9	☒	ICAL ACETYLENE L3	11	13	1 0	1 0000	1 0000	1 0000	7/17/2008 9:44:38 AM
10	☒	ICAL ACETYLENE L2	12	14	1 0	1 0000	1 0000	1 0000	7/17/2008 9:57:58 AM
11	☒	ICAL ACETYLENE L1	13	15	1 0	1 0000	1 0000	1 0000	7/17/2008 10:10:26 AM
12	☒	ICAL TCD L5	19	11	1 0	1 0000	1 0000	1 0000	7/17/2008 2:03:07 PM
13	☒	ICAL TCD L4	20	12	1.0	1 0000	1 0000	1 0000	7/17/2008 2:17:13 PM
14	☒	ICAL TCD L3	21	13	1 0	1.0000	1 0000	1 0000	7/17/2008 2:27:11 PM
15	☒	ICAL TCD L2	22	14	1 0	1 0000	1 0000	1 0000	7/17/2008 2:45:52 PM
16	☒	ICAL TCD L1	23	15	1 0	1 0000	1.0000	1 0000	7/17/2008 2:56:11 PM

Dissolved Light Hydrocarbons 07/17/08

FID Detection

No.	Ret.Time min	Peak Name	Cal.Type	R-Square %	Corr.Coeff. %	#Points	Slope	Curve
1	0.48	Methane	Quad	100.000	99.9943	6	0.4502	0.0003
2	0.78	Ethane	Quad	100.000	99.9916	6	0.4360	0.0002
3	1.10	Ethene	Quad	100.000	99.9930	6	0.3931	0.0001
4	2.04	Propane	Quad	100.000	99.9917	6	0.4560	0.0001
5	4.27	Propene	Quad	100.000	99.9960	6	0.3791	0.0001
6	6.70	iso-Butane	Quad	100.000	99.9961	6	0.4533	0.0001
7	7.97	n-Butane	Quad	100.000	99.9967	6	0.4647	0.0001

Dissolved Light Hydrocarbons - Acetylene 07/17/08

No.	Ret.Time min	Peak Name	Cal.Type	R-Square %	Corr.Coeff. %	#Points	Slope	Curve
1	9.45	Acetylene	Quad	100.000	99.9999	5	0.1495	0.0000

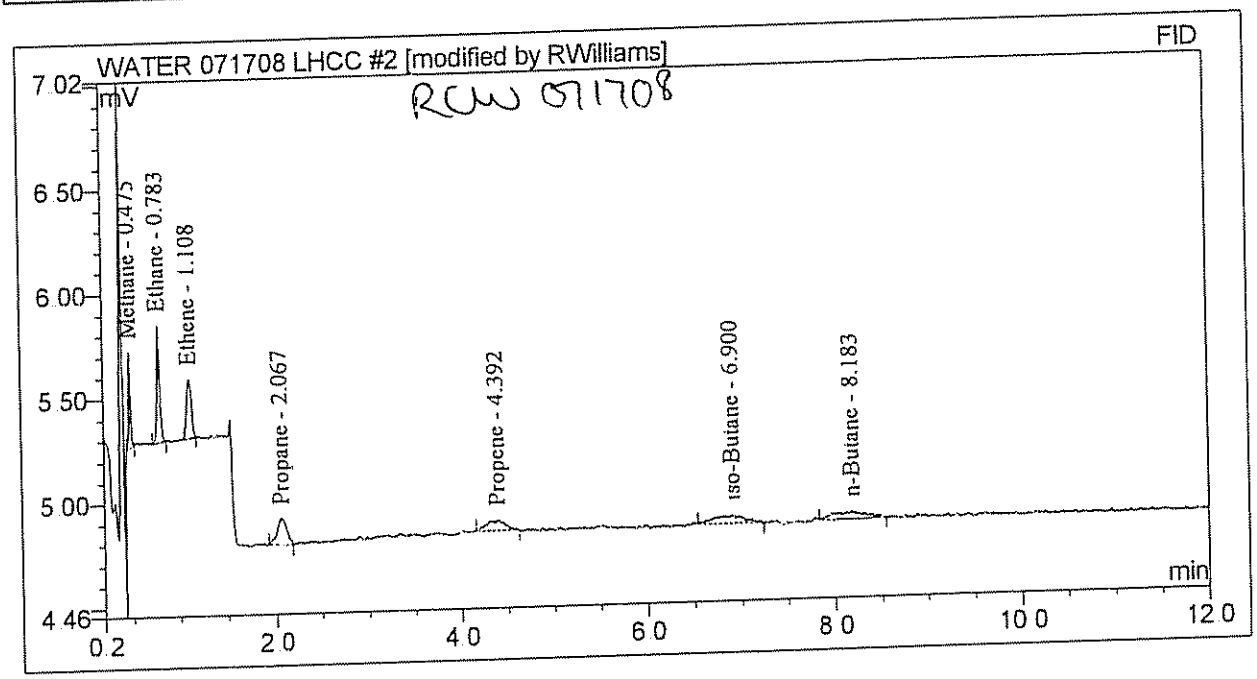
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL LHC L6	**Sequence No:**	2
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 7:44	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	0.010	0.456	BMB	0.0222
2	Ethane	0.783	0.023	0.556	BMB	0.0520
3	Ethene	1.108	0.016	0.282	BMB	0.0408
4	Propane	2.067	0.015	0.127	BMB	0.0338
5	Propene	4.392	0.011	0.052	BMB	0.0302
6	iso-Butane	6.900	0.015	0.044	BMB*	0.0324
7	n-Butane	8.183	0.014	0.038	BMB*	0.0304

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



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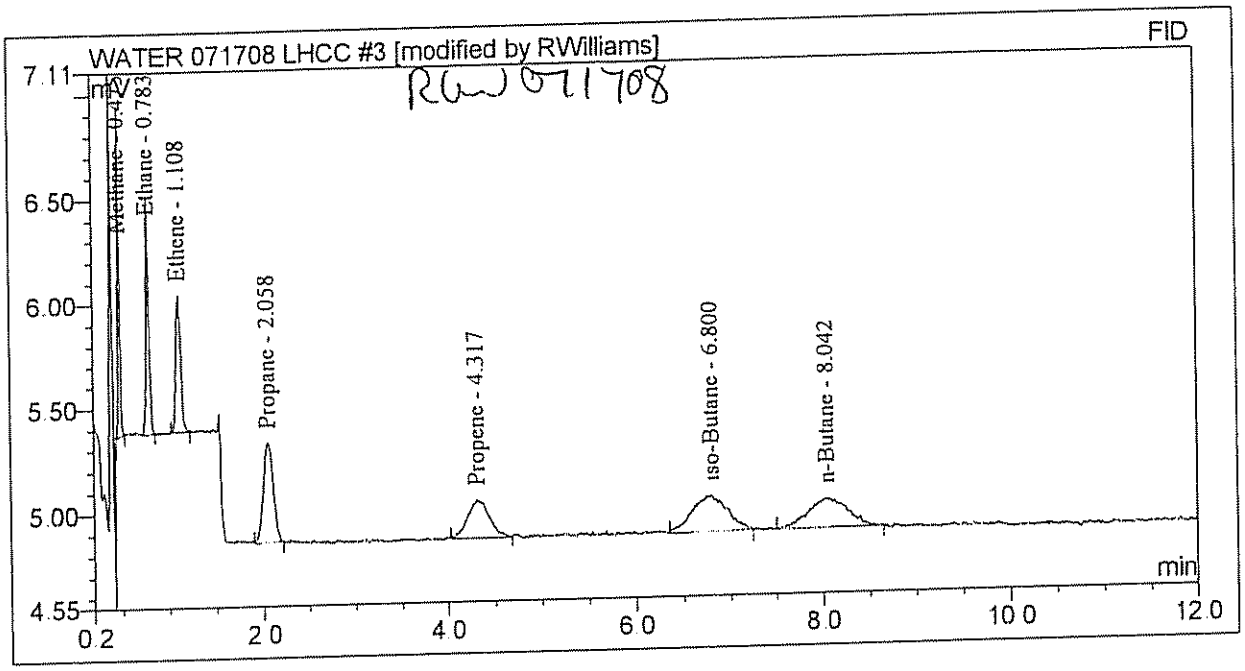
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL LHC L5	**Sequence No:**	3
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1 0000
Date Time Collected:	7/17/2008 8:01	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	0.034	1.575	BMB	0.0748
2	Ethane	0.783	0.044	1.140	BMB	0.1020
3	Ethene	1.108	0.038	0.655	BMB	0.0957
4	Propane	2.058	0.058	0.473	BMB	0.1273
5	Propene	4.317	0.047	0.181	BMB*	0.1249
6	iso-Butane	6.800	0.075	0.174	BMB	0.1652
7	n-Butane	8.042	0.069	0.141	BMB*	0.1491

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



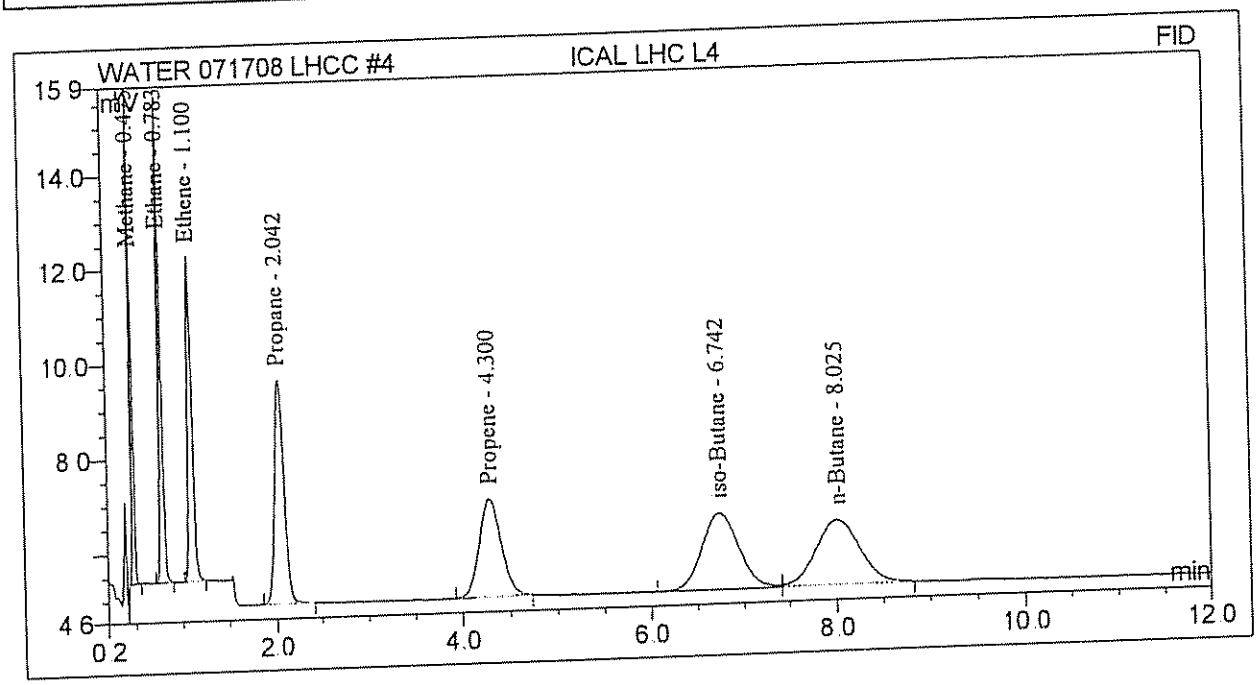
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL LHC L4	**Sequence No:**	4
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 8:15	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	0.219	10.497	BMB	0.4860
2	Ethane	0.783	0.401	10.279	BMB	0.9200
3	Ethene	1.100	0.395	6.862	BMB	1.0045
4	Propane	2.042	0.581	4.714	BMB	1.2741
5	Propene	4.300	0.553	2.068	BM	1.4577
6	iso-Butane	6.742	0.743	1.619	MB	1.6388
7	n-Butane	8.025	0.748	1.381		1.6088

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



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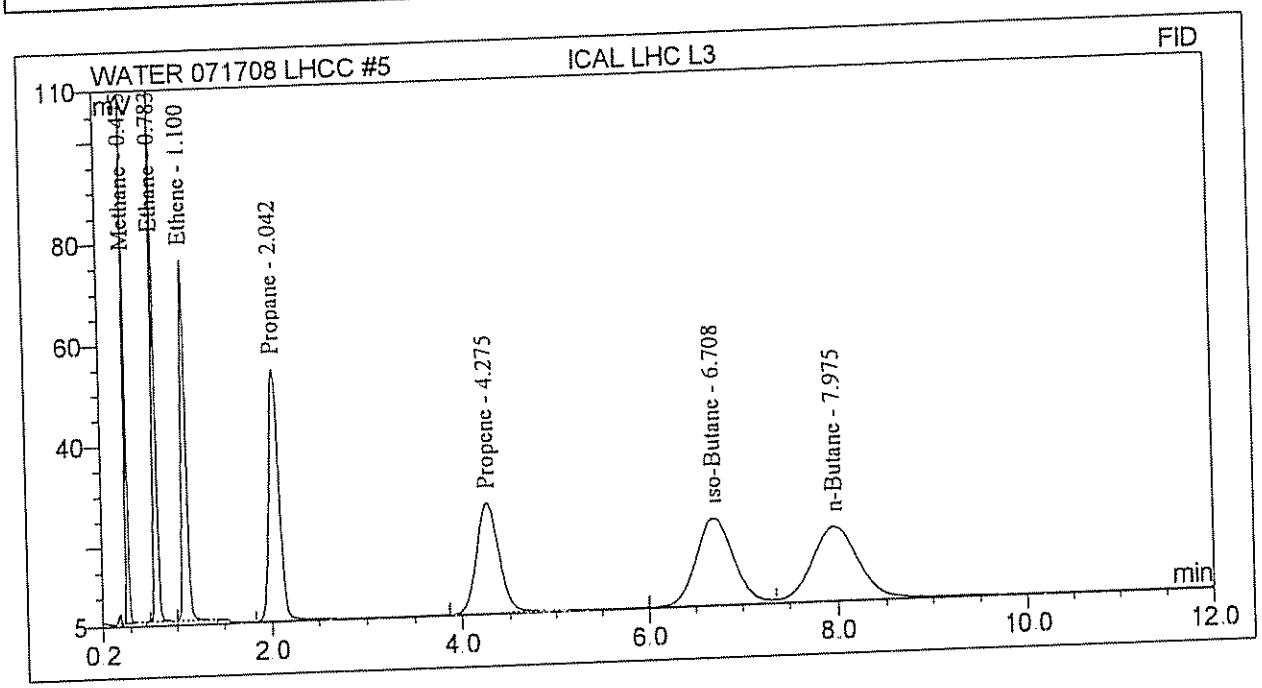
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL LHC L3	**Sequence No:**	5
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 8:27	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	2.167	103.238	BMB	4.8004
2	Ethane	0.783	4.106	104.949	BMb	9.3851
3	Ethene	1.100	4.102	71.236	bMB	10.4035
4	Propane	2.042	6.111	49.627	BMB	13.3543
5	Propene	4.275	5.870	21.623	BMB	15.4490
6	iso-Butane	6.708	7.811	17.034	BM	17.1899
7	n-Butane	7.975	8.007	14.463	MB	17.1953

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



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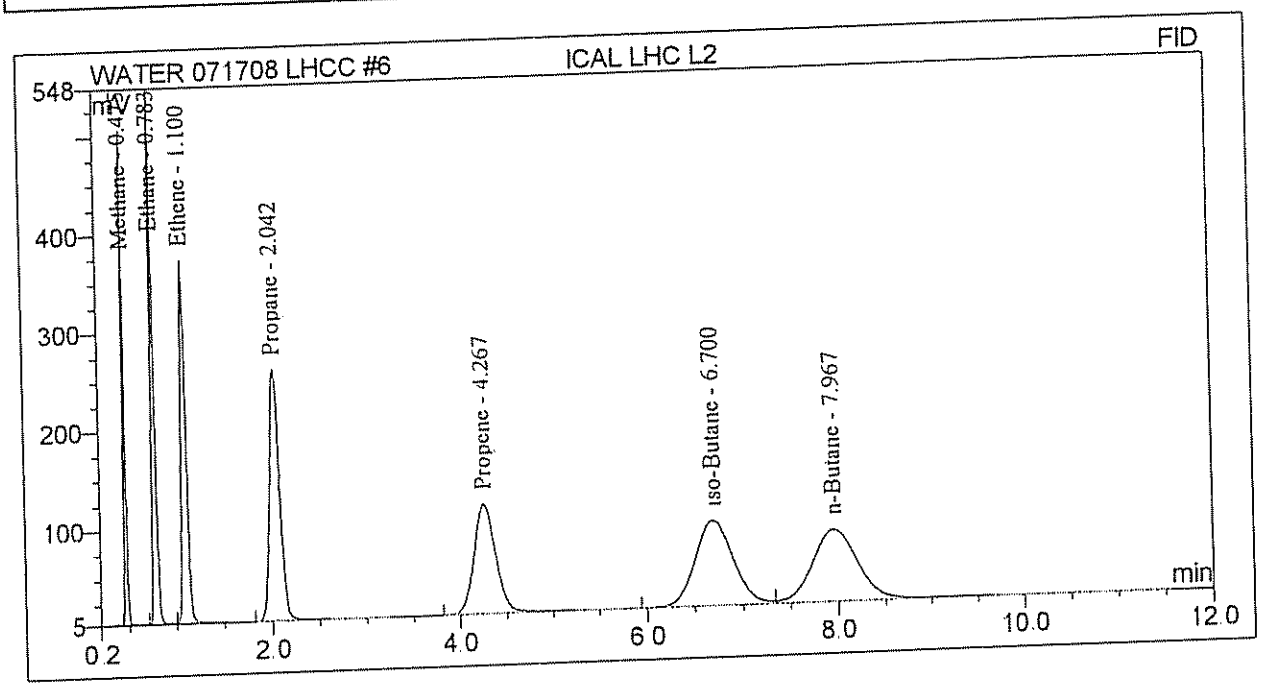
Sample Analysis Report

Sample Name:	ICAL LHC L2	**Sequence No:**	6
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 8:41	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	11.102	501.196	BMB	24.3139
2	Ethane	0.783	21.128	542.705	bMb	47.6088
3	Ethene	1.100	21.023	367.762	bMB	52.6336
4	Propane	2.042	31.195	254.839	BMB	67.2217
5	Propene	4.267	30.145	111.065	BM	78.5753
6	iso-Butane	6.700	39.322	86.311	M	85.7337
7	n-Butane	7.967	40.815	73.065	MB	86.8902

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



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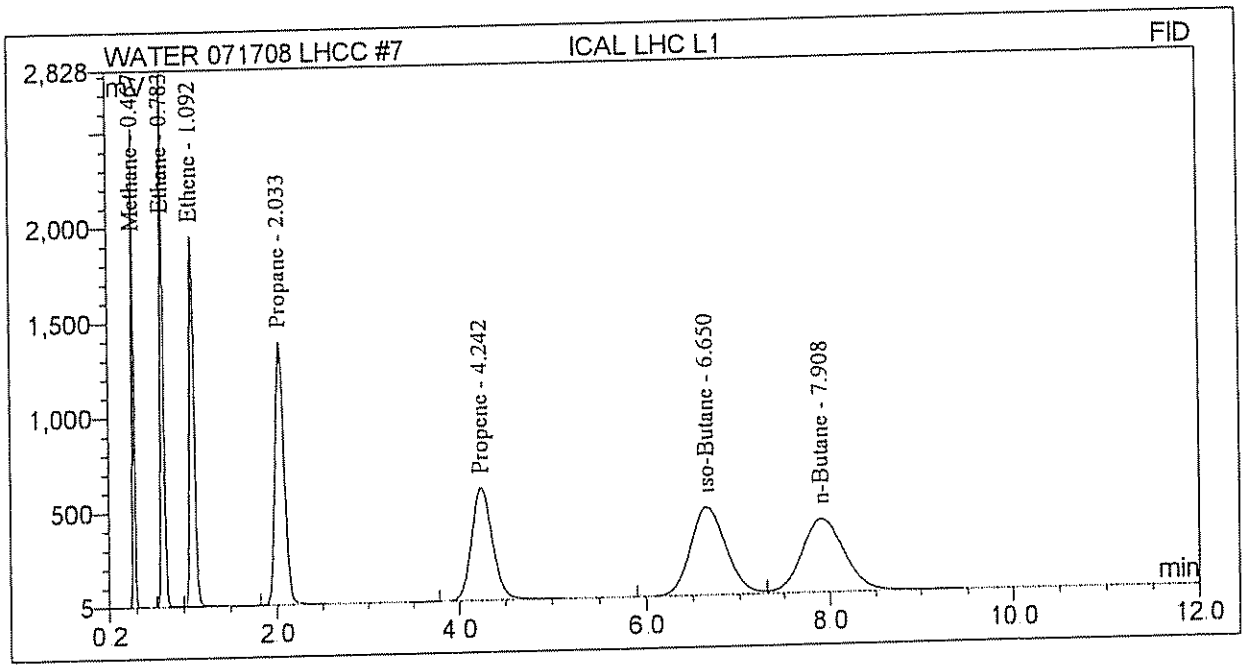
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL LHC L1	**Sequence No:**	7
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 8:53	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.467	58.602	2525.989	BMB	121.4996
2	Ethane	0.783	112.950	2822.015	bMb	237.8871
3	Ethene	1.092	111.739	1947.747	bMB	263.0241
4	Propane	2.033	166.762	1384.839	BMB	335.9994
5	Propene	4.242	157.819	592.100	BM	392.5621
6	iso-Butane	6.650	205.763	462.118	M	428.7082
7	n-Butane	7.908	212.772	386.272	MB	434.2286

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



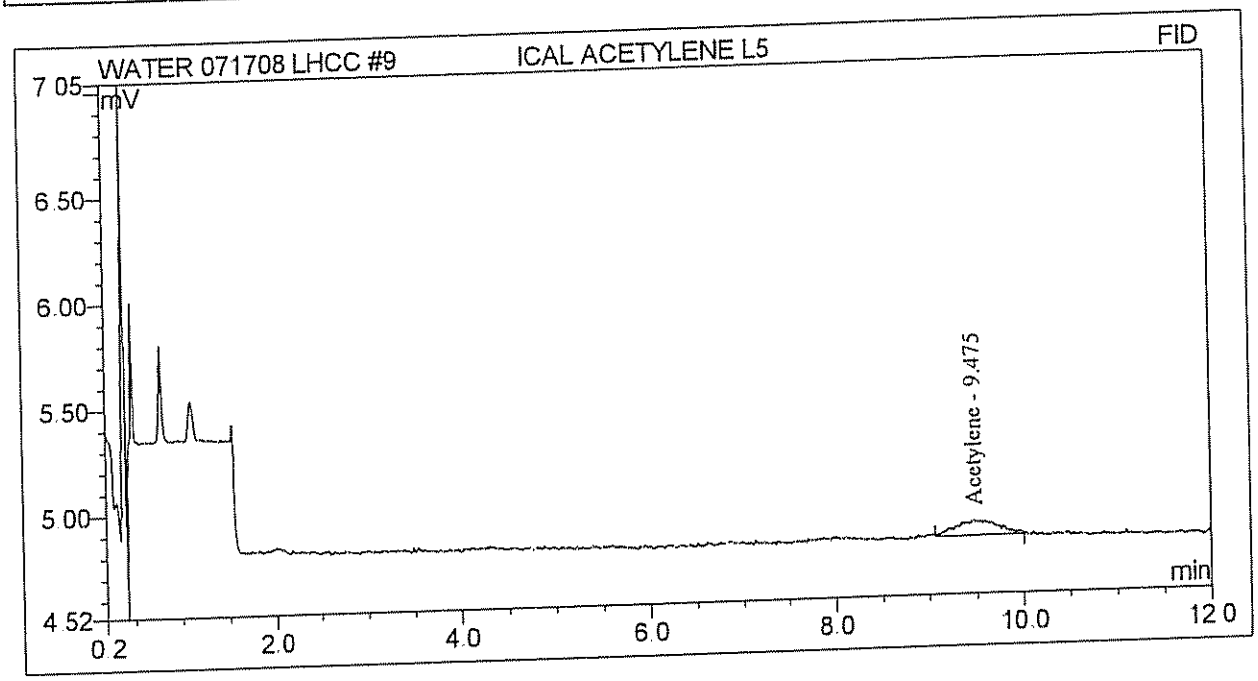
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL ACETYLENE L5	**Sequence No:**	9
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 9:19	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Acetylene	9.475	0.037	0.077	BMB	0.2506

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



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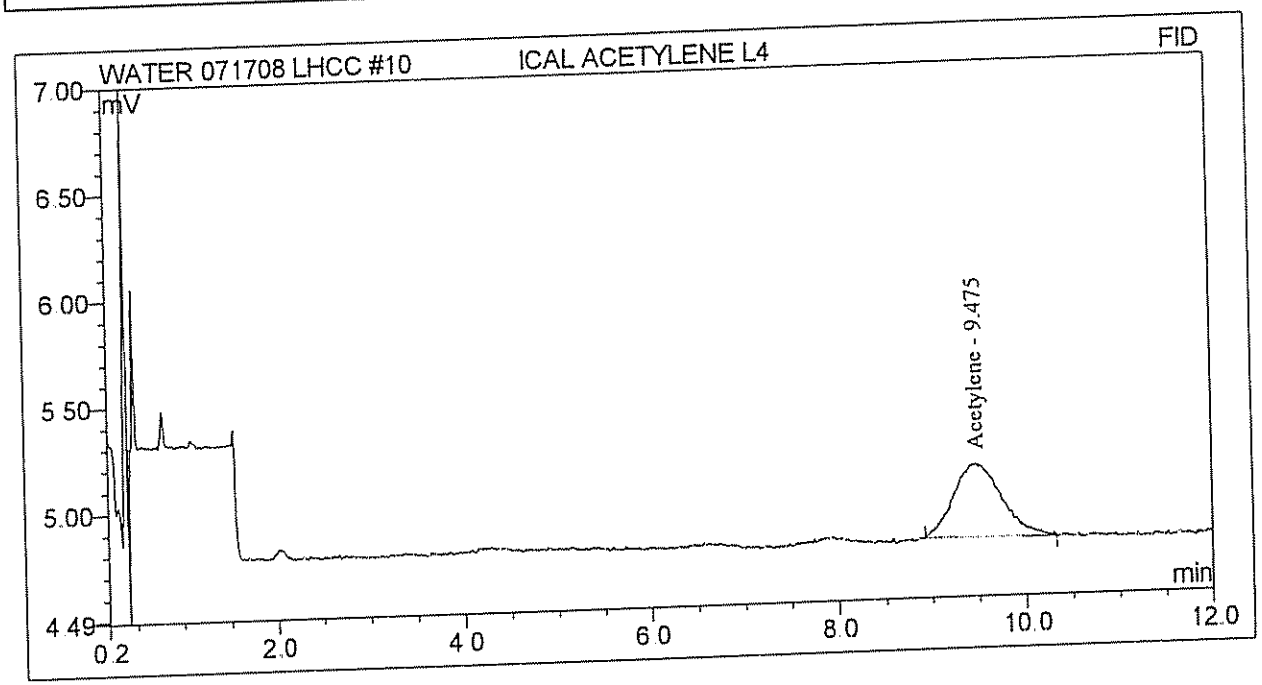
Sample Analysis Report

Sample Name:	ICAL ACETYLENE L4	**Sequence No:**	10
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1 0000
Date Time Collected:	7/17/2008 9:31	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Acetylene	9.475	0.203	0.345	BMB	1.3606

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



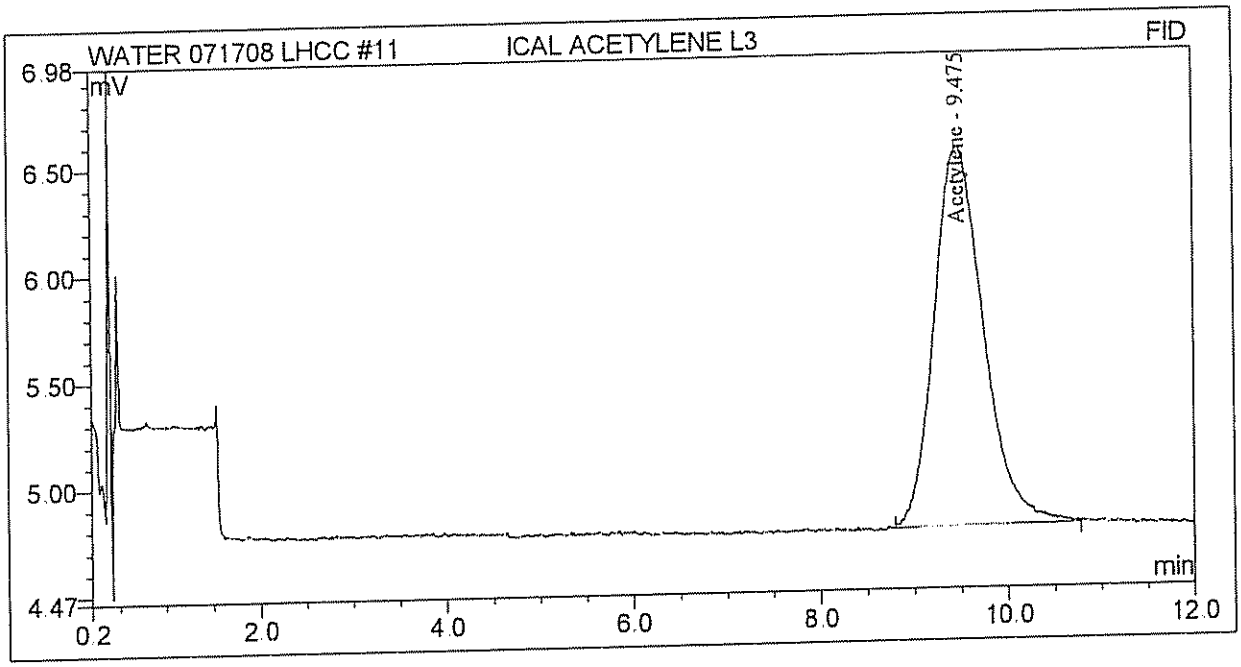
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL ACETYLENE L3	**Sequence No:**	11
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 9:44	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Acetylene	9.475	1.088	1.780	BMB	7.2759

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



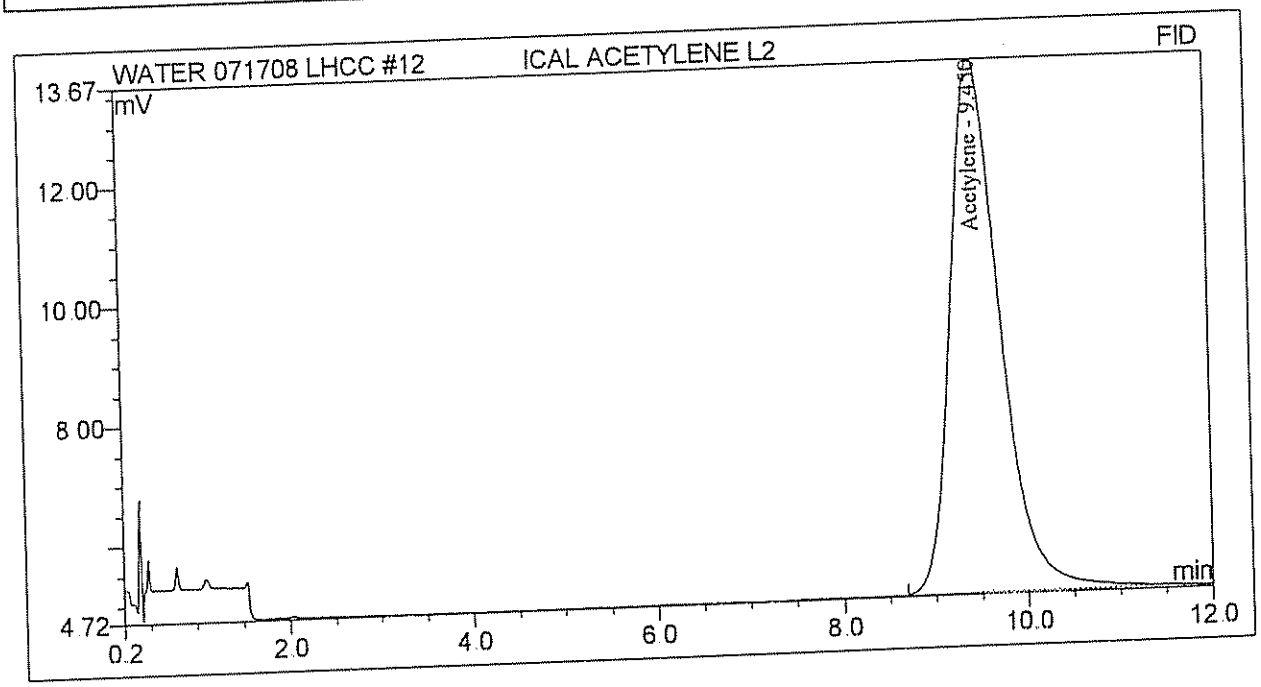
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL ACETYLENE L2	**Sequence No:**	12
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 9:57	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Acetylene	9.450	5.529	8.922	BMB	36.9000

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



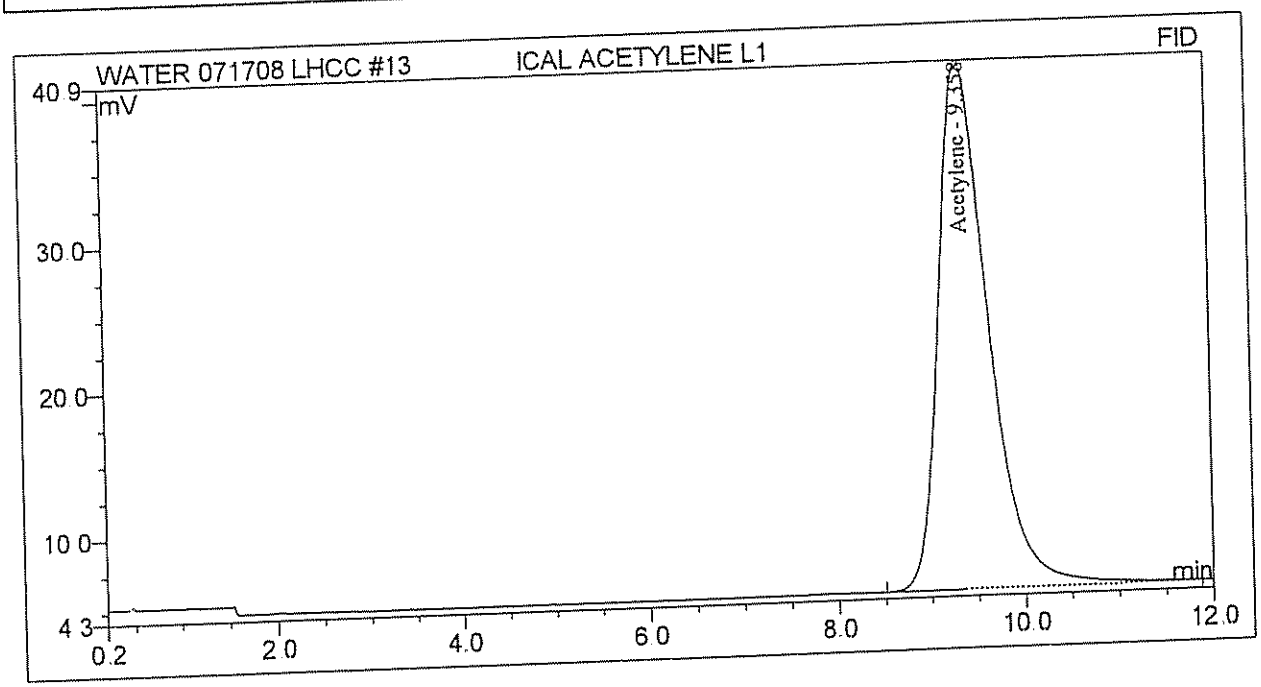
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL ACETYLENE L1	**Sequence No:**	13
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 10:10	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Acetylene	9.358	22.227	36.166	BMB	147.4584

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



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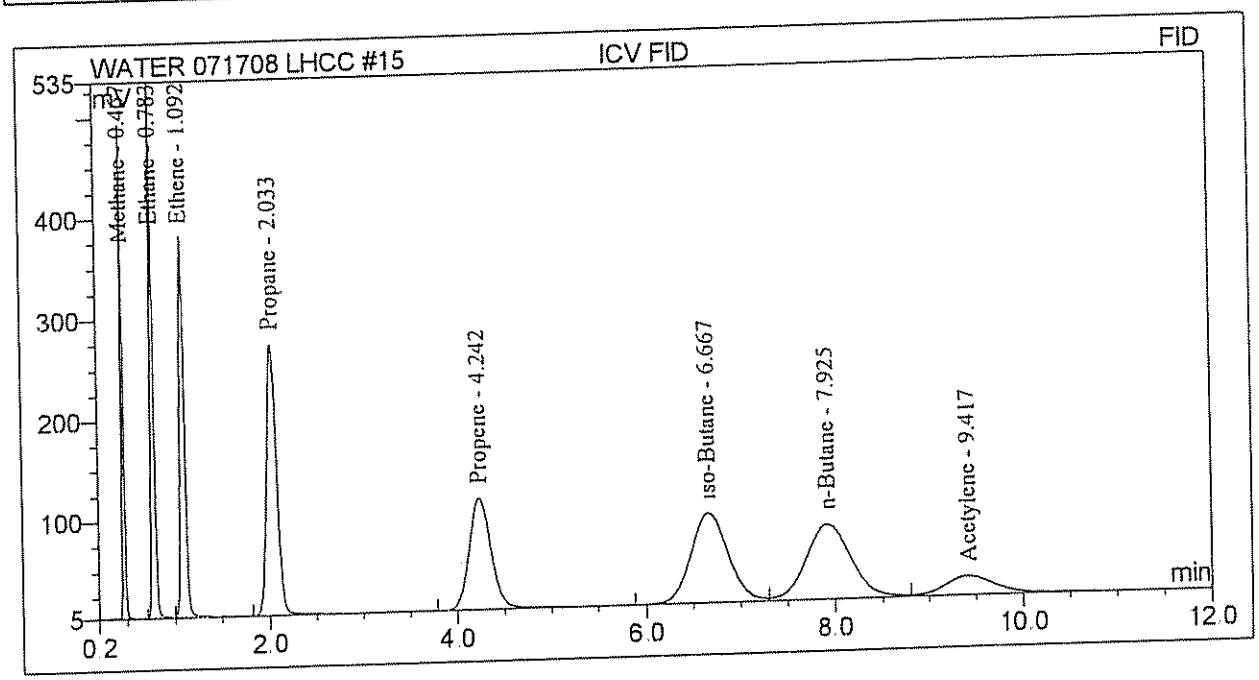
Sample Analysis Report

Sample Name:	ICV FID	**Sequence No:**	15
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 10:38	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	RA-02-16

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	O/R
1	Methane	0.467	11.499	488.445	BMB	25.1694	102
2	Ethane	0.783	21.254	529.644	bMb	47.8894	99
3	Ethene	1.092	21.631	377.138	bMB	54.1308	102
4	Propane	2.033	32.554	268.081	BMB	70.0978	102
5	Propene	4.242	29.607	110.030	BM	77.1887	98
6	iso-Butane	6.667	39.982	88.301	M	87.1551	104
7	n-Butane	7.925	40.274	73.820	M	85.7523	98
8	Acetylene	9.417	11.874	18.639	MB	79.0711	107

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



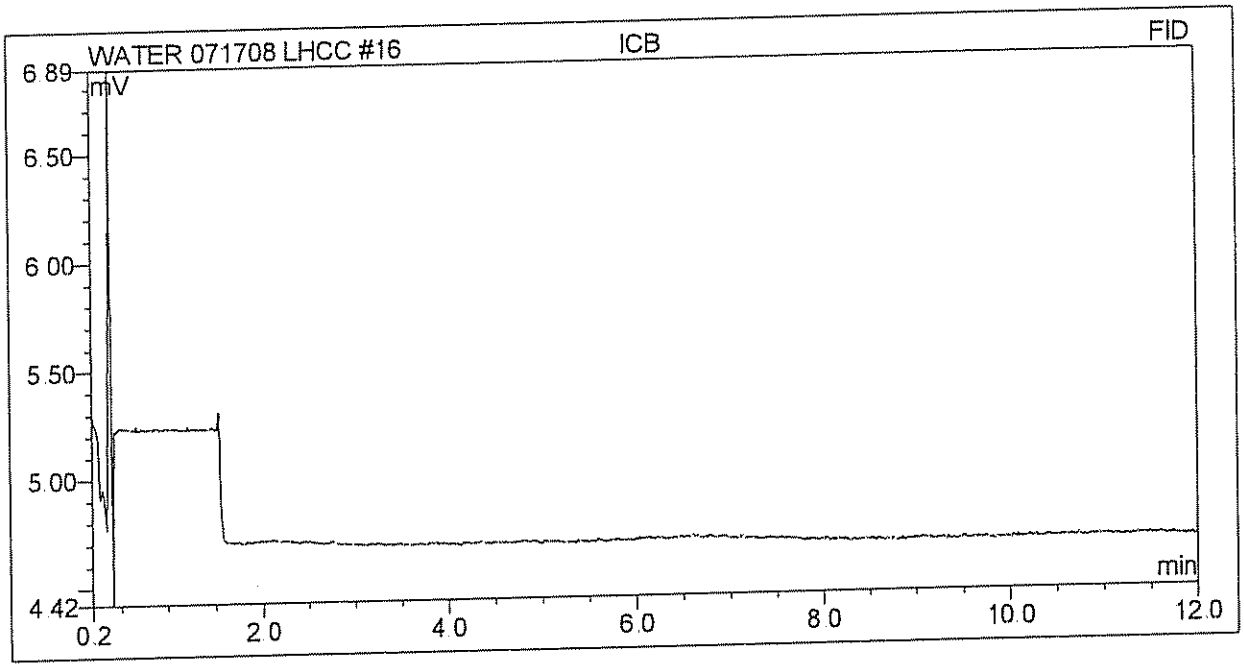
MICROSEEPS

Sample Analysis Report

Sample Name:	ICB	**Sequence No:**	16
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 10:54	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

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

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



Dissolved Permanent Gases 07/17/08

TCD Detection

No.	Ret.Time min	Peak Name	Cal.Type	R-Square %	Corr.Coeff. %	#Points	Slope	Curve
1	1.63	Methane	Lin	99.994	99.9971	5	0.0010	0.0000
2	2.25	Carbon Dioxide	Lin	99.999	99.9995	5	0.1567	0.0000
3	3.28	Ethene	Lin	99.999	99.9995	5	0.0007	0.0000
4	4.00	Ethane	Lin	99.997	99.9985	5	0.0008	0.0000

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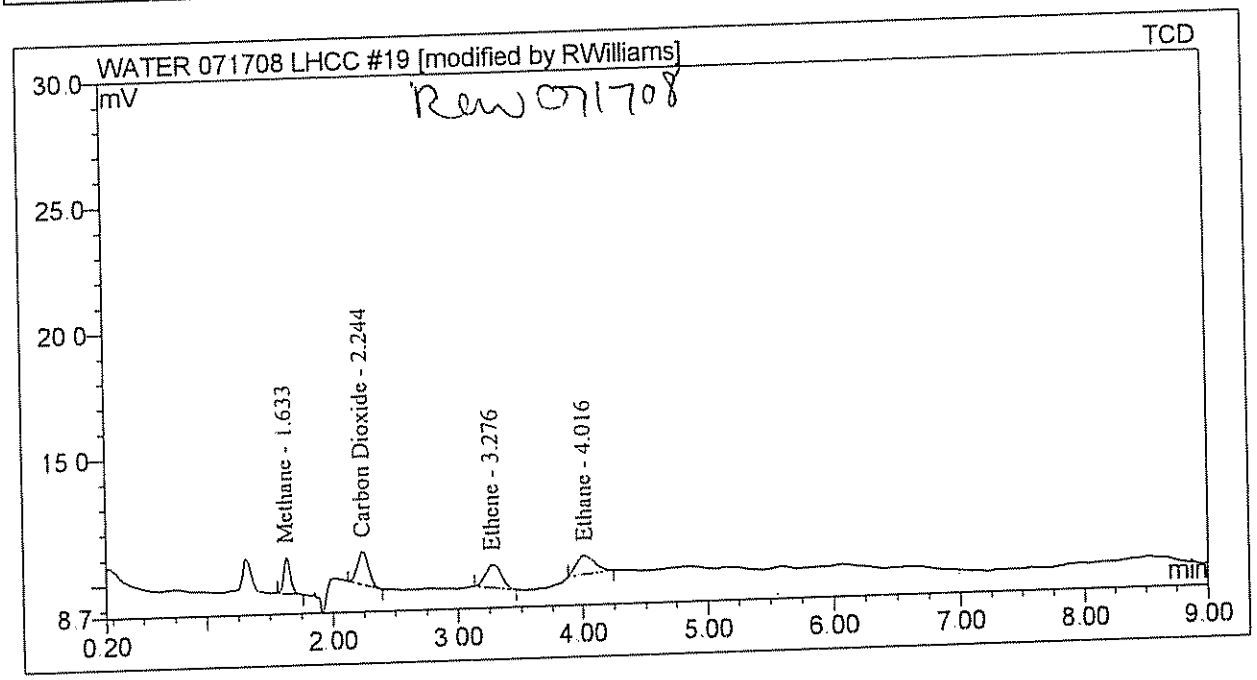
Sample Analysis Report

Sample Name:	ICAL TCD L5	**Sequence No:**	19
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxMEEC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1 0000
Date Time Collected:	7/17/2008 14:03	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	1.633	0.093	1.422	BMB*	94.1849
2	Carbon Dioxide	2.244	0.133	1.307	BMB	0.8516
3	Ethene	3.276	0.130	0.907	BMB*	198.7038
4	Ethane	4.016	0.126	0.744	BMB*	158.9750

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



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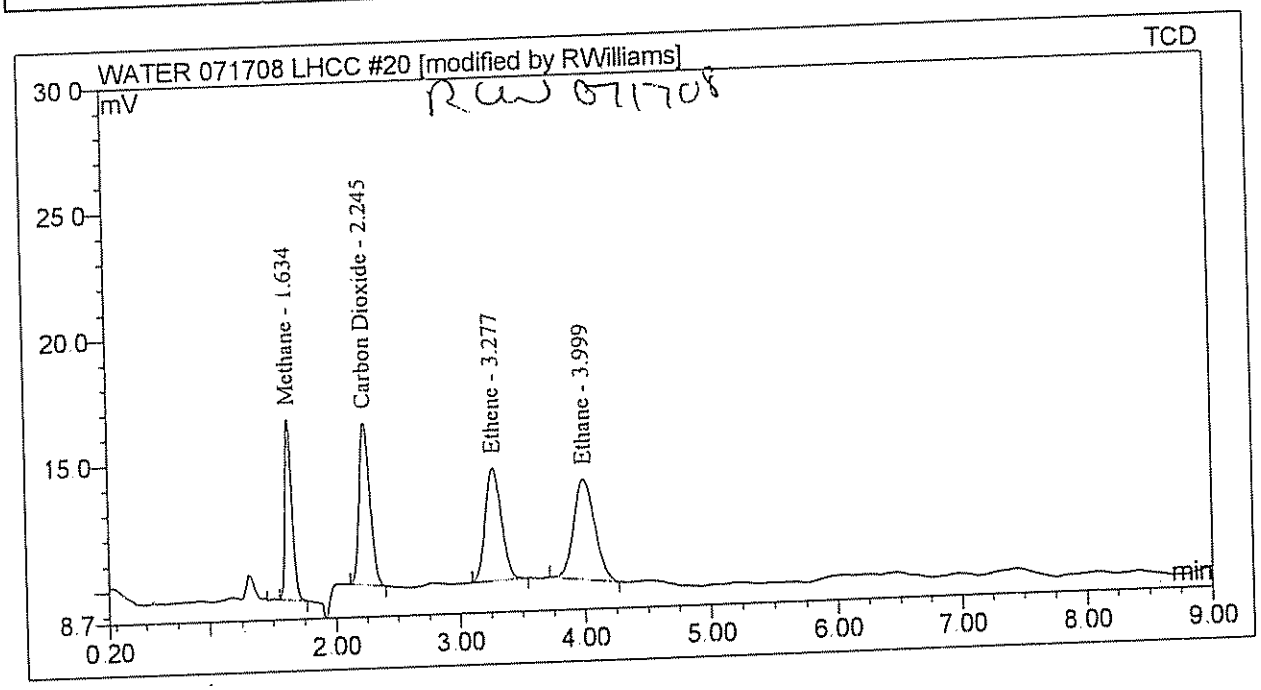
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD L4	**Sequence No:**	20
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxMEEC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 14:17	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	1.634	0.470	7.172	BMB	473.4325
2	Carbon Dioxide	2.245	0.647	6.449	BMB	4.1311
3	Ethene	3.277	0.667	4.484	BMB	1021.5032
4	Ethane	3.999	0.774	3.999	BMB*	978.3772

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



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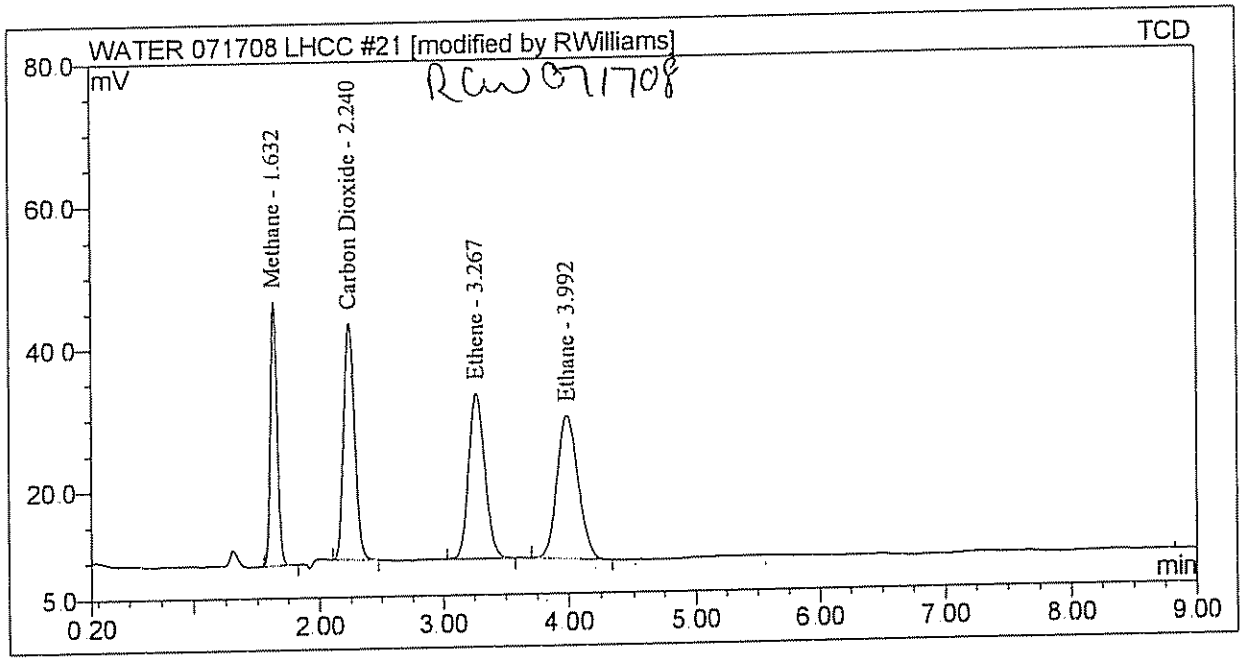
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD L3	**Sequence No:**	21
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxMEEC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 14:27	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	1.632	2.434	37.048	BMB	2452.5333
2	Carbon Dioxide	2.240	3.371	33.226	BMB*	21.5144
3	Ethene	3.267	3.493	23.066	BMB*	5350.6934
4	Ethane	3.992	3.845	20.001	BMB	4861.5888

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



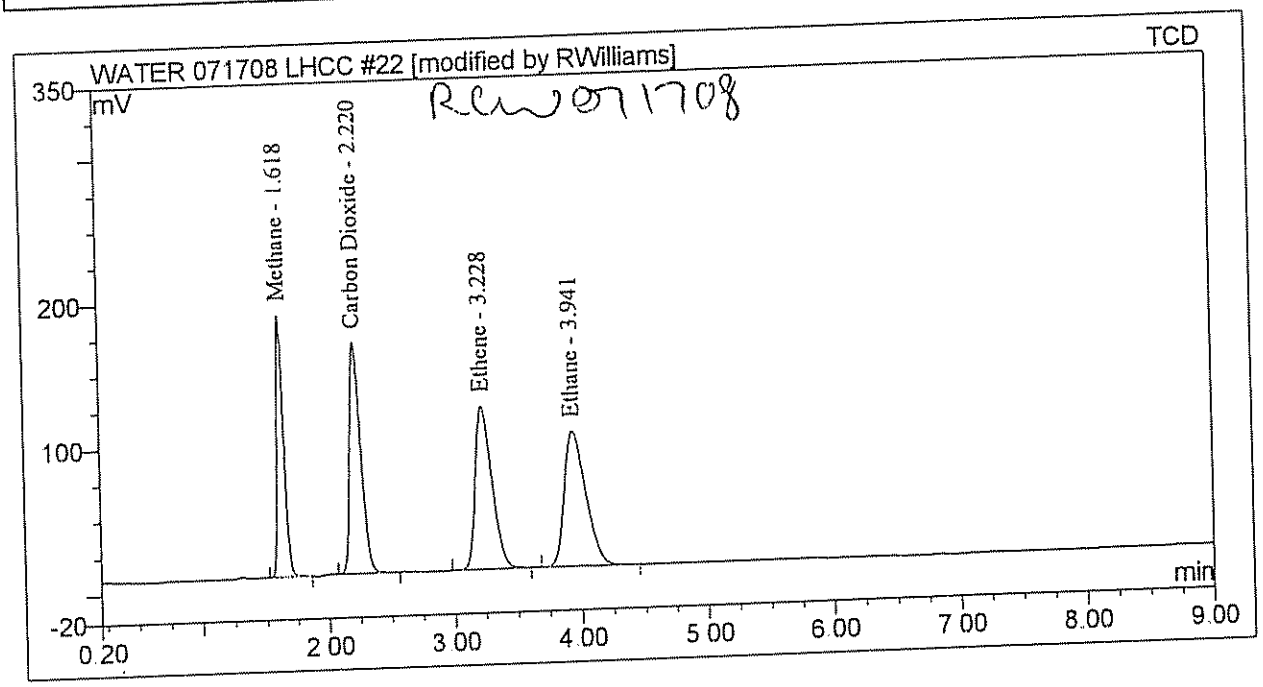
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD L2	**Sequence No:**	22
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxMEEC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1 0000
Date Time Collected:	7/17/2008 14:45	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	1.618	11.804	180.879	BMB	11893.0260
2	Carbon Dioxide	2.220	16.429	159.442	BMB	104.8392
3	Ethene	3.228	17.004	112.129	BMB*	26047.5146
4	Ethane	3.941	18.384	92.764	BMB	23244.6621

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



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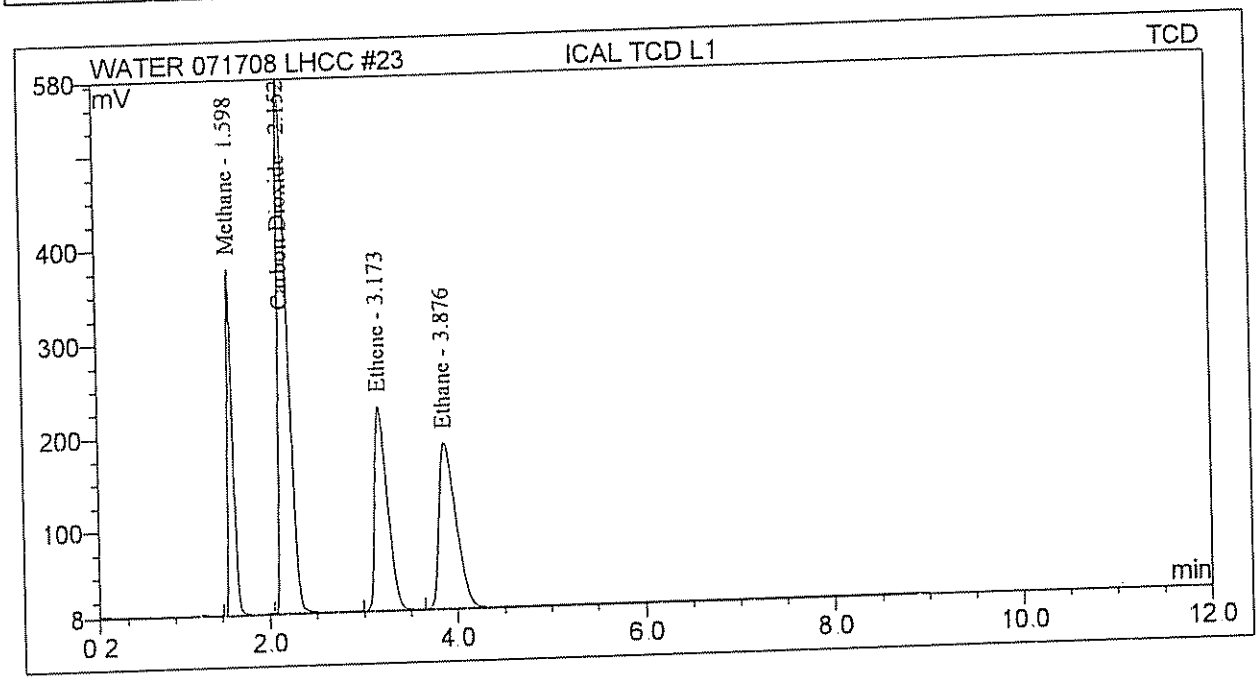
MICROSEEPS

Sample Analysis Report

Sample Name:	ICAL TCD L1	**Sequence No:**	23
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1 0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 14:56	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	1.598	23.940	369.972	BMB	24120.4953
2	Carbon Dioxide	2.152	66.645	570.603	BMB	425.2800
3	Ethene	3.173	34.117	218.047	BMB	52261.5782
4	Ethane	3.876	36.988	176.832	BMB	46768.0534

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



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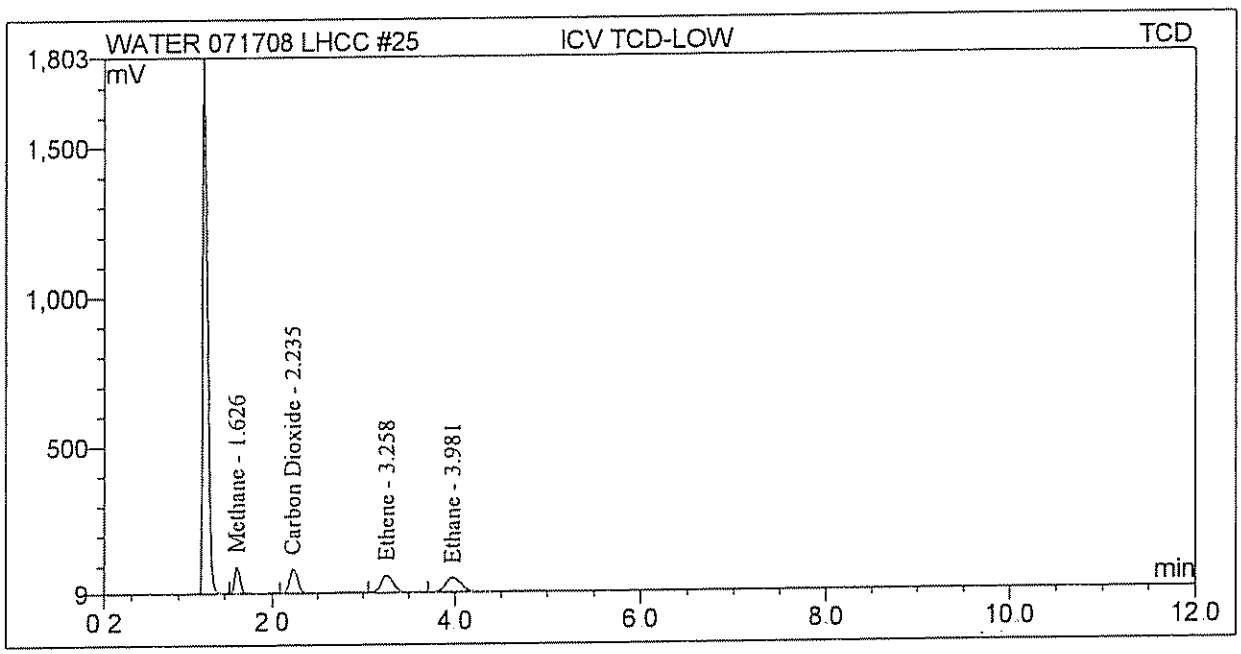
Sample Analysis Report

Sample Name:	ICV TCD-LOW	**Sequence No:**	25
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1 0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1 0000
Date Time Collected:	7/17/2008 15:50	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	RA-05-14 2X

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	%R
1	Methane	1.626	5.940	89.100	BMB	5984.3147	99
2	Carbon Dioxide	2.235	8.324	81.099	BMB	53.1154	100
3	Ethene	3.258	8.703	57.846	BMB	13331.3403	101
4	Ethane	3.981	9.349	48.170	BMB	11820.9748	100

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



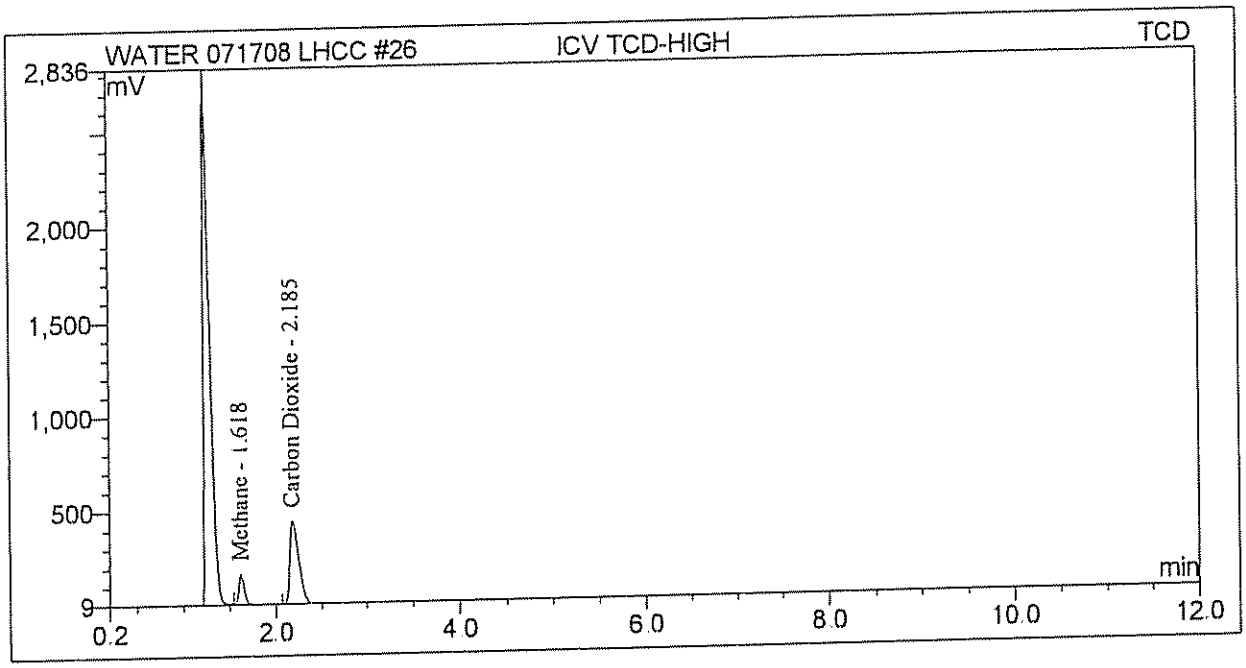
MICROSEEPS

Sample Analysis Report

Sample Name:	ICV TCD-HIGH	**Sequence No:**	26
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 16:03	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	RA-05-09

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount	O/SR
1	Methane	1.618	10.466	155.735	BMB	10544.7985	96
2	Carbon Dioxide	2.185	48.766	431.199	BMB	311.1872	97

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



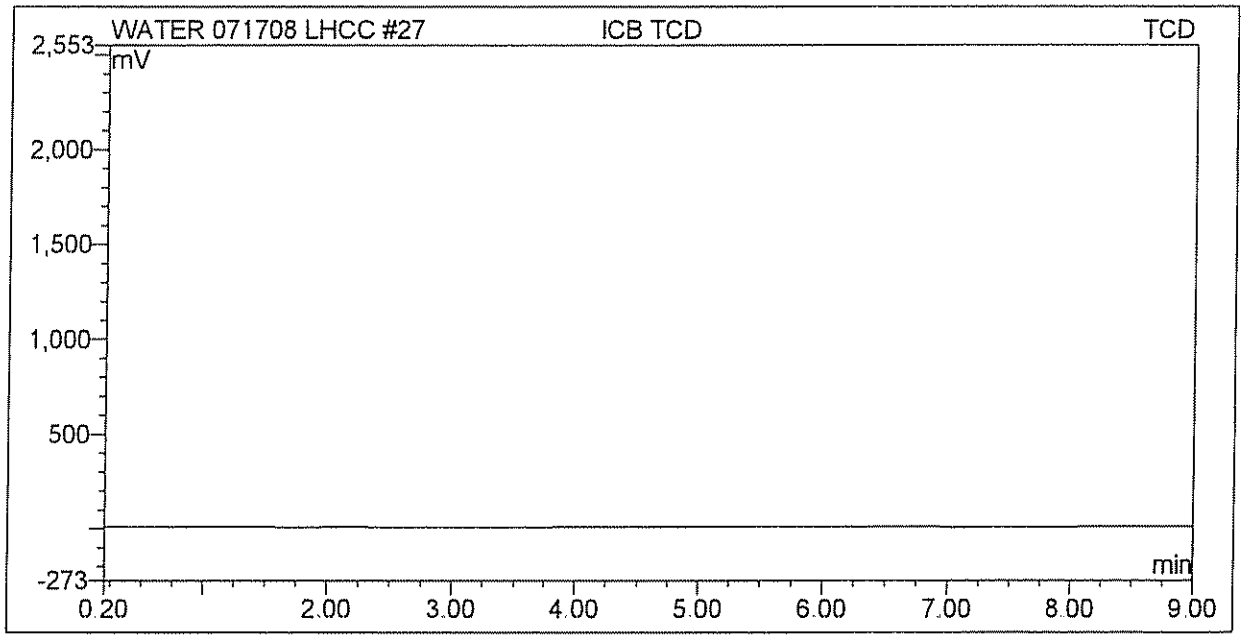
MICROSEEPS

Sample Analysis Report

Sample Name:	ICB TCD	**Sequence No:**	27
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/17/2008 16:15	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

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

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



Case Narrative/BIOREM 12

Analytical Method: AM20Gax **Batch Number** **Original Run Date:** 07/25/08

Light Hydrocarbons (C_1-C_4)	M080725001
Permanent Gases (CH_4, CO_2)	M080725002

1. Sample numbers:

P0807222 (01-02)

P0807266 (01-18)

2. Out of Control Event:

i. Manual integrations are due to the software not compensating for baseline flucuations.

3. Corrective Action Taken:

i. None

4. Result:

i. Analysis OK

5. Observations to support use of data: NA

i. None

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: RCW **Date:** 072508

Manual Integration Conducted? Yes

Reviewed by: _____ **Date:** 072808

Reviewed & Entered by: LIMS UPLOAD **Date:** 072508

Reviewed by: _____ **Date:** _____

Corrected by: _____ **Date:** _____

Microseeps, Inc

PROJECTS:
P0807222 (01-02)
P0807266 (01-18)

----- BIOREM 12 -----
----- QUALITY CONTROL -----
----- **DATE ANALYZED: 07/25/08** -----
----- MATRIX: WATER -----

Sequence File: WATER 062408 LHCC
Method File: WATER 062408 LHCC

CCV INITIAL: FID RA-02-17 5x / TCD RA-05-14 5x

COMPOUND	FILE ID	TRUE CONC.	MEASURED	%REC.
METHANE (FID)	59	4 957	4 952	**100**
ETHANE (FID)	59	9 63	9 41	**98**
ETHENE (FID)	59	10 61	10 66	**101**
PROPANE	59	13 71	13 84	**101**
PROPENE	59	15 80	15 22	**96**
iso-BUTANE	59	16 84	17 25	**102**
n-BUTANE	59	17 47	16 98	**97**
ACETYLENE	59	14 80	15 00	**101**
METHANE (TCD)	60	2440	2244	**92**
CARBON DIOXIDE	60	21 3	19 5	**91**
ETHENE (TCD)	60	5282	4943	**94**
ETHANE (TCD)	60	4729	4442	**94**

BLANK

COMPOUND	FILE ID	MEASURED
METHANE (FID)	64	ND
ETHANE (FID)	64	ND
ETHENE (FID)	64	ND
PROPANE	64	ND
PROPENE	64	ND
iso-BUTANE	64	ND
n-BUTANE	64	ND
ACETYLENE	64	ND
METHANE (TCD)	64	ND
CARBON DIOXIDE	64	ND
ETHENE (TCD)	64	ND
ETHANE (TCD)	64	ND

LABORATORY CONTROL SAMPLE - High Level

COMPOUND		TRUE CONC.	MEASURED	% REC.
ETHANE (FID)	62	41 68	47 22	**113**
ETHENE (FID)	62	38 89	43 23	**111**
PROPANE	62	61 13	68 51	**112**
PROPENE	62	58 33	61 40	**105**
iso-BUTANE	62	80 58	90 80	**113**
n-BUTANE	62	80 58	88 58	**110**
ACETYLENE	62	36 10	37 60	**104**
METHANE (TCD)	62	822 8	837 2	**102**
CARBON DIOXIDE	62	129 3	126 5	**98**

LABORATORY CONTROL SAMPLE DUPLICATE - High Level

COMPOUND	FILE ID	TRUE CONC.	MEASURED	% REC.	RPD
ETHANE (FID)	63	41 68	47 73	**115**	**1.08**
ETHENE (FID)	63	38 89	43 45	**112**	**0.51**
PROPANE	63	61 13	69 22	**113**	**1.04**
PROPENE	63	58 33	62 29	**107**	**1.44**
iso-BUTANE	63	80 58	91 61	**114**	**0.89**
n-BUTANE	63	80 58	89 51	**111**	**1.05**
ACETYLENE	63	36 10	39	**109**	**4.14**
METHANE (TCD)	63	822 8	847 7	**103**	**1.25**
CARBON DIOXIDE	63	129 3	130 0	**101**	**2.73**

CCV FINAL: FID RA-02-17/ TCD RA-05-14 2x

COMPOUND	FILE ID	TRUE CONC.	MEASURED	%REC.
METHANE (FID)	110	24 786	25 151	**101**
ETHANE (FID)	110	48 14	47 84	**99**
ETHENE (FID)	110	53 03	54 08	**102**
PROPANE	110	68 54	70	**102**
PROPENE	110	78 98	77	**98**
iso-BUTANE	110	84 20	87	**104**
n-BUTANE	110	87 37	85	**98**
ACETYLENE	110	74 02	82	**111**
METHANE (TCD)	111	6075	5758	**95**
CARBON DIOXIDE	111	53 3	50 9	**96**
ETHENE (TCD)	111	13204	12903	**98**
ETHANE (TCD)	111	11824	11429	**97**

ANALYST: RCW 072508

REVIEW

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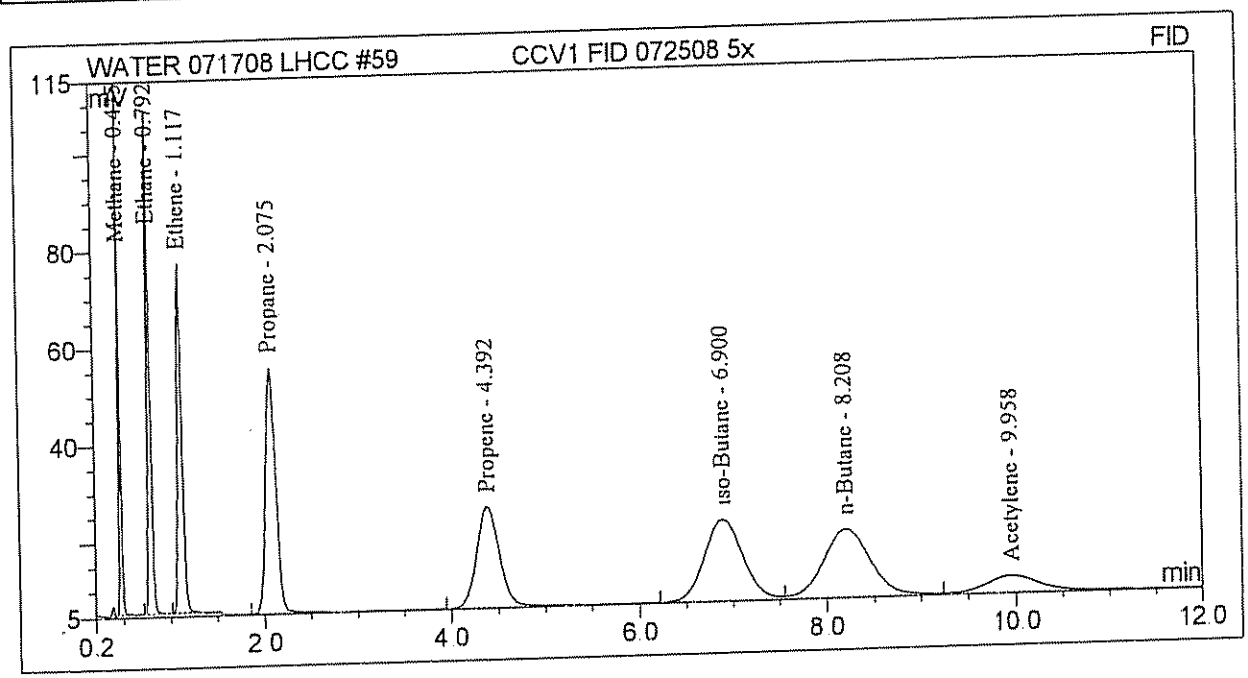
Sample Analysis Report

Sample Name:	CCV1 FID 072508 5x	**Sequence No:**	59
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1 0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1 0000
Date Time Collected:	7/25/2008 8:04	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	2.236	109.362	BMB	4.9521
2	Ethane	0.792	4.117	103.384	BMb	9.4102
3	Ethene	1.117	4.205	71.863	bMB	10.6640
4	Propane	2.075	6.332	50.449	BMB	13.8362
5	Propene	4.392	5.784	20.667	BMB	15.2243
6	iso-Butane	6.900	7.839	16.656	BM	17.2509
7	n-Butane	8.208	7.908	13.920	M	16.9825
8	Acetylene	9.958	2.245	3.427	MB	15.0007

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



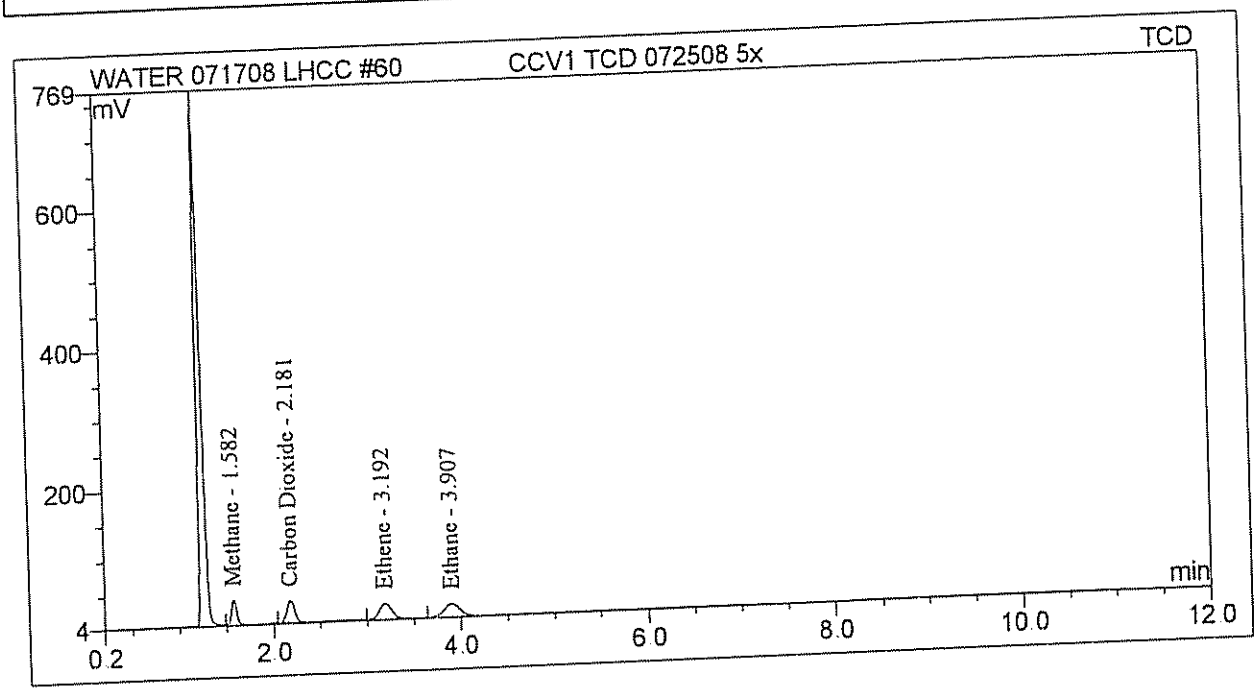
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV1 TCD 072508 5x	**Sequence No:**	60
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 8:19	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	1.582	2.227	35.201	BMB	2244.0659
2	Carbon Dioxide	2.181	3.052	31.011	BMB	19.4732
3	Ethene	3.192	3.227	22.073	BMB	4942.6340
4	Ethane	3.907	3.513	18.547	BMB	4442.3742

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



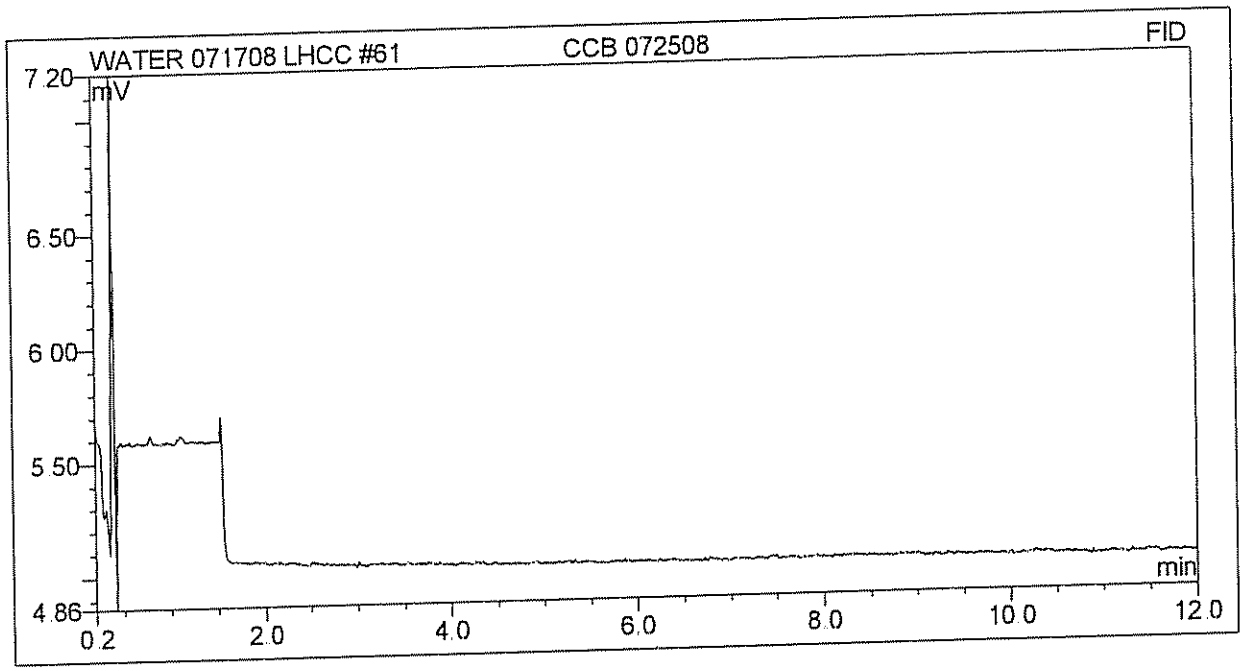
MICROSEEPS

Sample Analysis Report

Sample Name:	CCB 072508	**Sequence No:**	61
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 8:32	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

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

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



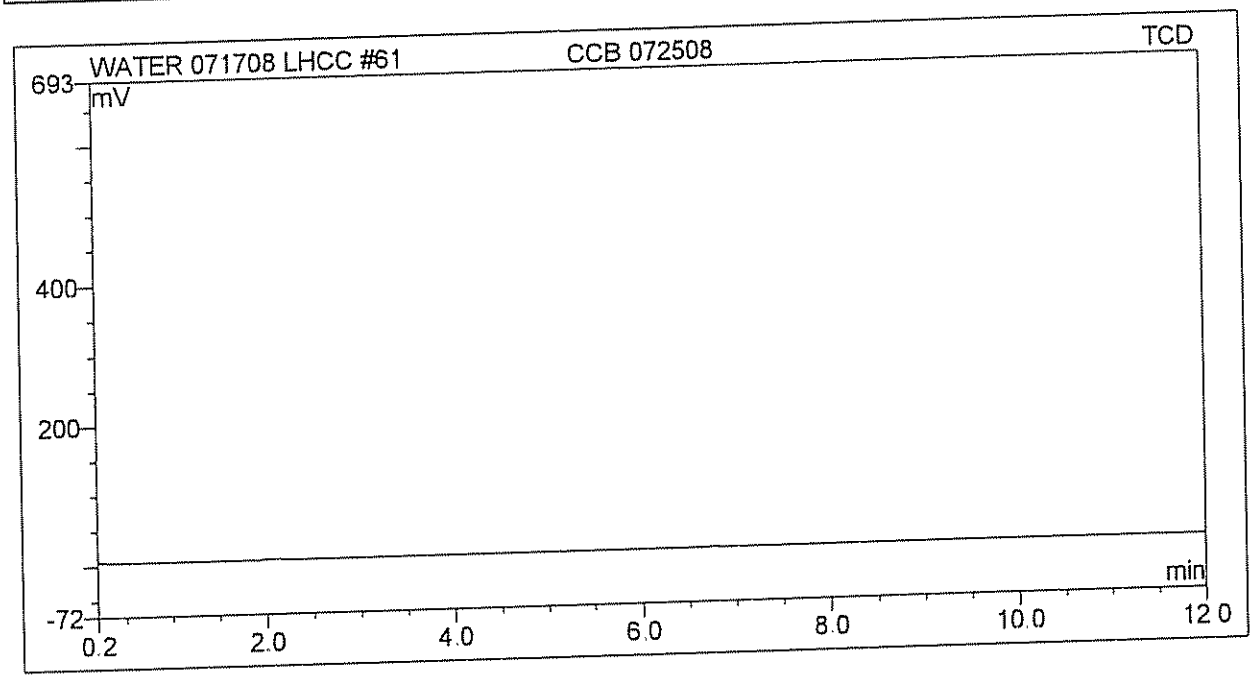
MICROSEEPS

Sample Analysis Report

Sample Name:	CCB 072508	**Sequence No:**	61
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 8:32	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

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

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



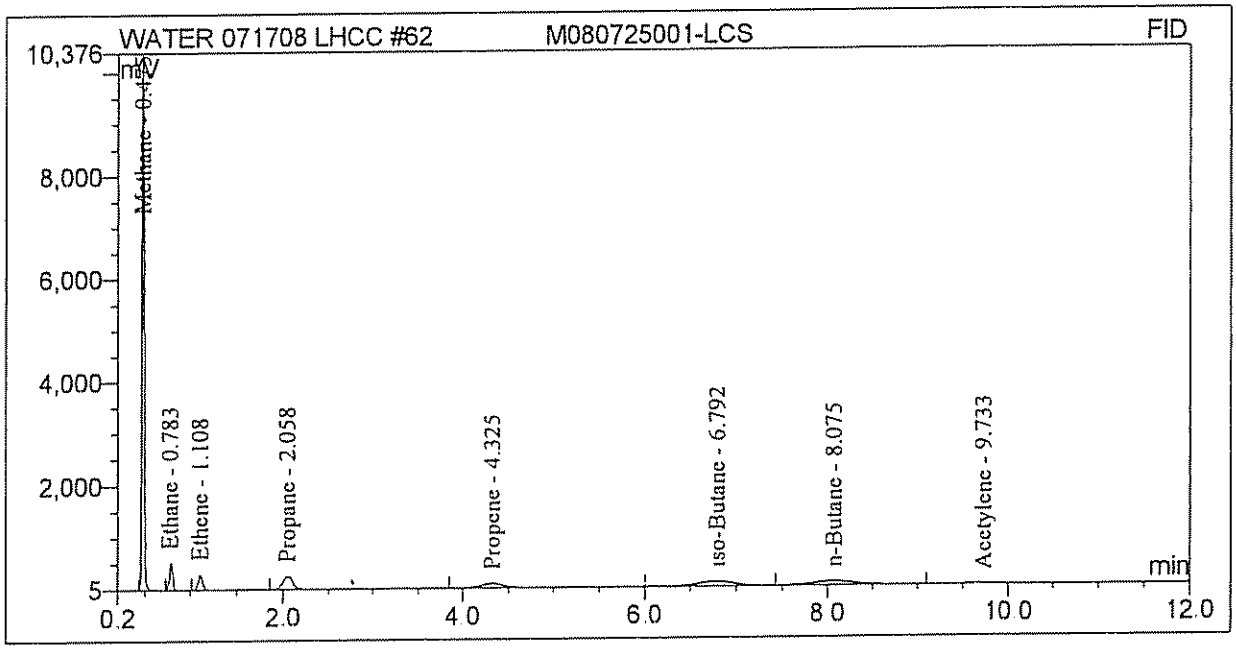
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725001-LCS	**Sequence No:**	62
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1 0000
Date Time Collected:	7/25/2008 8:46	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	295.196	10370.216	BMb	~~505.5903~~ RCW 072508
2	Ethane	0.783	20.950	528.680	bMB	47.2152
3	Ethene	1.108	17.218	299.611	BMB	43.2311
4	Propane	2.058	31.803	256.366	BMB	68.5094
5	Propene	4.325	23.496	84.956	BM	61.4038
6	iso-Butane	6.792	41.674	90.396	M	90.7982
7	n-Butane	8.075	41.617	74.353	M	88.5791
8	Acetylene	9.733	5.634	8.450	MB	37.6012

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



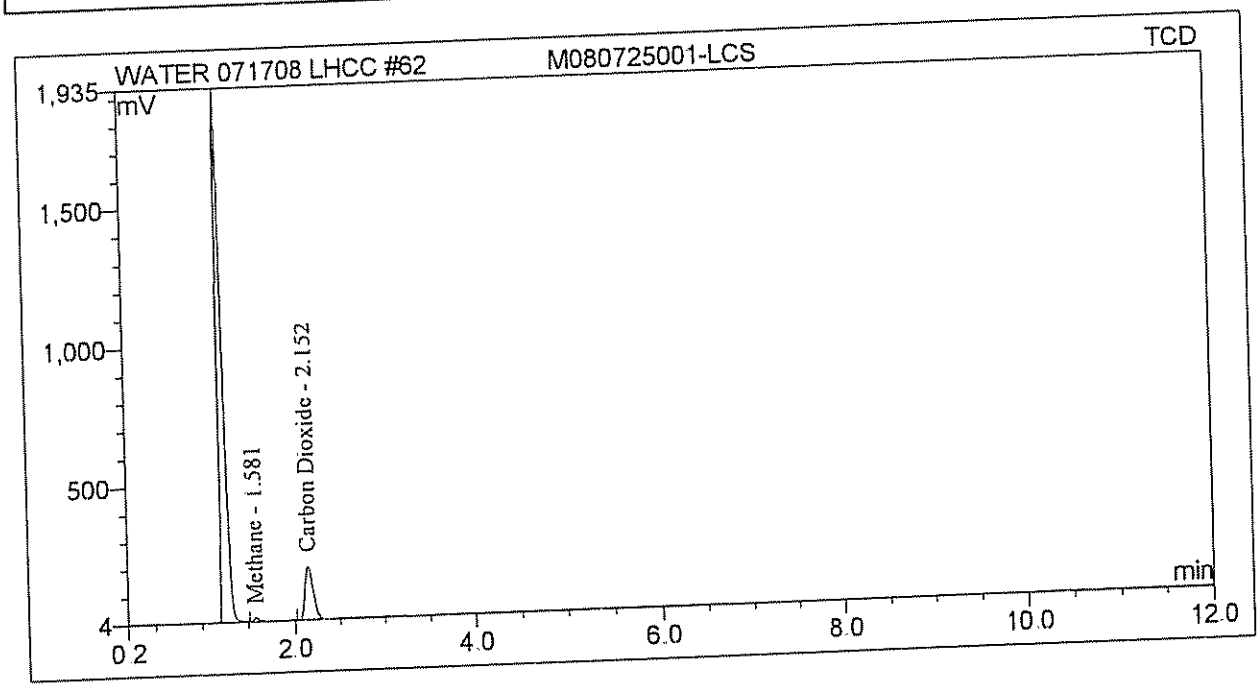
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725001-LCS	**Sequence No:**	62
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 8:46	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	1.581	0.831	13.349	BMB	837.1777
2	Carbon Dioxide	2.152	19.828	194.007	BMB	126.5305

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



current date: 7/25/2008
current time: 8:59 AM

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80

MICROSEEPS

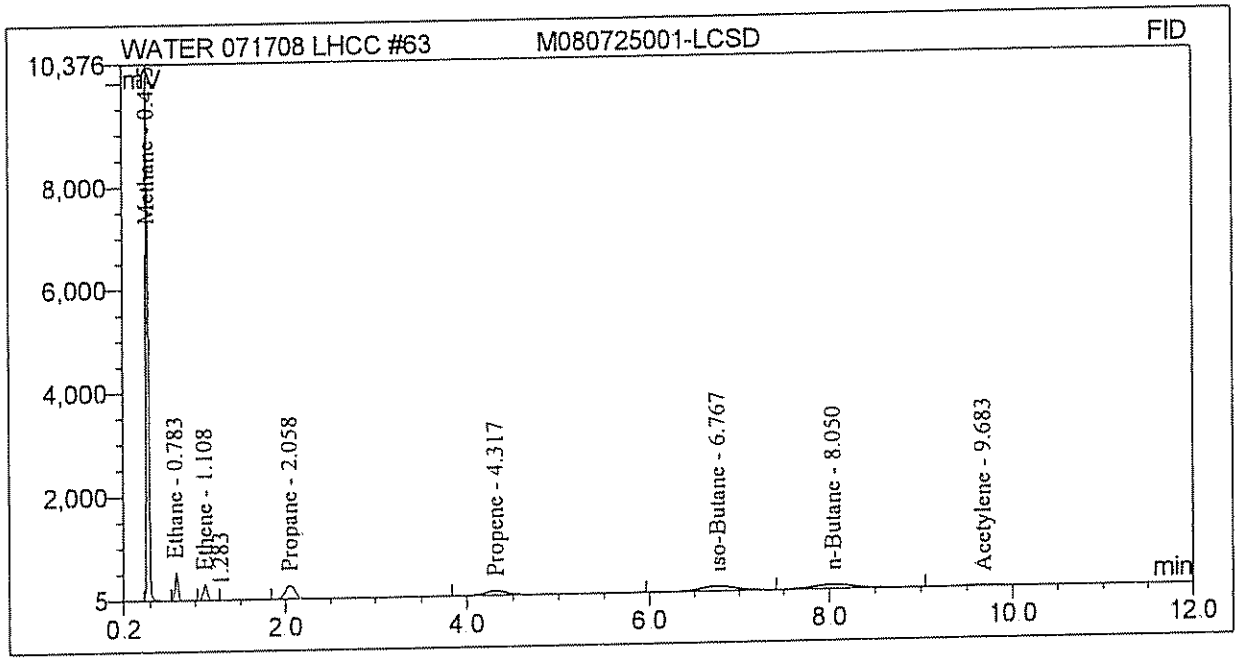
Sample Analysis Report

Sample Name:	M080725001-LCSD	**Sequence No:**	63
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 9:00	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	295.189	10370.225	BMb	~~505.5796~~
2	Ethane	0.783	21.181	536.476	bMB	47.7266
3	Ethene	1.108	17.308	303.862	BMb	43.4524
5	Propane	2.058	32.140	259.942	BMB	69.2228
6	Propene	4.317	23.840	86.952	BM	62.2941
7	iso-Butane	6.767	42.052	91.439	M	91.6126
8	n-Butane	8.050	42.060	75.630	M	89.5117
9	Acetylene	9.683	5.873	8.820	MB	39.1912

RCW 07258

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



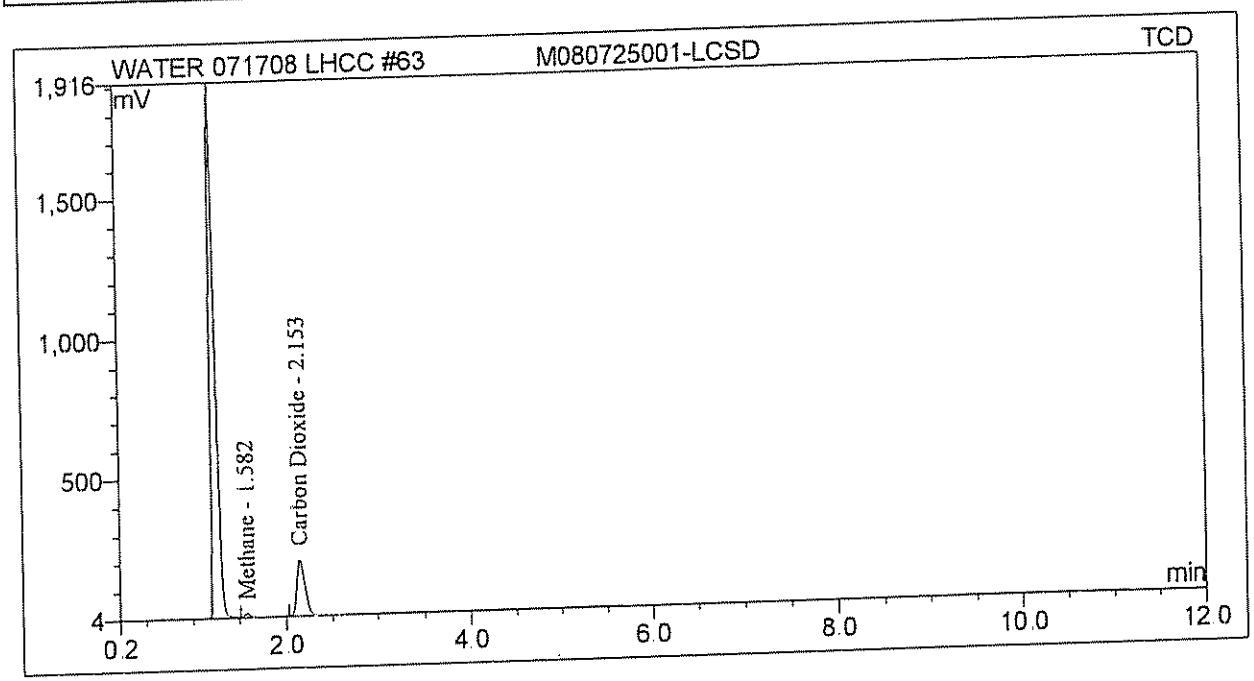
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725001-LCSD	**Sequence No:**	63
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 9:00	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	1.582	0.841	13.527	BMB	847.7409
2	Carbon Dioxide	2.153	20.378	198.958	BMB	130.0371

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



current date: 7/25/2008
current time: 9:21 AM

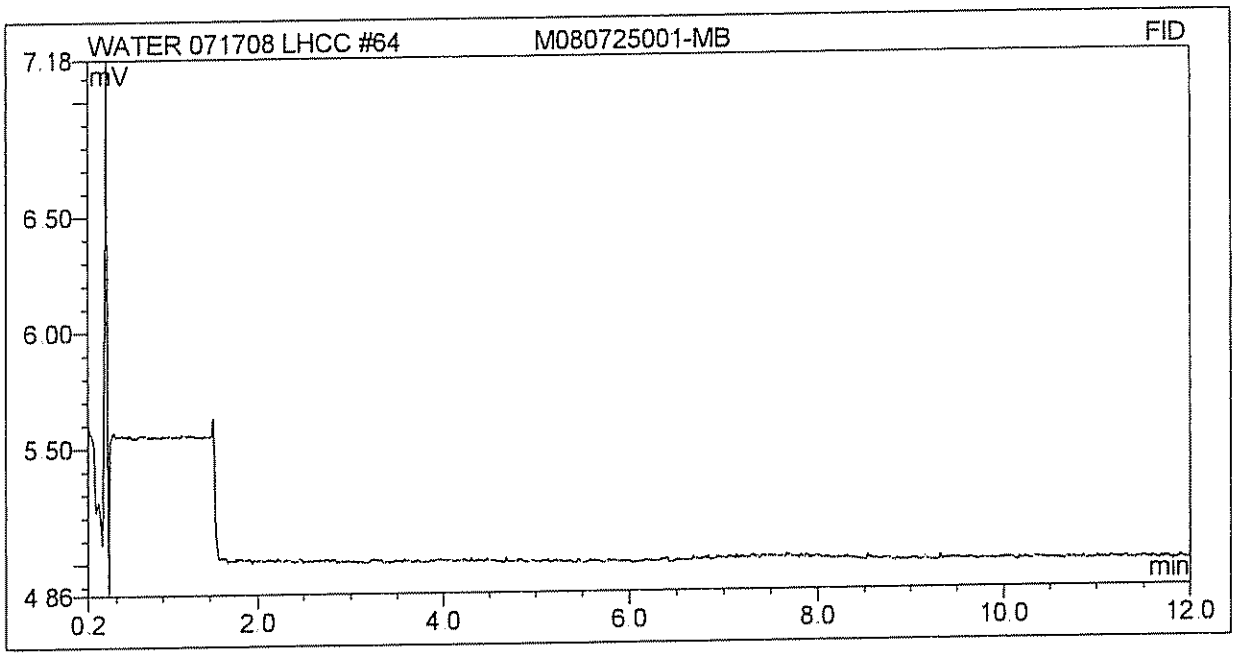
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725001-MB	**Sequence No:**	64
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 9:15	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

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

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



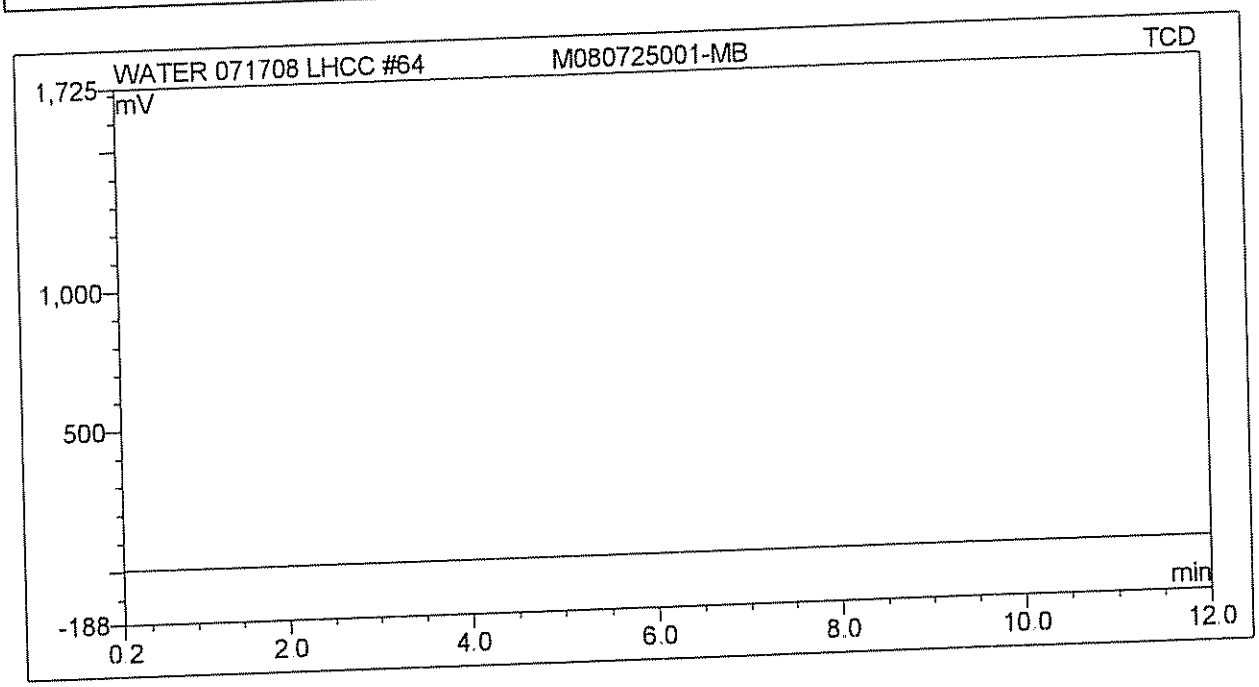
MICROSEEPS

Sample Analysis Report

Sample Name:	M080725001-MB	**Sequence No:**	64
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1 0000
Date Time Collected:	7/25/2008 9:15	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

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

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



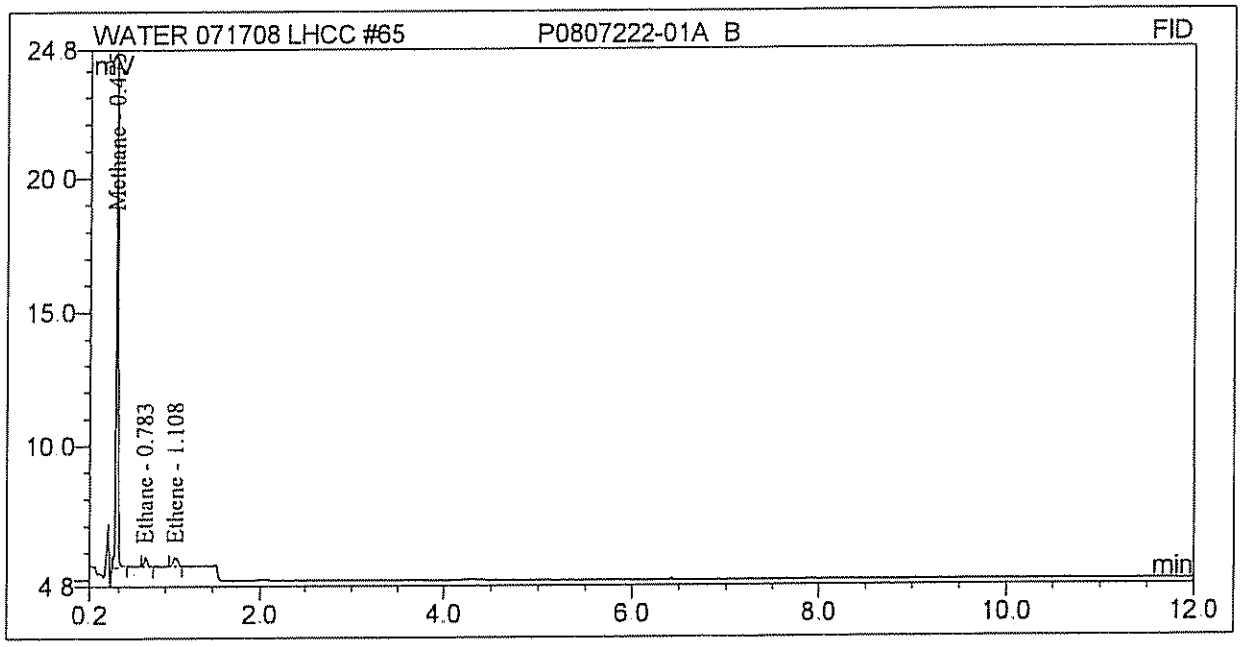
MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-01A B	**Sequence No:**	65
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1 0000
Date Time Collected:	7/25/2008 9:28	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	0.386	19.292	BMB	0.8564
2	Ethane	0.783	0.014	0.345	BMB	0.0317
3	Ethene	1.108	0.018	0.319	BMB	0.0455

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



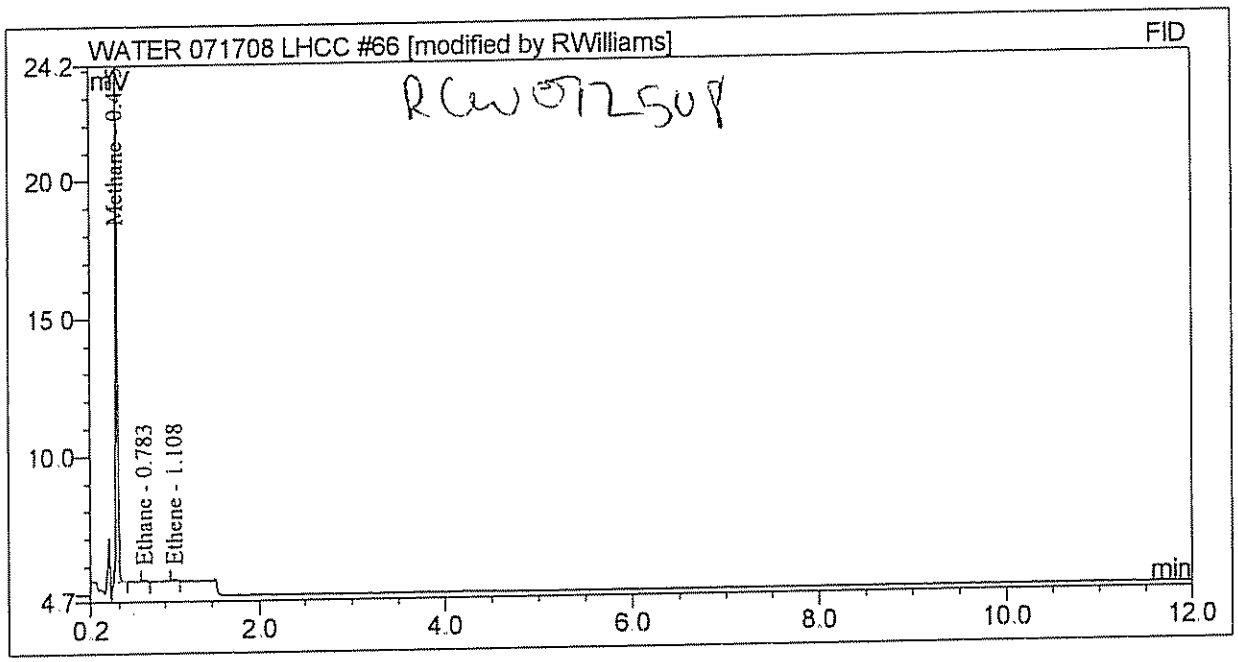
MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-02A B	**Sequence No:**	66
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 9:44	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	0.372	18.718	BMB*	0.8264
2	Ethane	0.783	0.004	0.091	BMB*	0.0091
3	Ethene	1.108	0.004	0.073	BMB*	0.0095

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



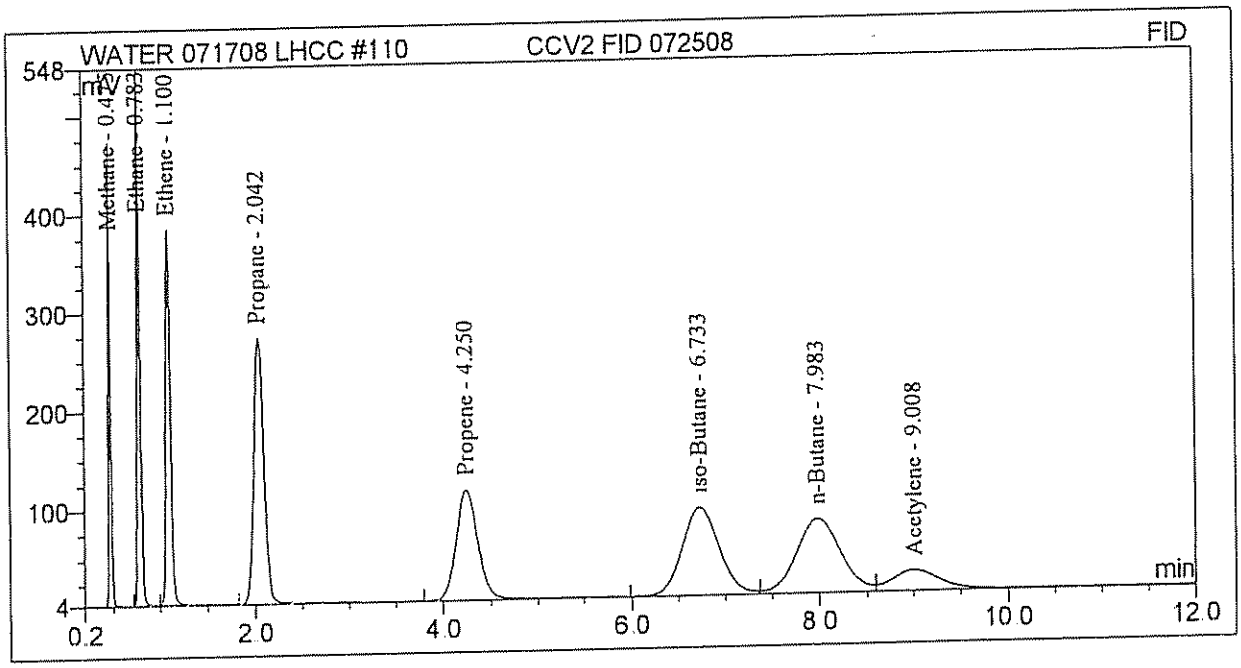
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV2 FID 072508	**Sequence No:**	110
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1.0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 19:41	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	0.475	11.490	469.705	BMB	25.1509
2	Ethane	0.783	21.233	542.713	BMb	47.8411
3	Ethene	1.100	21.610	379.943	bMB	54.0805
4	Propane	2.042	32.529	268.908	BMB	70.0440
5	Propene	4.250	29.634	111.298	BM	77.2571
6	iso-Butane	6.733	40.015	88.419	M	87.2266
7	n-Butane	7.983	40.066	74.559	M	85.3123
8	Acetylene	9.008	12.388	20.660	MB	82.4756

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)



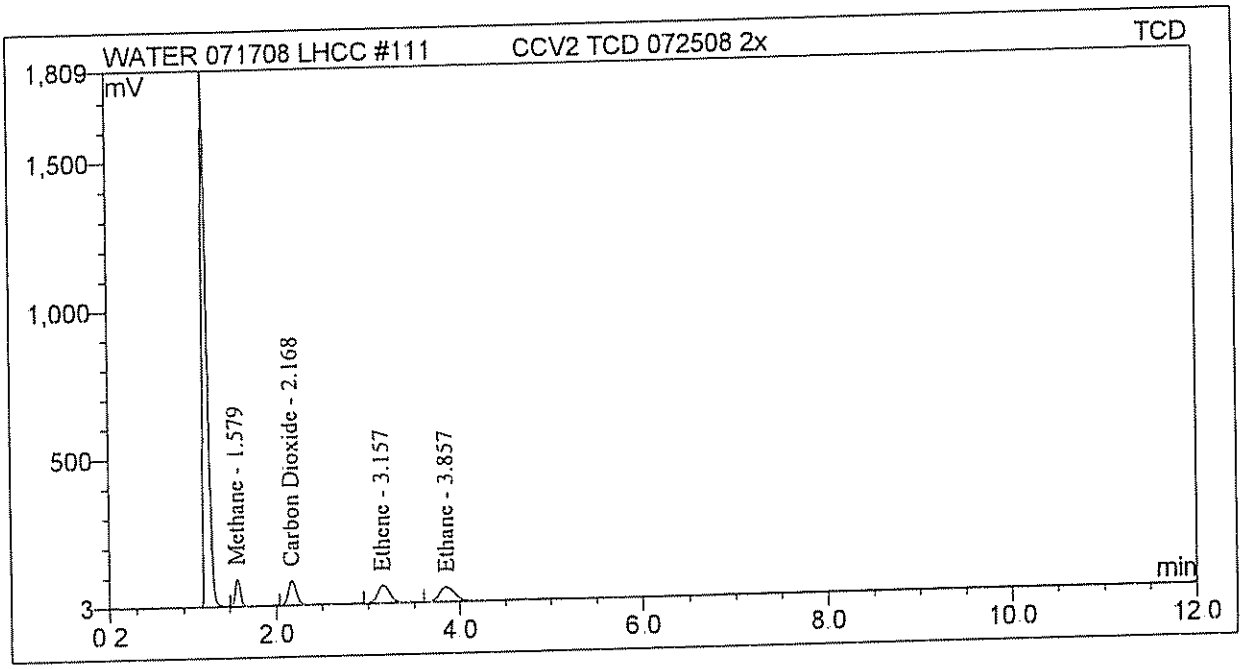
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV2 TCD 072508 2x	**Sequence No:**	111
Sequence Name:	WATER 071708 LHCC	**Instrument ID:**	BIOREM12
Program Method:	AM20GAxLHCC	**Injection vol.:**	1 0
Quantitation Method:	WATER 071708 LHCC	**Dilution Factor:**	1.0000
Date Time Collected:	7/25/2008 19:55	**Analytical Method:**	PM01C/AM20GAx
System Operator:	RWilliams	**Comment:**	

Peak No.	Component Name	Retention Time	Area mV*min	Height mV	Type	Amount
1	Methane	1.579	5.716	89.322	BMB	5758.4944
2	Carbon Dioxide	2.168	7.984	80.349	BMB	50.9472
3	Ethene	3.157	8.423	57.512	BMB	12902.9917
4	Ethane	3.857	9.039	47.673	BMB	11428.7330

FID UNITS (Methane thru Acetylene ug/L)
TCD UNITS (Methane, Ethane, Ethene ug/L, CO2 mg/L)

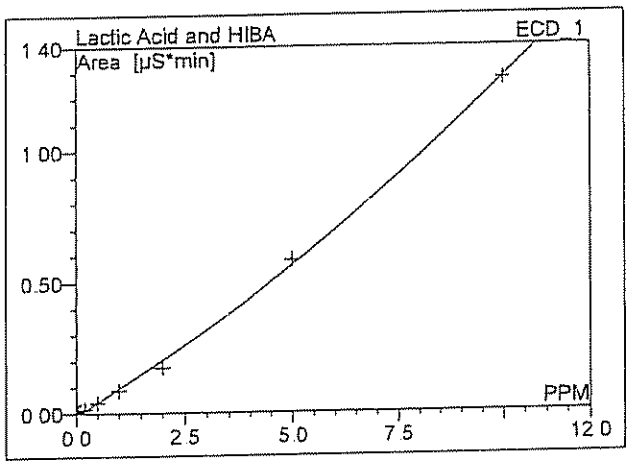


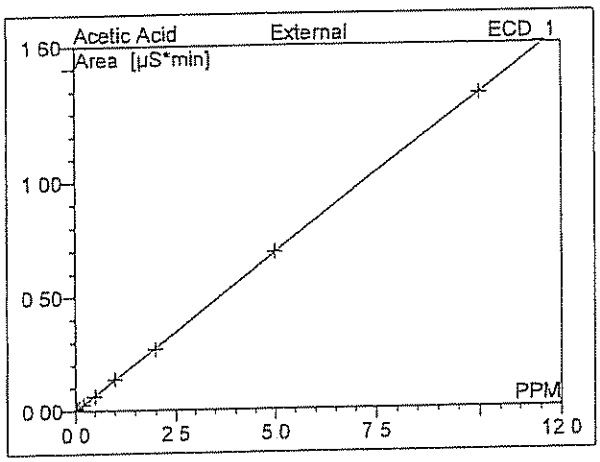
current date: 7/25/2008
current time: 8:08 PM

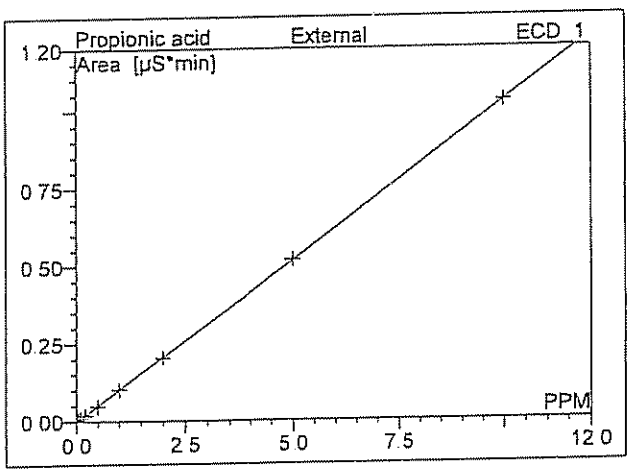
Volatile Fatty Acid Data

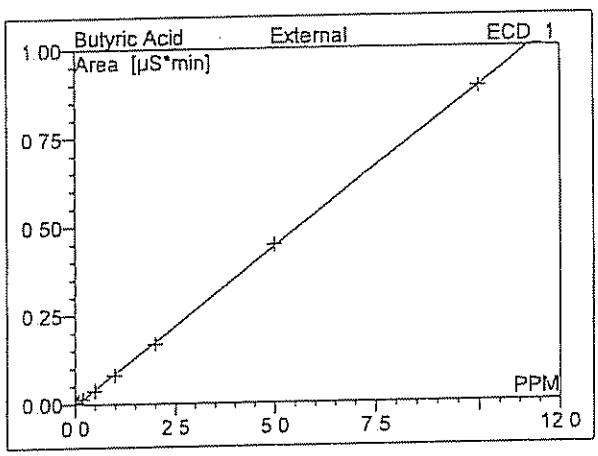
Calibration Batch Report

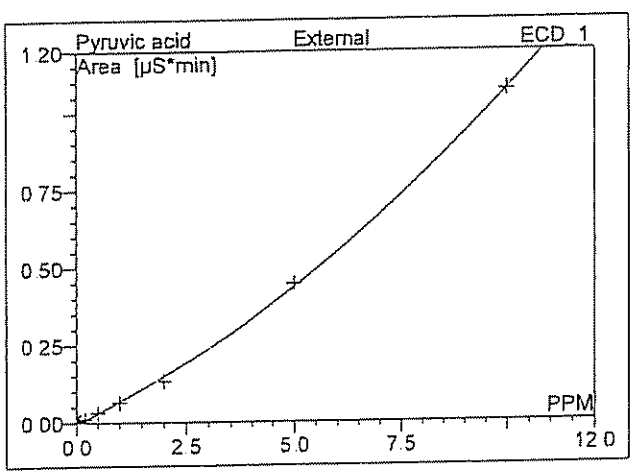
Sequence:	LLVFA 070208	Inj. Vol.	1.0
Program:	PWM070715AA	Operator:	SEMIVOL13
Inj. Date/Time:	07/02/08	Run Time:	30.00

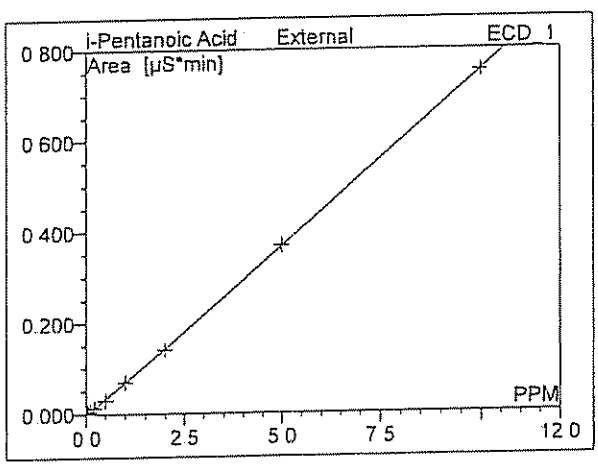






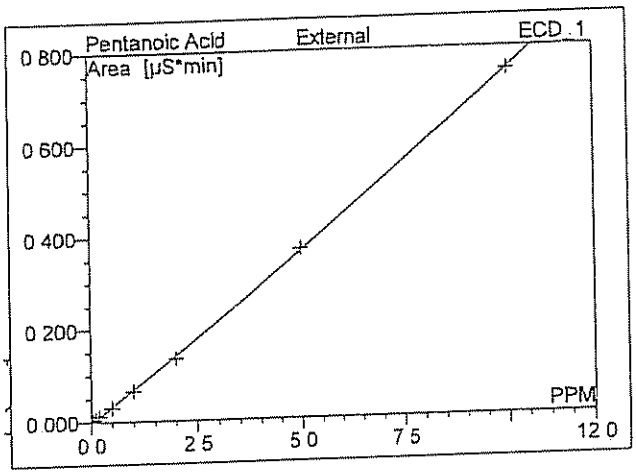


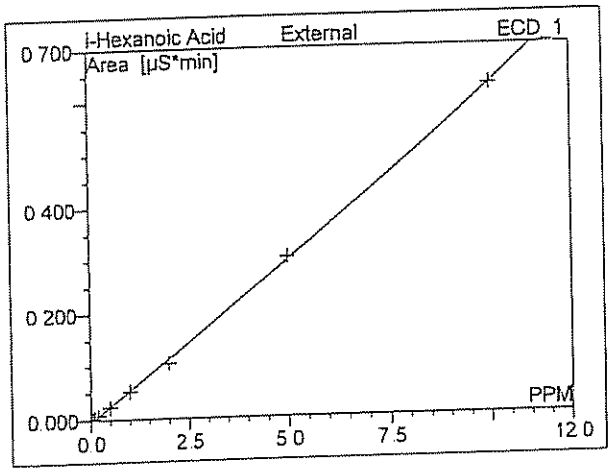


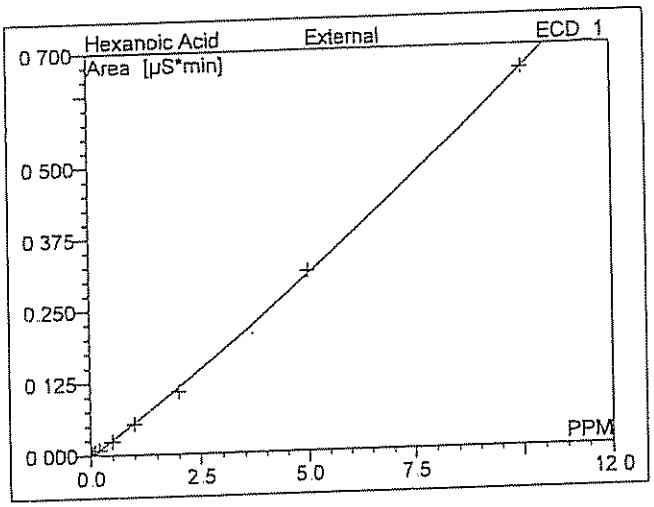


Operator.chemware Timebase:DX-500 Sequence:LLVFA 070208

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







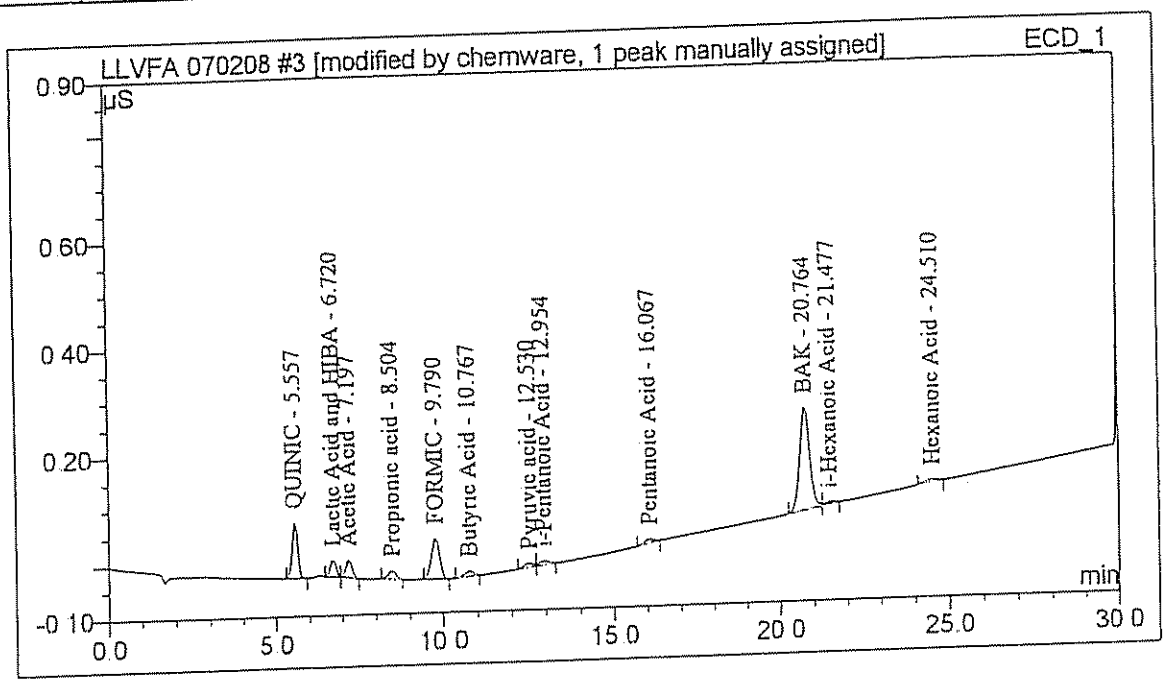
Peak Name	Cal.Mode	Cal.Type	Slope	#Points	Rel.Std.Dev. %	R-Square %
QUINIC	Total	QOff	0.000	8	n.a.	n.a.
Lactic Acid and HIBA	Total	QOff	0.100	8	6.286	99.894
Acetic Acid	Total	QOff	0.138	8	1.049	99.996
Propionic acid	Total	QOff	0.105	8	0.804	99.998
FORMIC	Total	QOff	0.000	8	n.a.	n.a.
Butyric Acid	Total	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

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



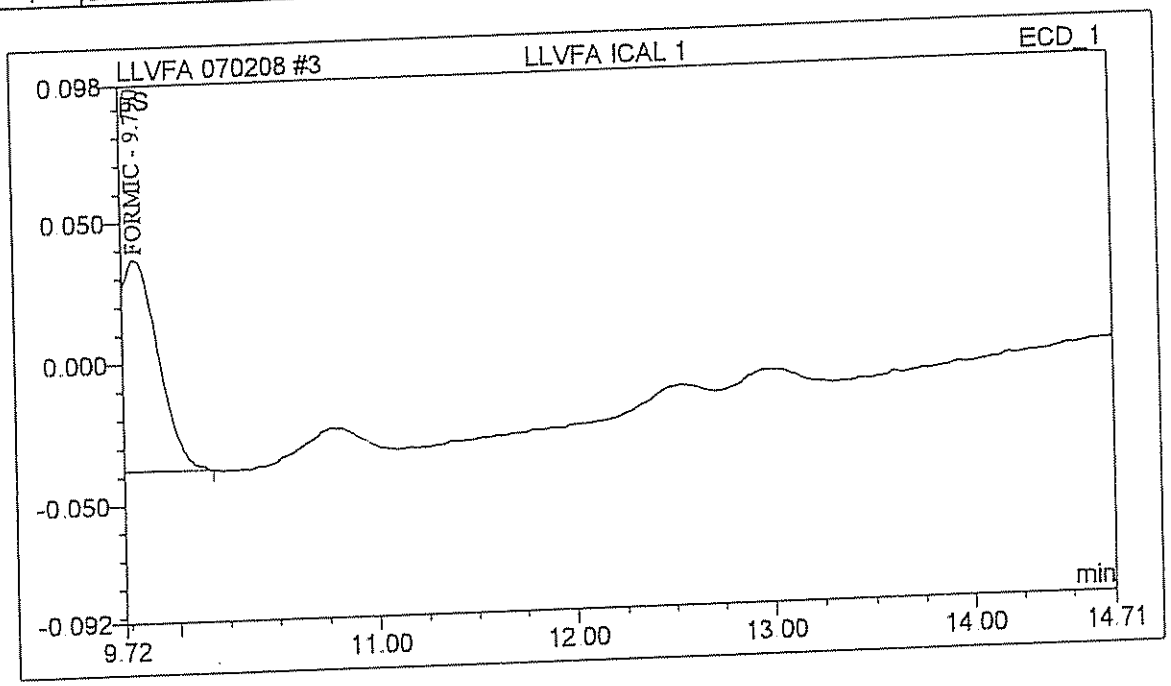
current date: 7/2/2008
current time: 5:05 PM

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.

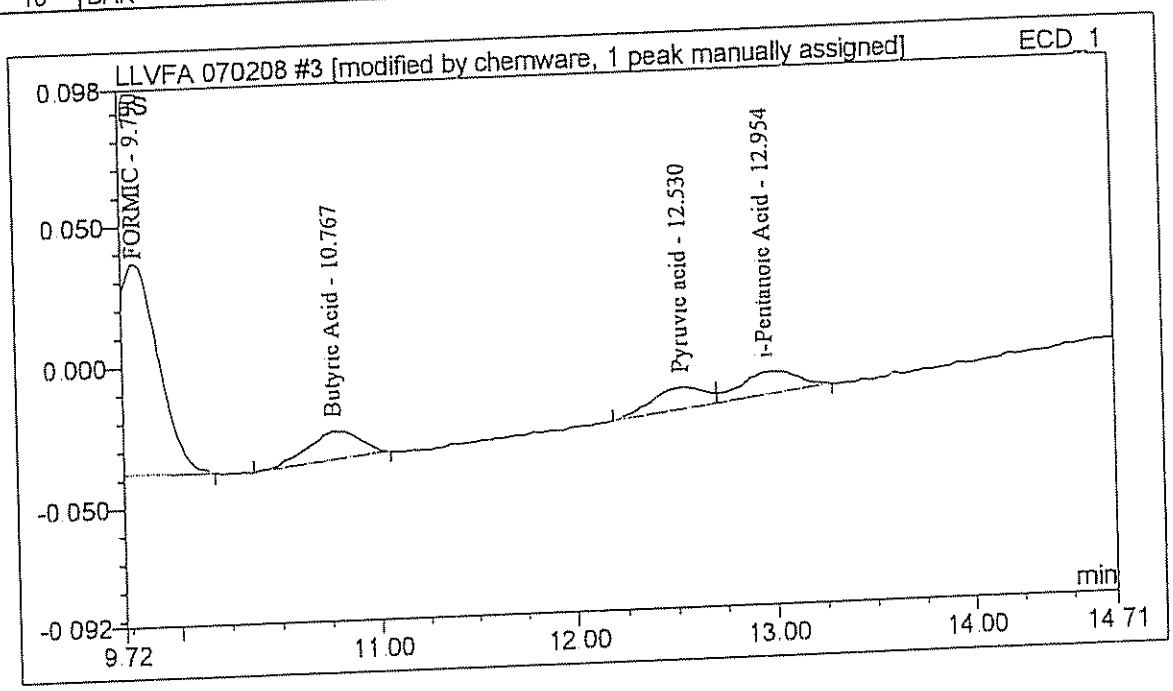


MICROSEEPS

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.

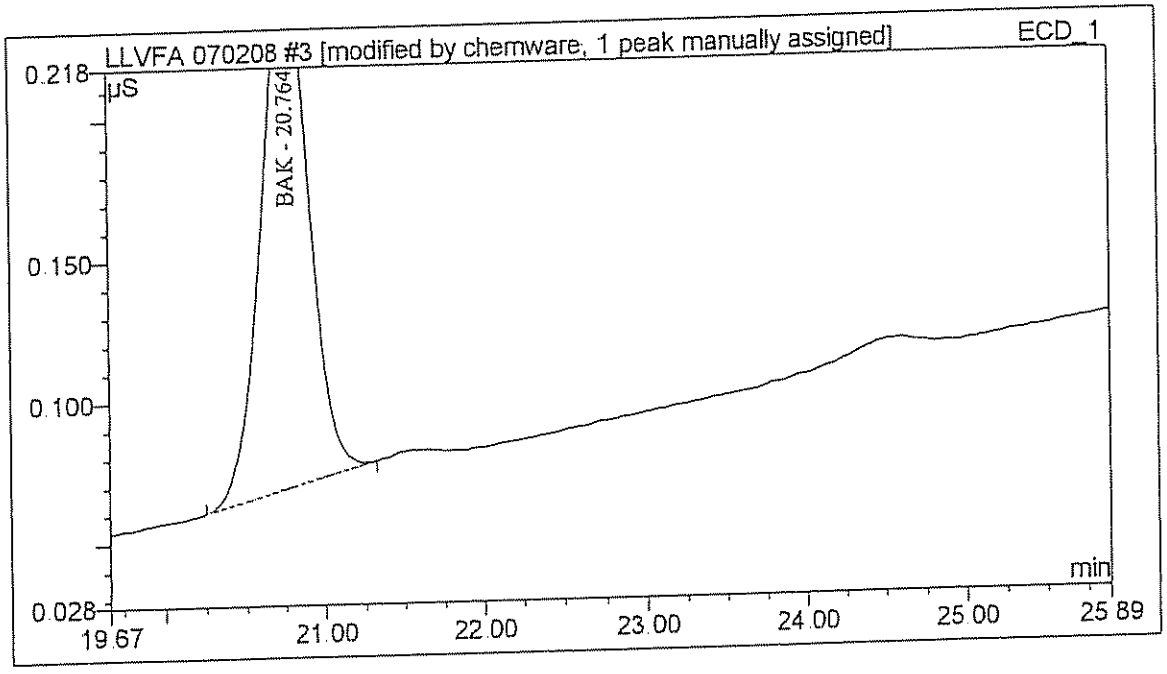


MICROSEEPS

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.

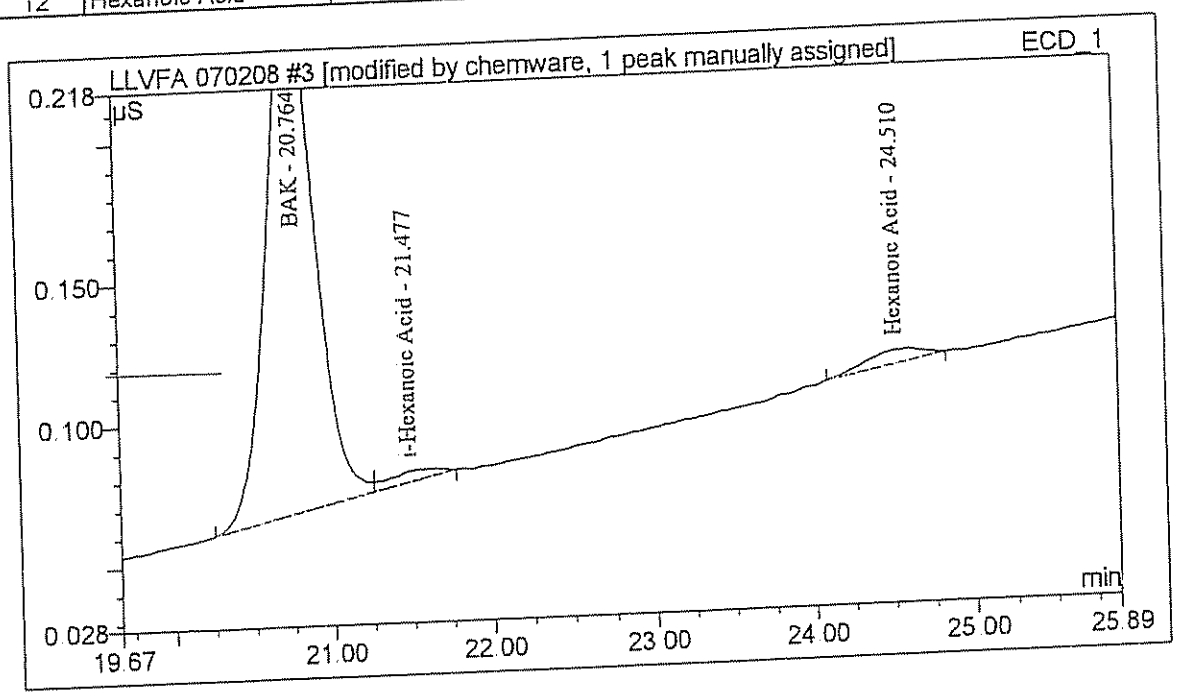


MICROSEEPS

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



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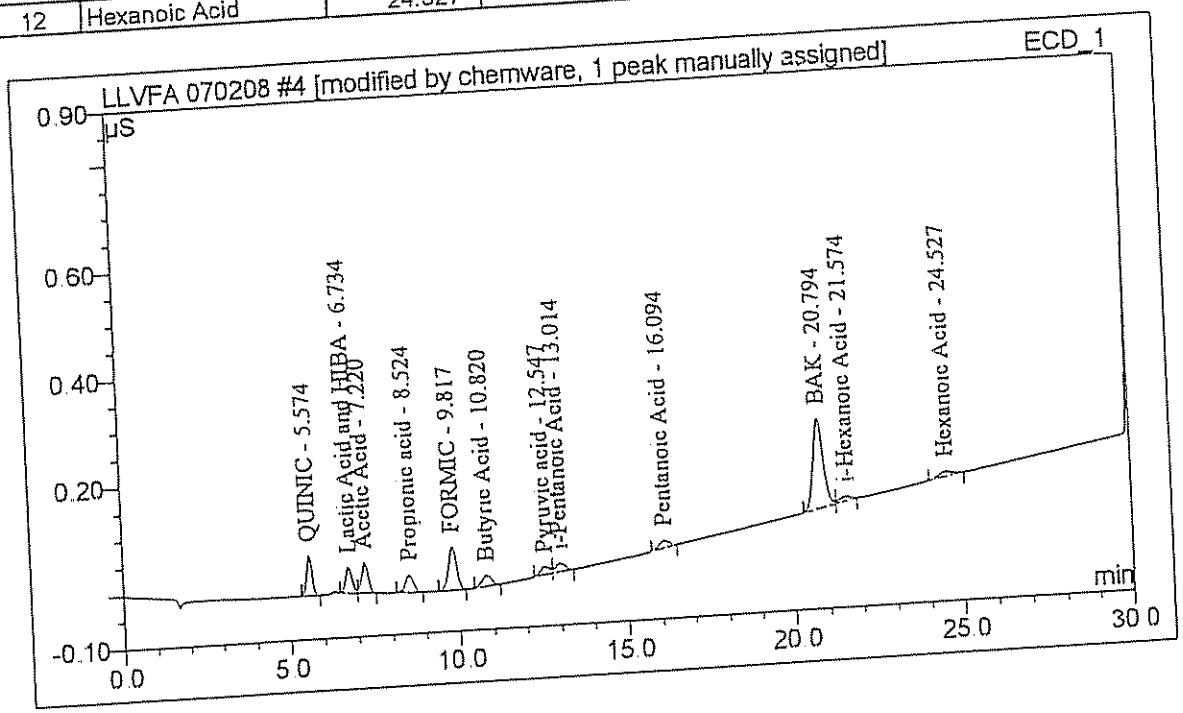
6.60 Build 1428

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	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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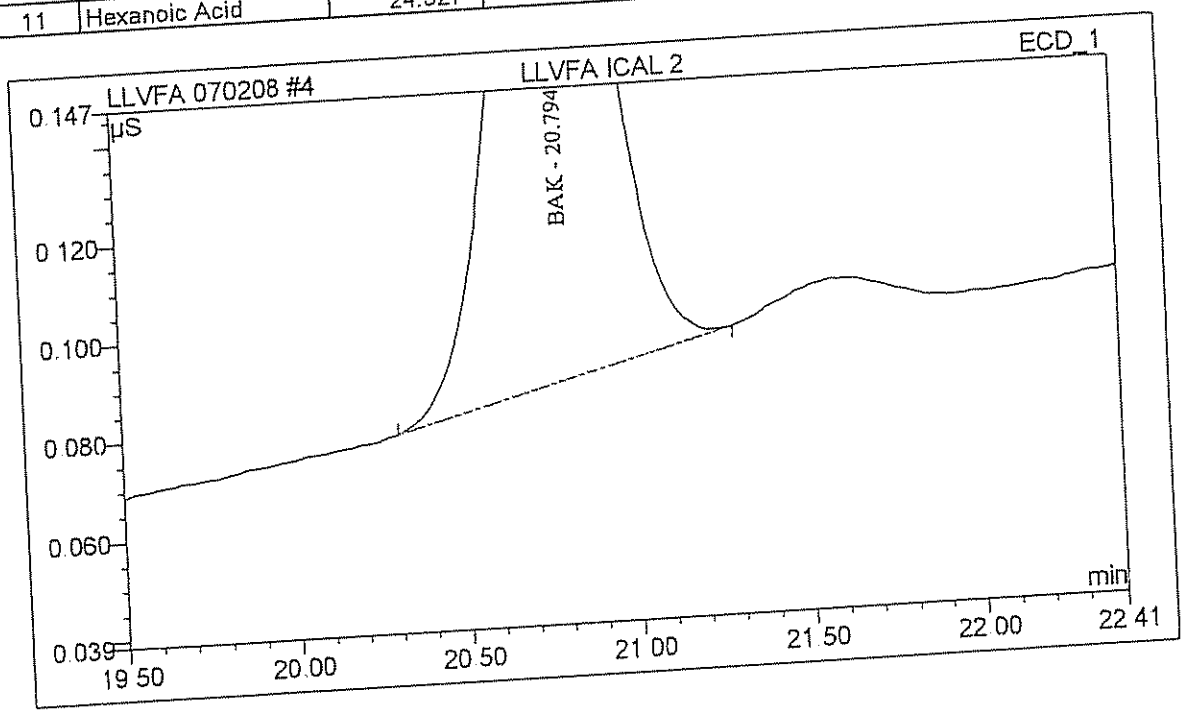
MICROSEEPS

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



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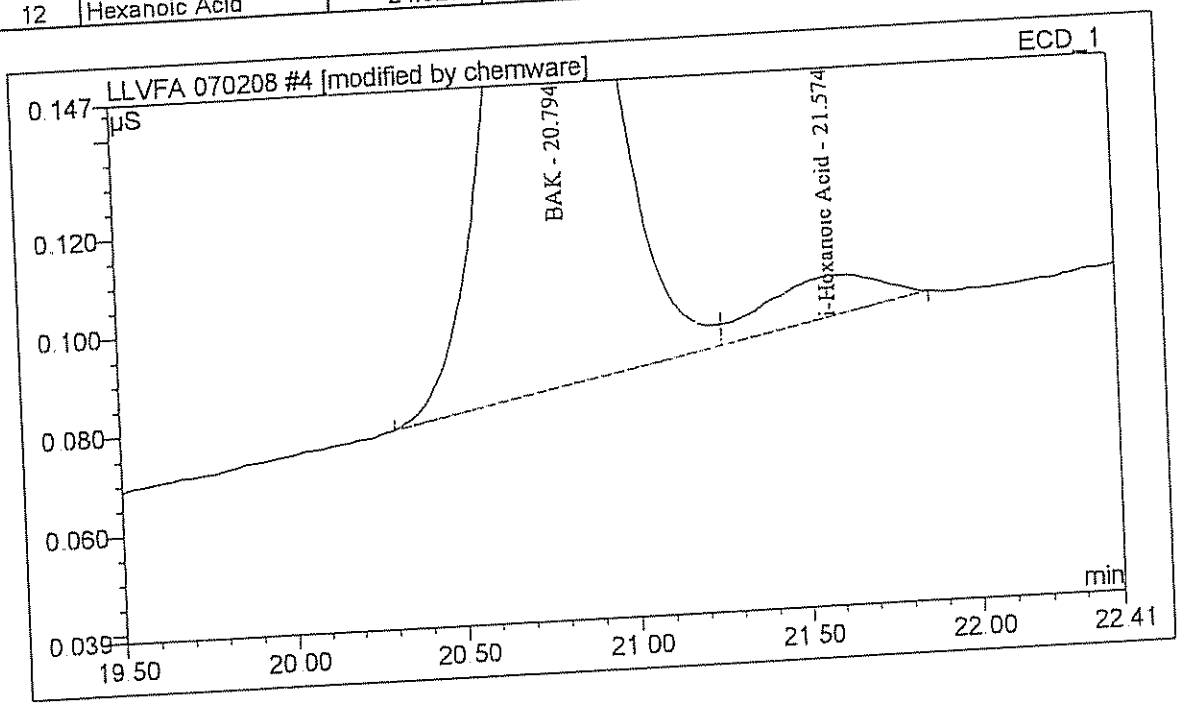
6.60 Build 1428

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



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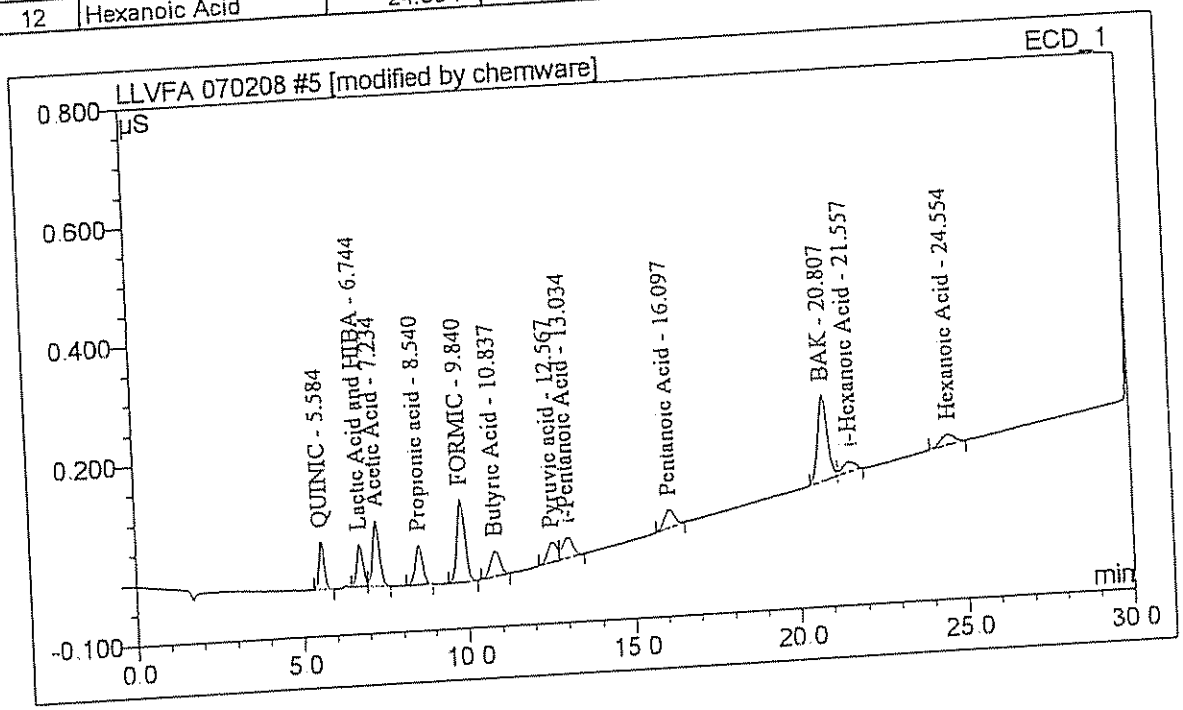
6 60 Build 1428

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



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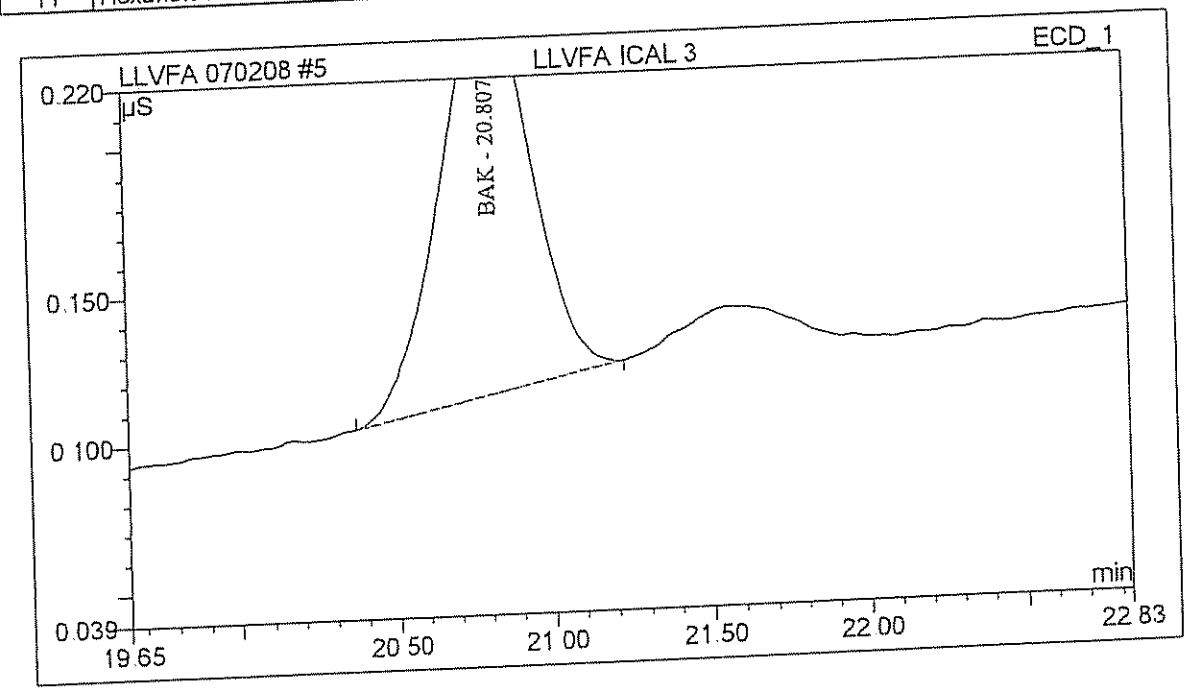
6.60 Build 1428

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	0.046	0.139	BMB	n.a.
11	Hexanoic Acid	24.554	0.009	0.019	BMB	0.2306



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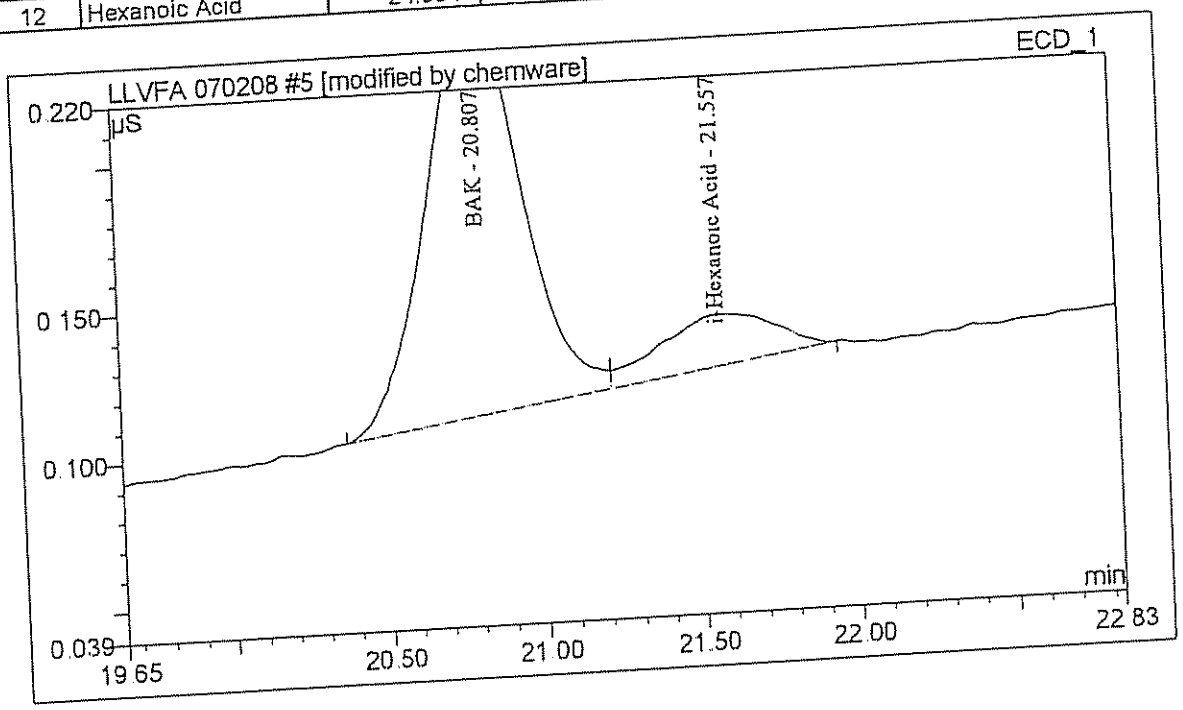
6 60 Build 1428

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



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6.60 Build 1428

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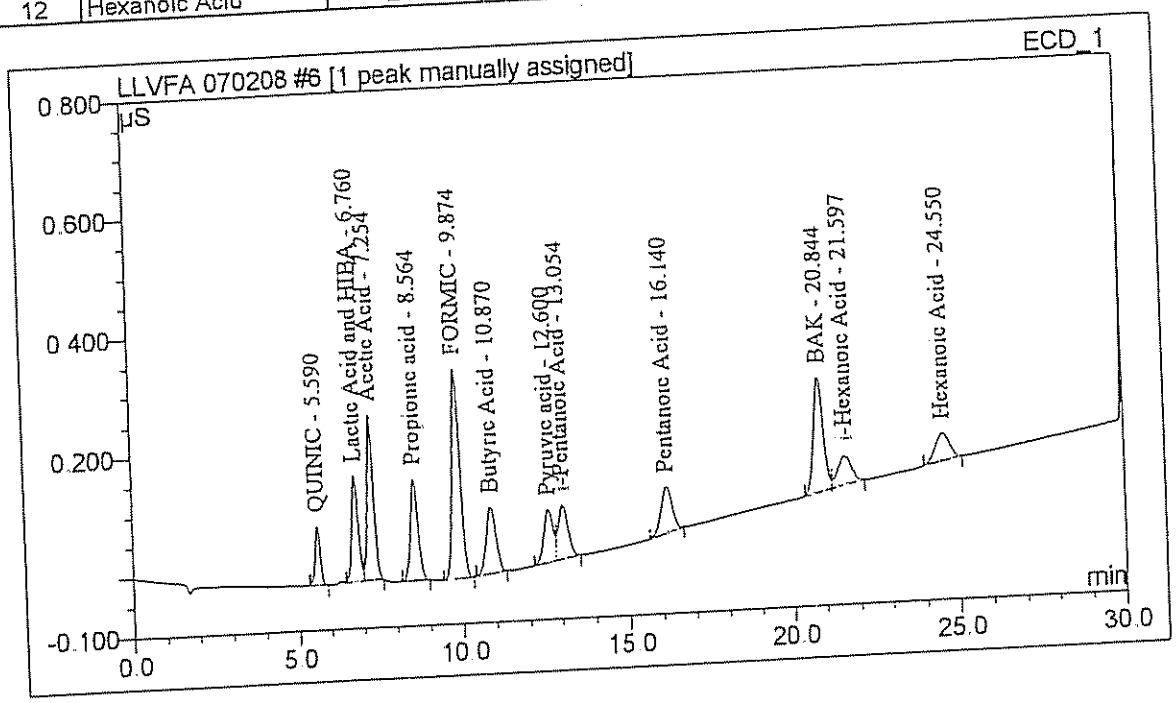
Sample Analysis Report

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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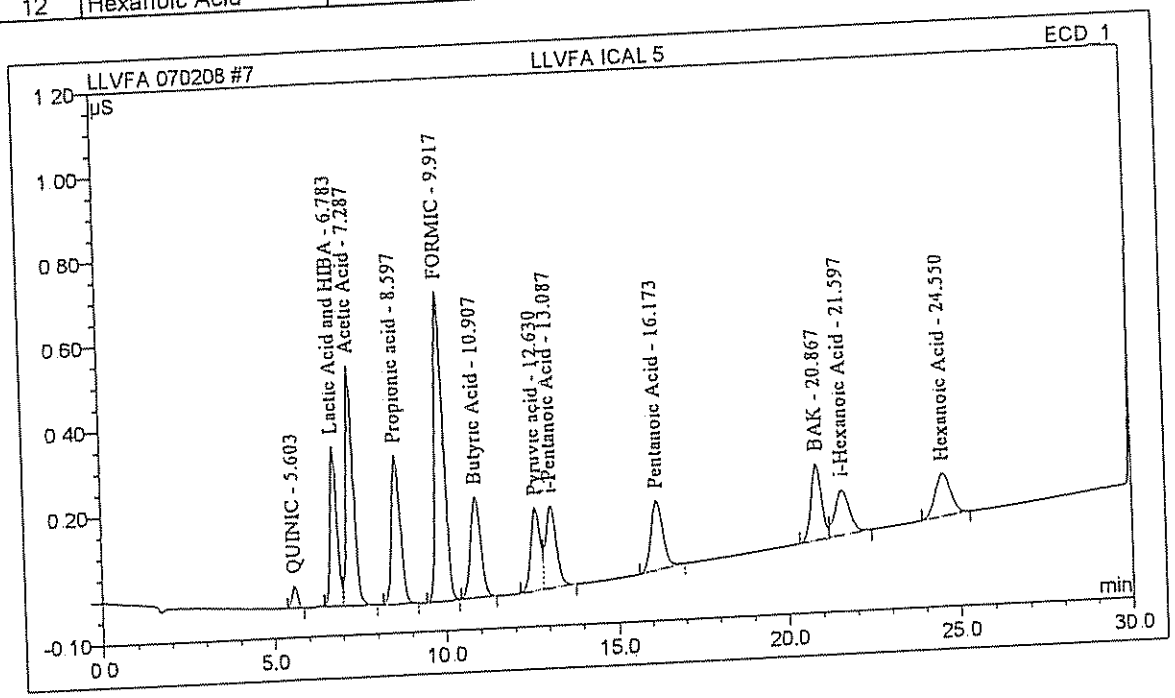
6 60 Build 1428

MICROSEEPS

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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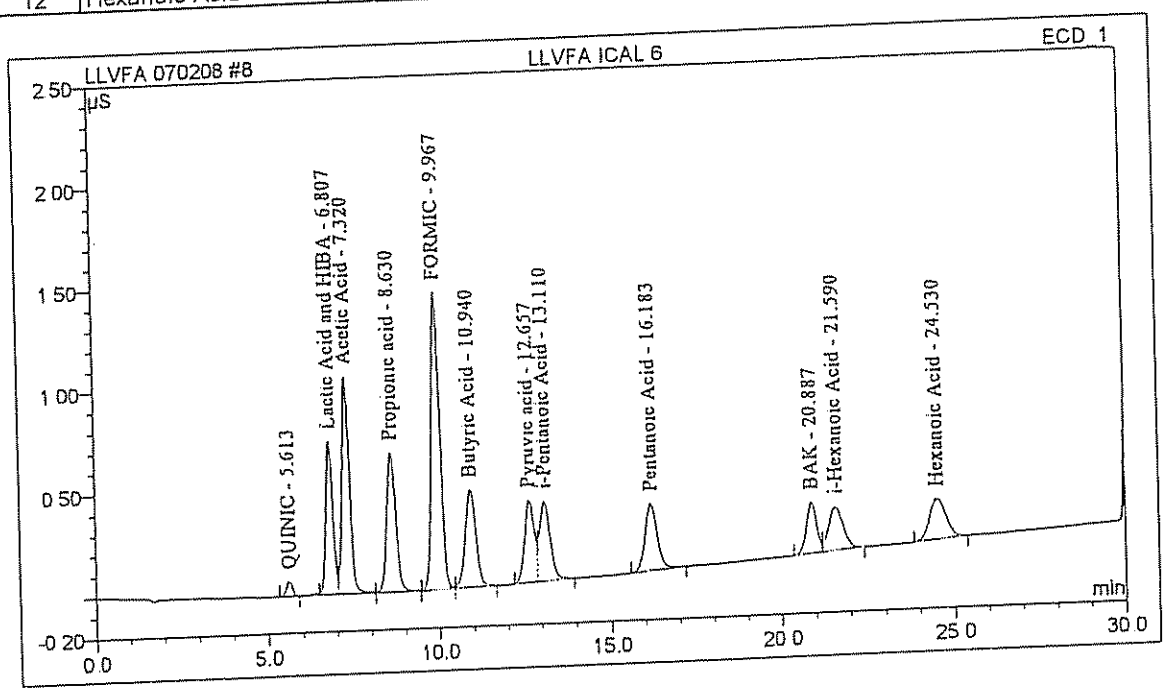
Sample Analysis Report

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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6.60 Build 1428

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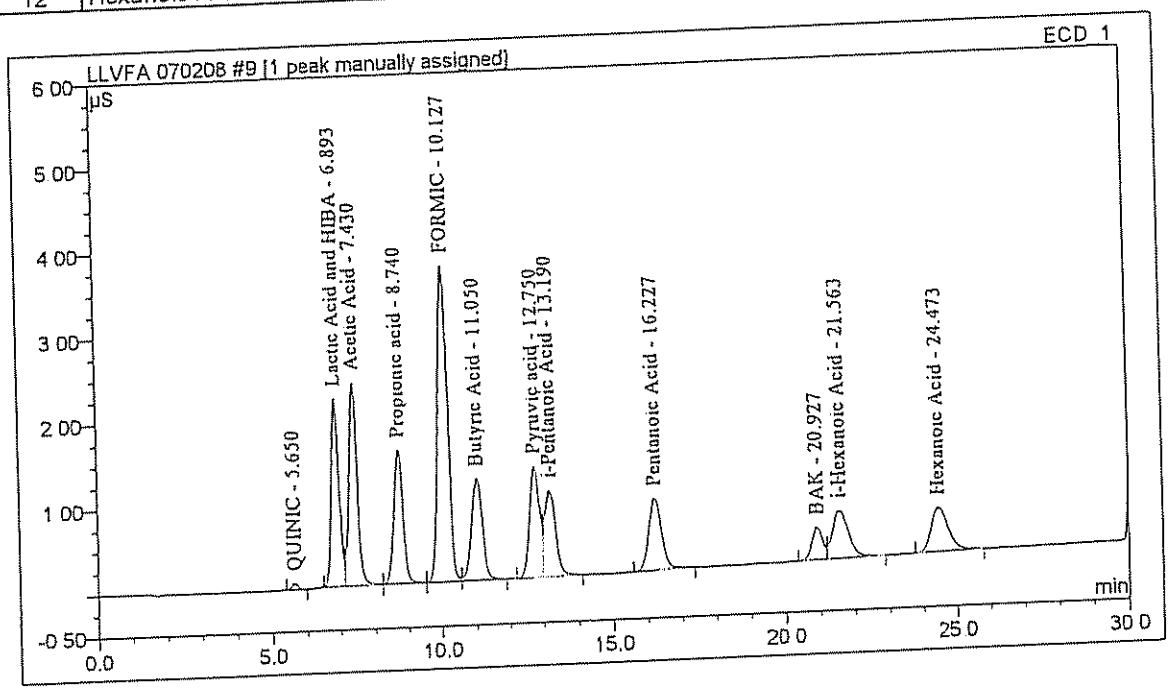
Sample Analysis Report

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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6.60 Build 1428

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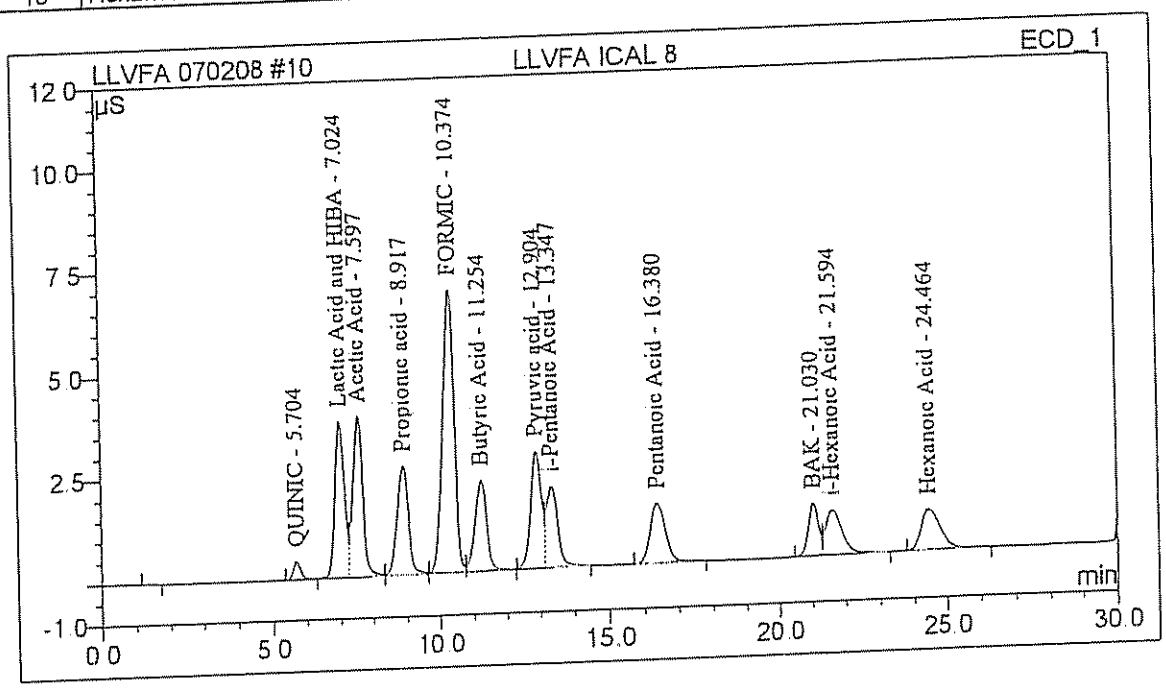
Sample Analysis Report

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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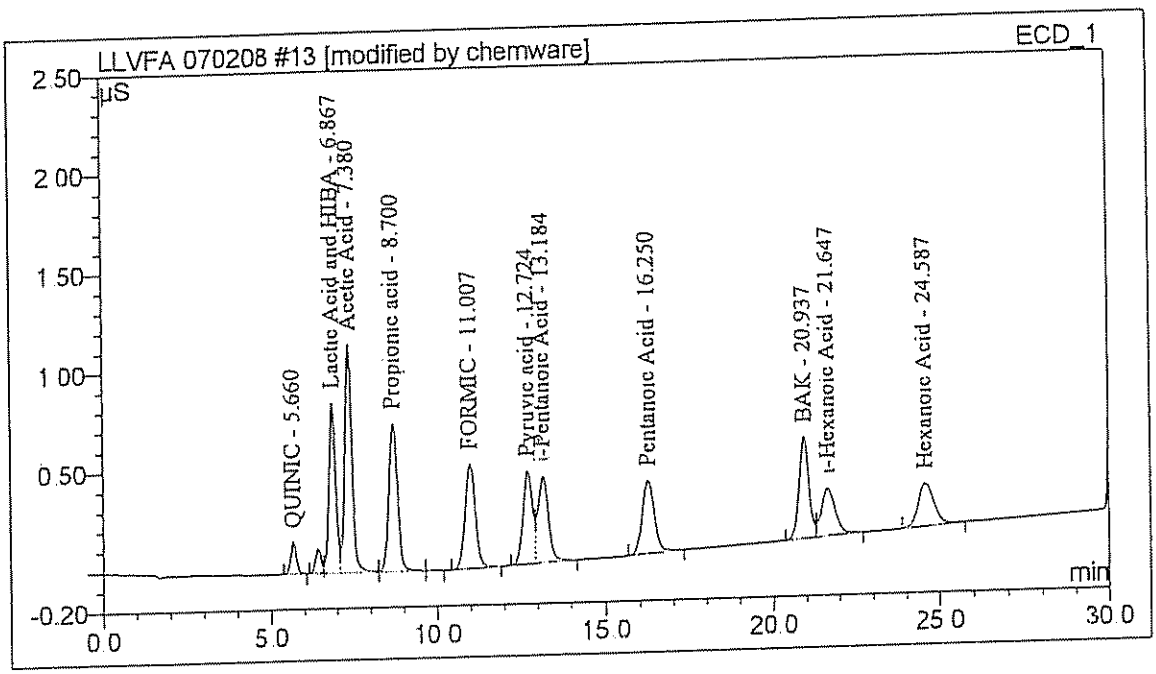
6.60 Build 1428

MICROSEEPS

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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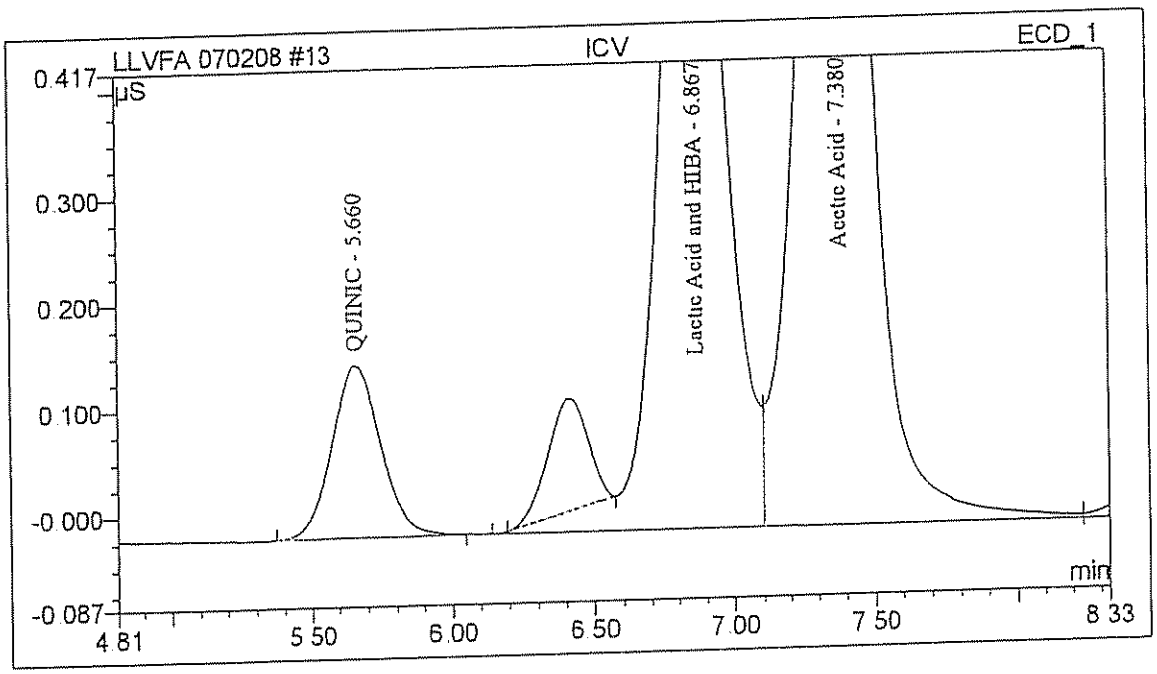
current time: 8:22 AM

MICROSEEPS

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



current date: 7/3/2008
current time: 8:22 AM

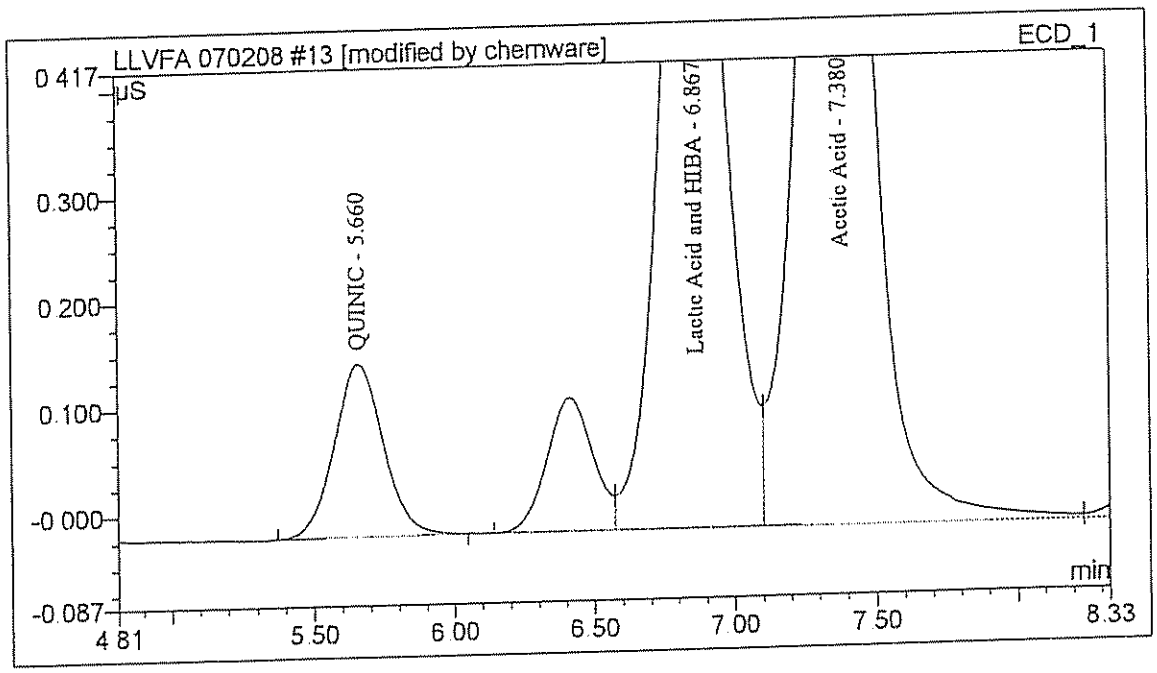
6.60 Build 1428

MICROSEEPS

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



current date: 7/3/2008
current time: 8:22 AM

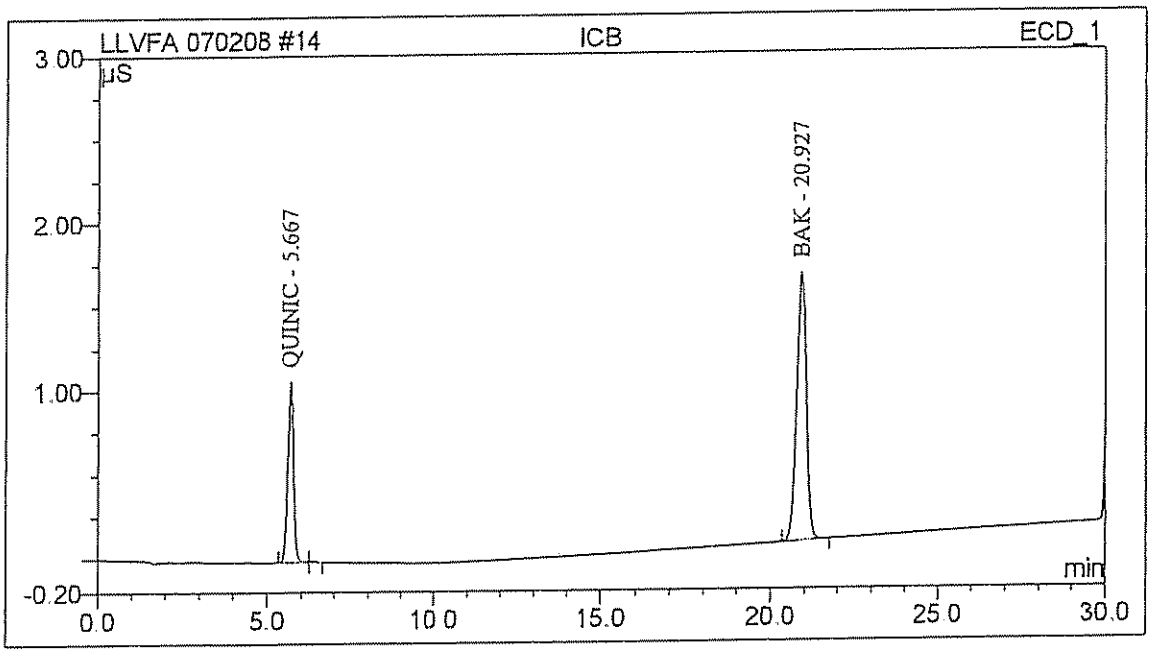
6.60 Build 1428

MICROSEEPS

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.

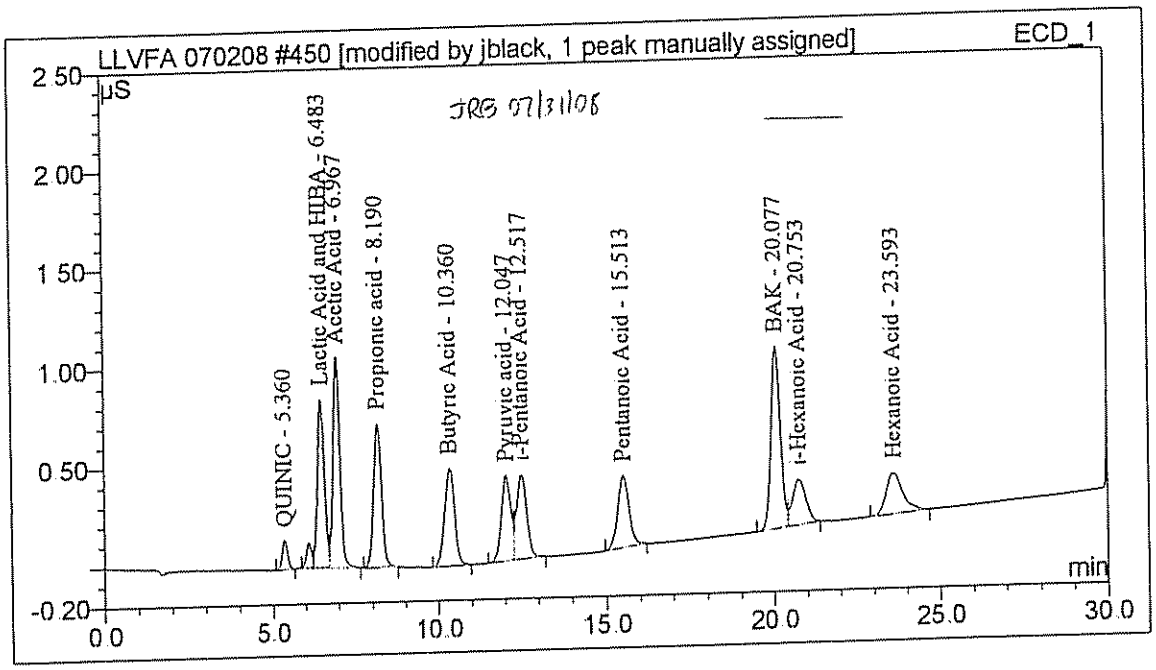


MICROSEEPS

Sample Analysis Report

Sample Name:	CCV 2	**Sequence No:**	450
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:	7/30/2008 5:52 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	% recovery
1	QUINIC	5.360	0.028	0.146	BMB	n.a.	
3	Lactic Acid and HIBA	6.483	0.198	0.849	M *	1.9522	98
4	Acetic Acid	6.967	0.258	1.066	MB	1.8875	94
5	Propionic acid	8.190	0.204	0.724	BMB	1.9814	99
6	Butyric Acid	10.360	0.172	0.491	BMB	1.9875	99
7	Pyruvic acid	12.047	0.141	0.431	BM ^	1.9212	96
8	i-Pentanoic Acid	12.517	0.152	0.424	MB	2.1283	106
9	Pentanoic Acid	15.513	0.141	0.363	BMB	2.0033	100
10	BAK	20.077	0.307	0.921	BM *	n.a.	
11	i-Hexanoic Acid	20.753	0.107	0.228	MB*	1.9000	95
12	Hexanoic Acid	23.593	0.121	0.208	BMB	2.0912	105



current date: 7/31/2008
current time: 9:49 AM

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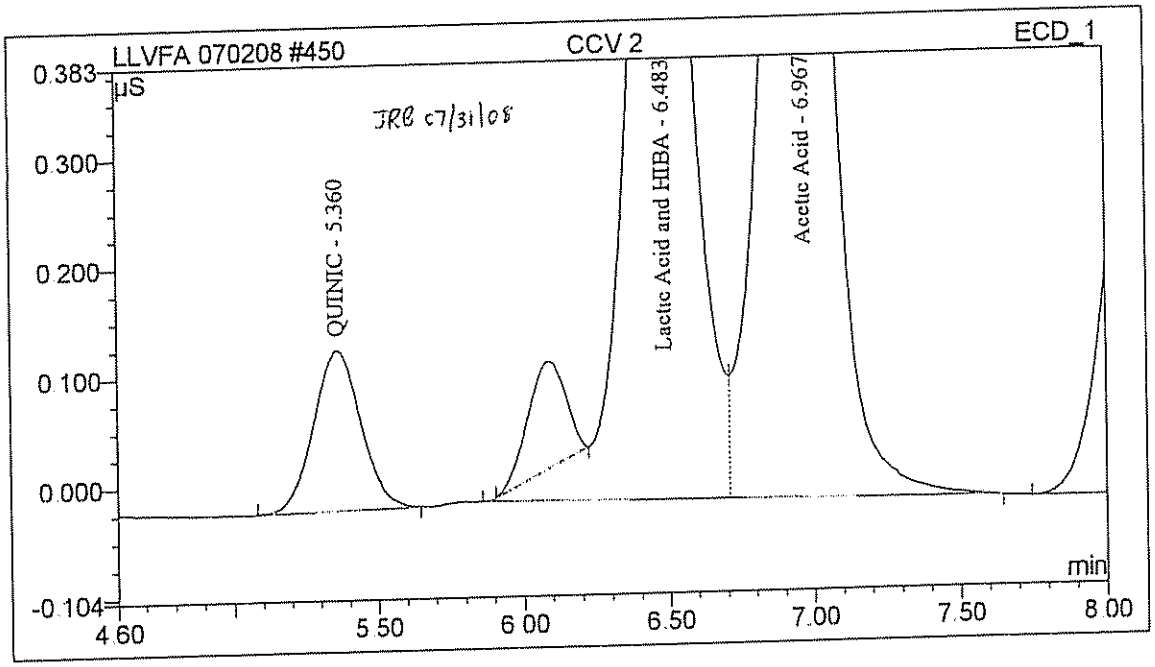
Sample Analysis Report

Sample Name:	CCV 2	**Sequence No:**	450
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:	7/30/2008 5:52 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	5.360	0.028	0.146	BMB	n.a.
3	Lactic Acid and HIBA	6.483	0.206	0.849	BM	2.0268
4	Acetic Acid	6.967	0.258	1.066	MB	1.8875
5	Propionic acid	8.190	0.204	0.724	BMB	1.9814
6	Butyric Acid	10.360	0.172	0.491	BMB	1.9875
7	i-Pentanoic Acid	12.047	0.141	0.431	BM	1.9793
8	Pyruvic acid	12.517	0.152	0.424	MB	2.0514
9	Pentanoic Acid	15.513	0.141	0.363	BMB	2.0033
10	BAK	20.113	0.055	0.325	BMB	n.a.
11	i-Hexanoic Acid	20.773	0.069	0.178	BMB	1.2656
12	Hexanoic Acid	23.593	0.121	0.208	BMB	2.0912

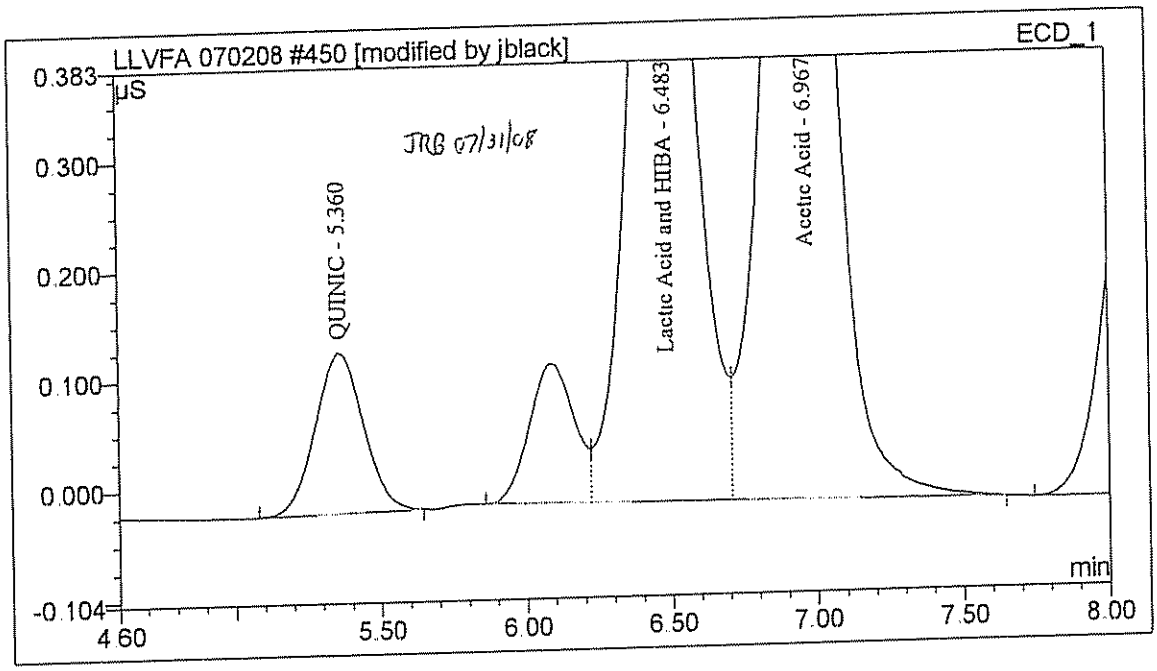


MICROSEEPS

Sample Analysis Report

Sample Name:	CCV 2	**Sequence No:**	450
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:	7/30/2008 5:52 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	5.360	0.028	0.146	BMB	n.a.
3	Lactic Acid and HIBA	6.483	0.198	0.849	M *	1.9522
4	Acetic Acid	6.967	0.258	1.066	MB	1.8875
5	Propionic acid	8.190	0.204	0.724	BMB	1.9814
6	Butyric Acid	10.360	0.172	0.491	BMB	1.9875
7	i-Pentanoic Acid	12.047	0.141	0.431	BM	1.9793
8	Pyruvic acid	12.517	0.152	0.424	MB	2.0514
9	Pentanoic Acid	15.513	0.141	0.363	BMB	2.0033
10	BAK	20.113	0.055	0.325	BMB	n.a.
11	i-Hexanoic Acid	20.773	0.069	0.178	BMB	1.2656
12	Hexanoic Acid	23.593	0.121	0.208	BMB	2.0912



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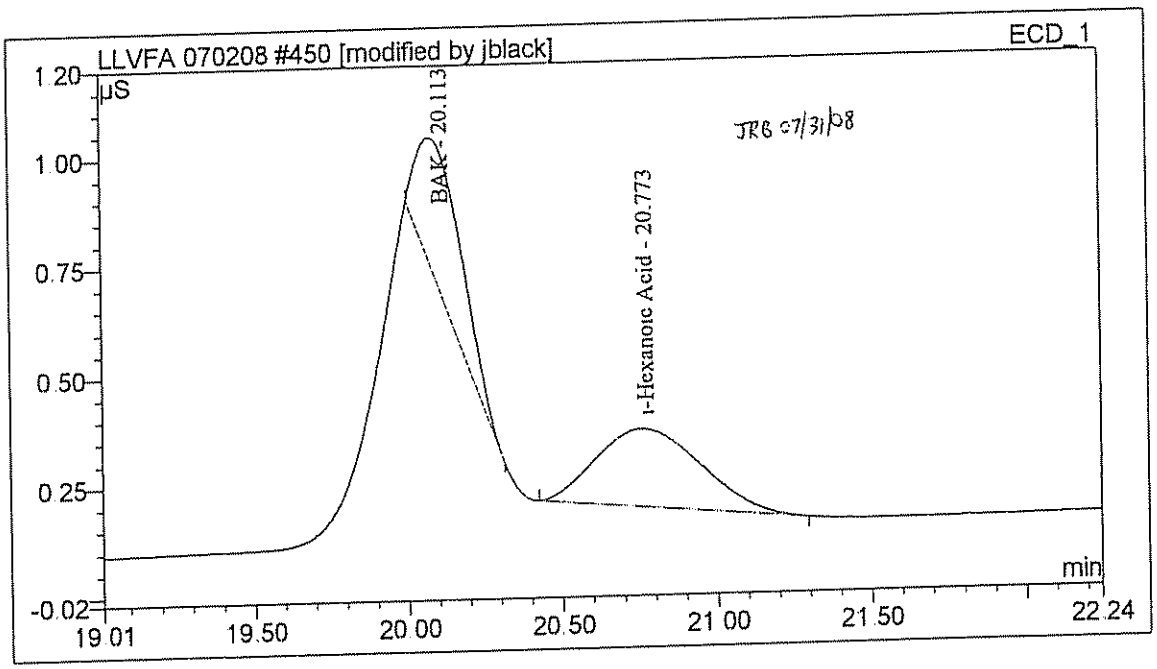
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV 2	**Sequence No:**	450
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:	7/30/2008 5:52 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	5.360	0.028	0.146	BMB	n.a.
3	Lactic Acid and HIBA	6.483	0.198	0.849	M *	1.9522
4	Acetic Acid	6.967	0.258	1.066	MB	1.8875
5	Propionic acid	8.190	0.204	0.724	BMB	1.9814
6	Butyric Acid	10.360	0.172	0.491	BMB	1.9875
7	i-Pentanoic Acid	12.047	0.141	0.431	BM	1.9793
8	Pyruvic acid	12.517	0.152	0.424	MB	2.0514
9	Pentanoic Acid	15.513	0.141	0.363	BMB	2.0033
10	BAK	20.113	0.055	0.325	BMB	n.a.
11	i-Hexanoic Acid	20.773	0.069	0.178	BMB	1.2656
12	Hexanoic Acid	23.593	0.121	0.208	BMB	2.0912



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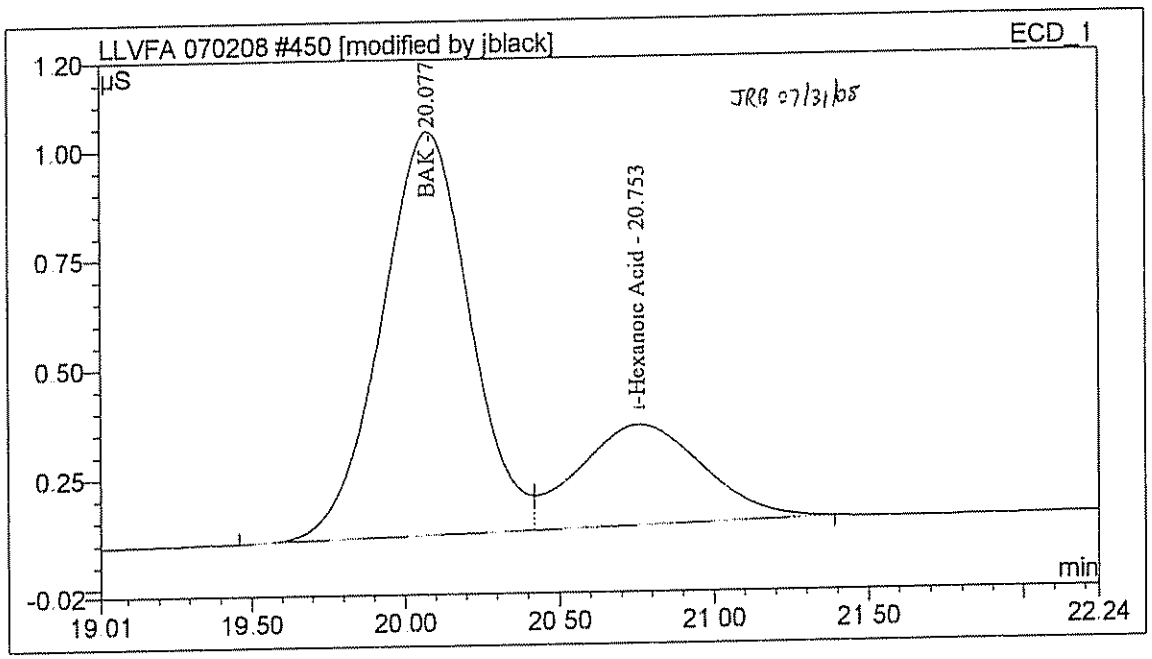
MICROSEEPS

Sample Analysis Report

Sample Name:	CCV 2	**Sequence No:**	450
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:	7/30/2008 5:52 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	5.360	0.028	0.146	BMB	n.a.
3	Lactic Acid and HIBA	6.483	0.198	0.849	M *	1.9522
4	Acetic Acid	6.967	0.258	1.066	MB	1.8875
5	Propionic acid	8.190	0.204	0.724	BMB	1.9814
6	Butyric Acid	10.360	0.172	0.491	BMB	1.9875
7	i-Pentanoic Acid	12.047	0.141	0.431	BM	1.9793
8	Pyruvic acid	12.517	0.152	0.424	MB	2.0514
9	Pentanoic Acid	15.513	0.141	0.363	BMB	2.0033
10	BAK	20.077	0.307	0.921	BM *	n.a.
11	i-Hexanoic Acid	20.753	0.107	0.228	MB*	1.9000
12	Hexanoic Acid	23.593	0.121	0.208	BMB	2.0912

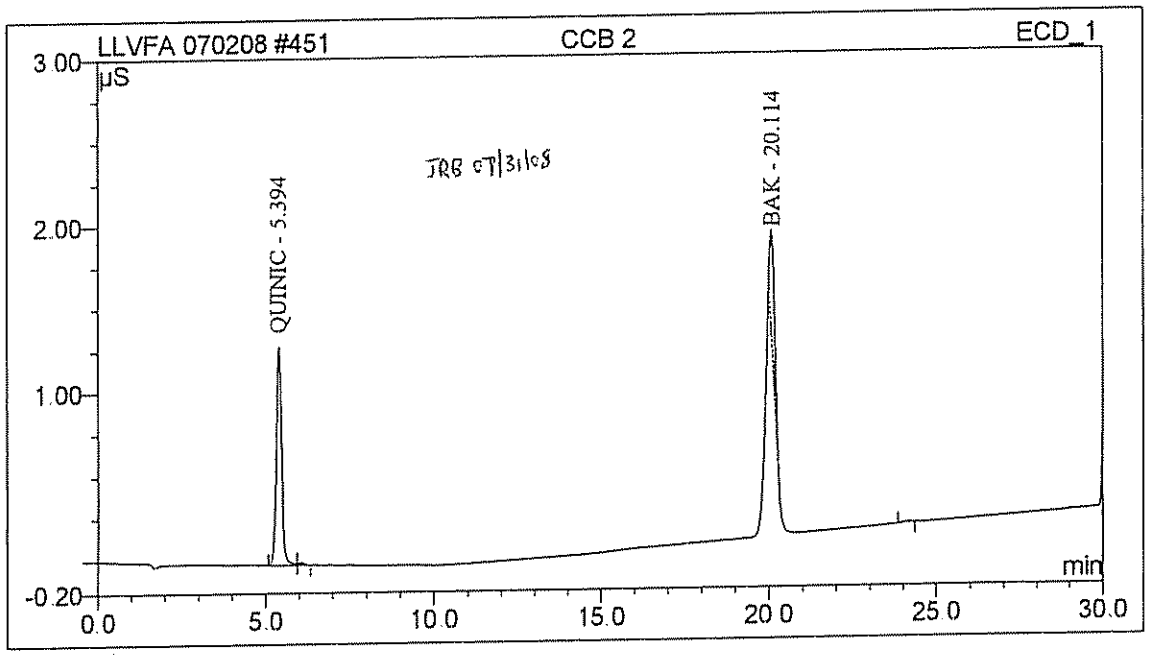


MICROSEEPS

Sample Analysis Report

Sample Name:	CCB 2	**Sequence No:**	451
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:	7/30/2008 6:33 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	5.394	0.257	1.304	BM	n.a.
3	BAK	20.114	0.120	0.692	BMB	n.a.

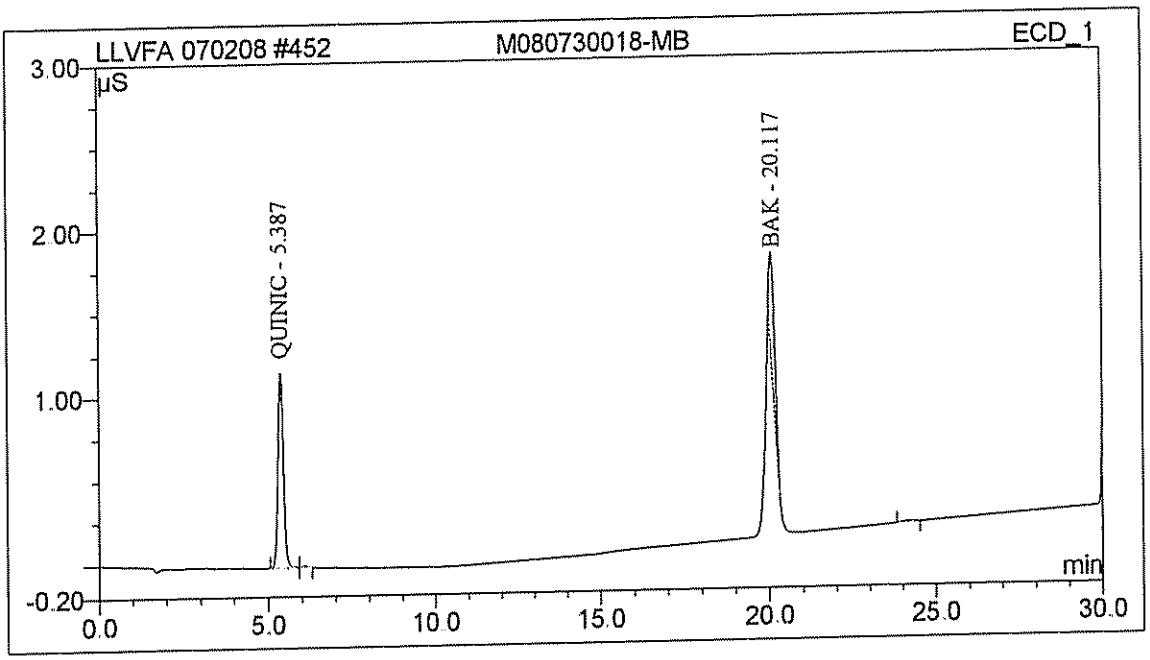


MICROSEEPS

Sample Analysis Report

Sample Name:	M080730018-MB	**Sequence No:**	452
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:	7/30/2008 7:14 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	5.387	0.223	1.172	BM	n.a.
3	BAK	20.117	0.122	0.684	BMB	n.a.

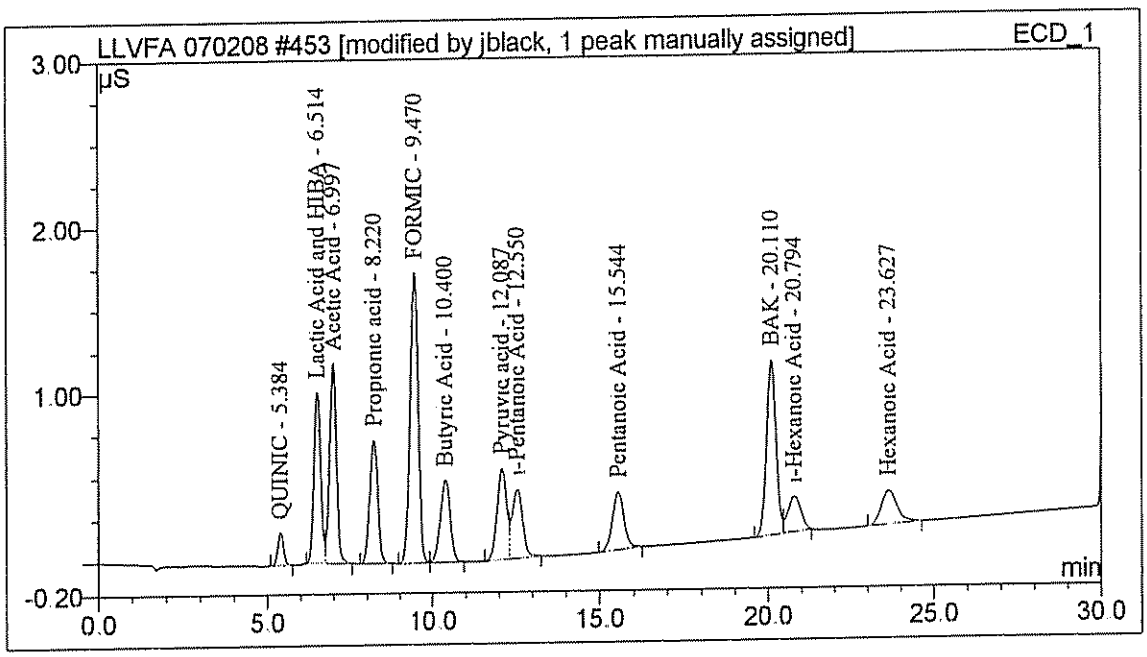


MICROSEEPS

Sample Analysis Report

Sample Name:	M080730018-LCS	**Sequence No:**	453
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:	7/30/2008 7:55 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	5.384	0.040	0.194	BMB	n.a.
2	Lactic Acid and HIBA	6.514	0.238	1.020	BM	2.3104
3	Acetic Acid	6.997	0.292	1.194	MB	2.1378
4	Propionic acid	8.220	0.209	0.736	BMB	2.0334
5	FORMIC	9.470	0.495	1.739	BM	n.a.
6	Butyric Acid	10.400	0.169	0.488	MB	1.9560
7	Pyruvic acid	12.087	0.180	0.543	BM ^	2.3735
8	i-Pentanoic Acid	12.550	0.145	0.409	MB	2.0327
9	Pentanoic Acid	15.544	0.135	0.344	BMB	1.9121
10	BAK	20.110	0.346	1.042	BM *	n.a.
11	i-Hexanoic Acid	20.794	0.096	0.209	MB*	1.7111
12	Hexanoic Acid	23.627	0.110	0.200	BMB	1.9120

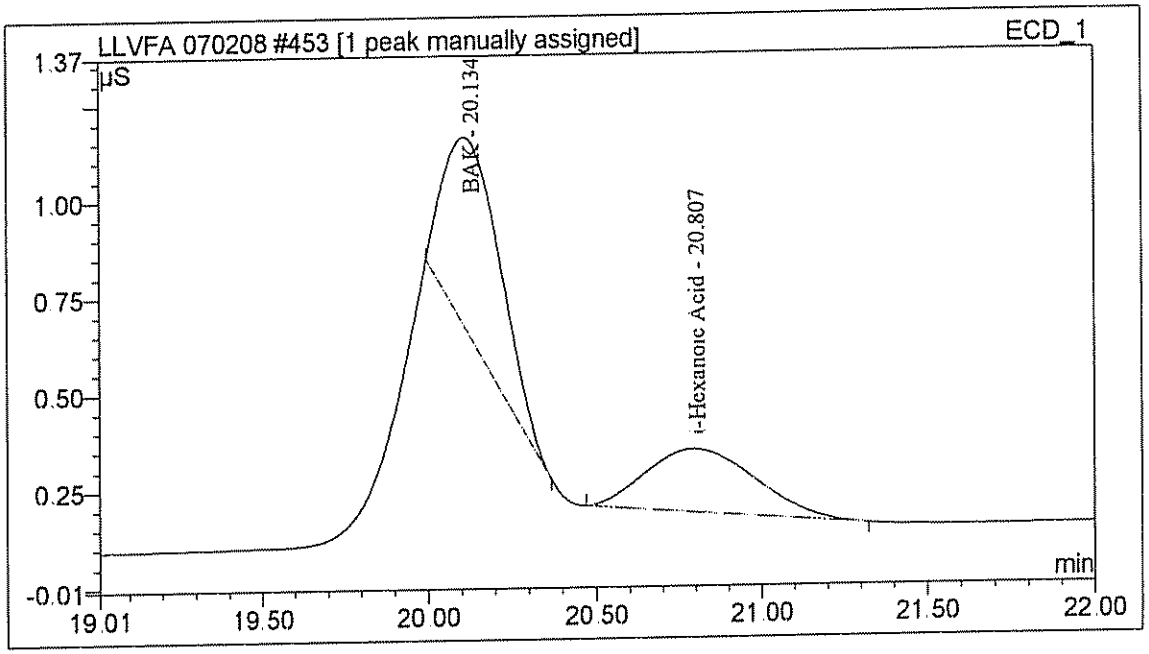


MICROSEEPS

Sample Analysis Report

Sample Name:	M080730018-LCS	**Sequence No:**	453
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:	7/30/2008 7:55 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	5.384	0.040	0.194	BMB	n.a.
2	Lactic Acid and HIBA	6.514	0.238	1.020	BM	2.3104
3	Acetic Acid	6.997	0.292	1.194	MB	2.1378
4	Propionic acid	8.220	0.209	0.736	BMB	2.0334
5	FORMIC	9.470	0.495	1.739	BM	n.a.
6	Butyric Acid	10.400	0.169	0.488	MB	1.9560
7	Pyruvic acid	12.087	0.180	0.543	BM ^	2.3735
8	i-Pentanoic Acid	12.550	0.145	0.409	MB	2.0327
9	Pentanoic Acid	15.544	0.135	0.344	BMB	1.9121
10	BAK	20.134	0.100	0.508	BMB	n.a.
11	i-Hexanoic Acid	20.807	0.062	0.162	BMB	1.1466
12	Hexanoic Acid	23.627	0.110	0.200	BMB	1.9120

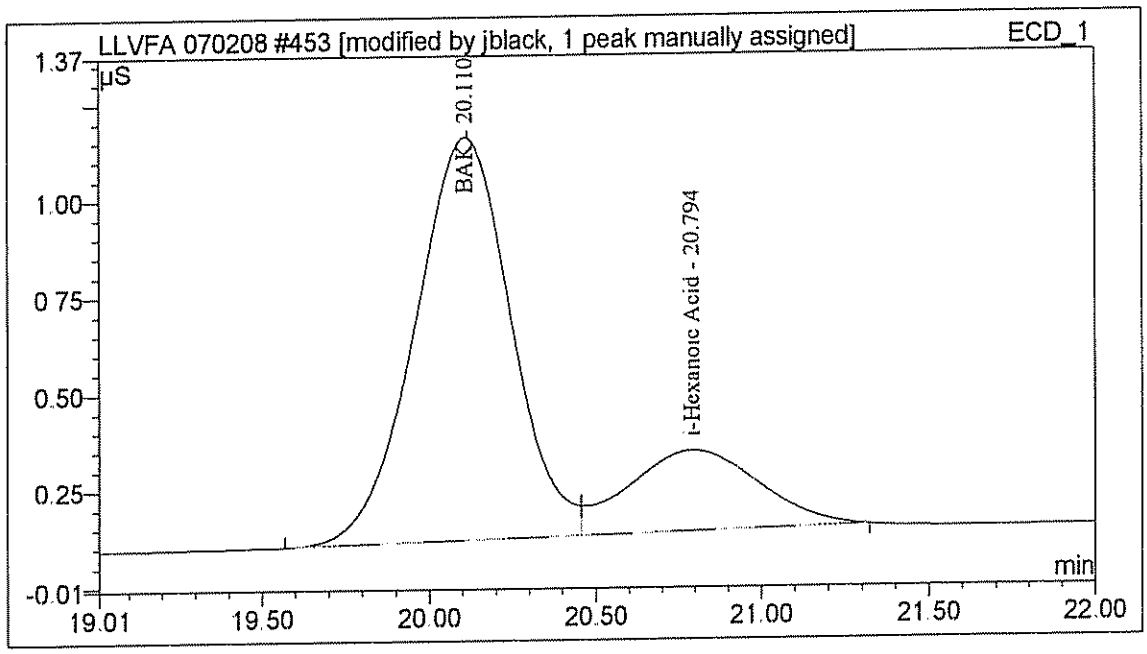


MICROSEEPS

Sample Analysis Report

Sample Name:	M080730018-LCS	**Sequence No:**	453
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:	7/30/2008 7:55 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	5.384	0.040	0.194	BMB	n.a.
2	Lactic Acid and HIBA	6.514	0.238	1.020	BM	2.3104
3	Acetic Acid	6.997	0.292	1.194	MB	2.1378
4	Propionic acid	8.220	0.209	0.736	BMB	2.0334
5	FORMIC	9.470	0.495	1.739	BM	n.a.
6	Butyric Acid	10.400	0.169	0.488	MB	1.9560
7	Pyruvic acid	12.087	0.180	0.543	BM ^	2.3735
8	i-Pentanoic Acid	12.550	0.145	0.409	MB	2.0327
9	Pentanoic Acid	15.544	0.135	0.344	BMB	1.9121
10	BAK	20.110	0.346	1.042	BM *	n.a.
11	i-Hexanoic Acid	20.794	0.096	0.209	MB*	1.7111
12	Hexanoic Acid	23.627	0.110	0.200	BMB	1.9120

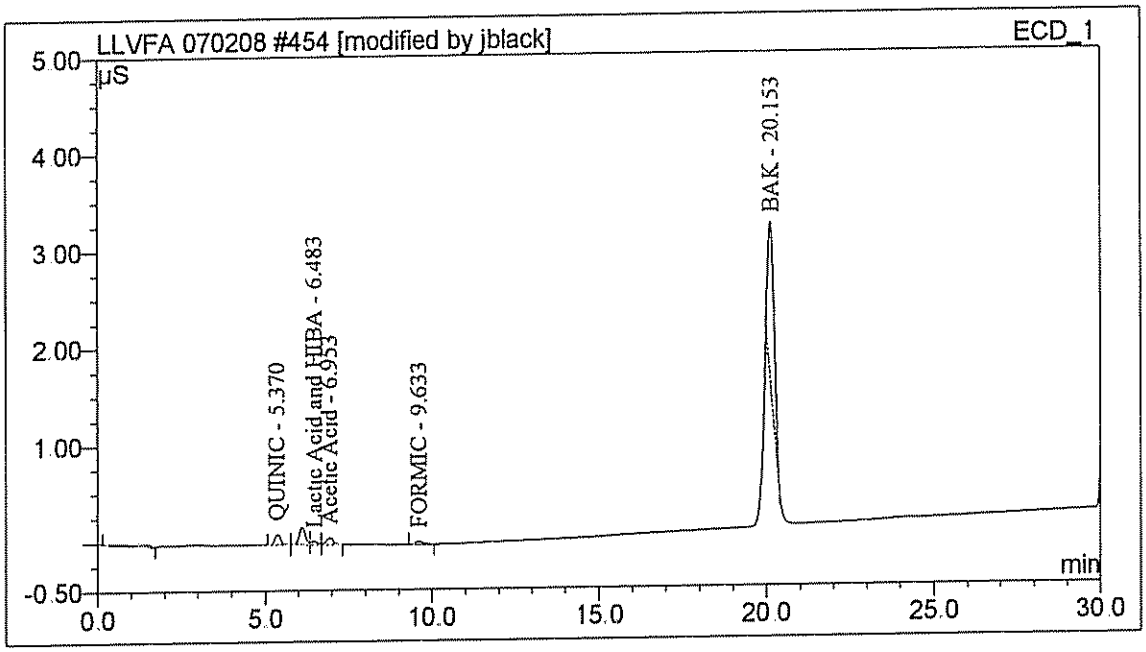


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-01A	**Sequence No:**	454
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:	7/30/2008 8:36 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	5.370	0.023	0.109	BM	n.a.
4	Lactic Acid and HIBA	6.483	0.008	0.035	M *	0.1634
5	Acetic Acid	6.953	0.017	0.072	MB	0.1420
6	FORMIC	9.633	0.008	0.030	BMB	n.a.
7	BAK	20.153	0.358	1.688	BMB	n.a.

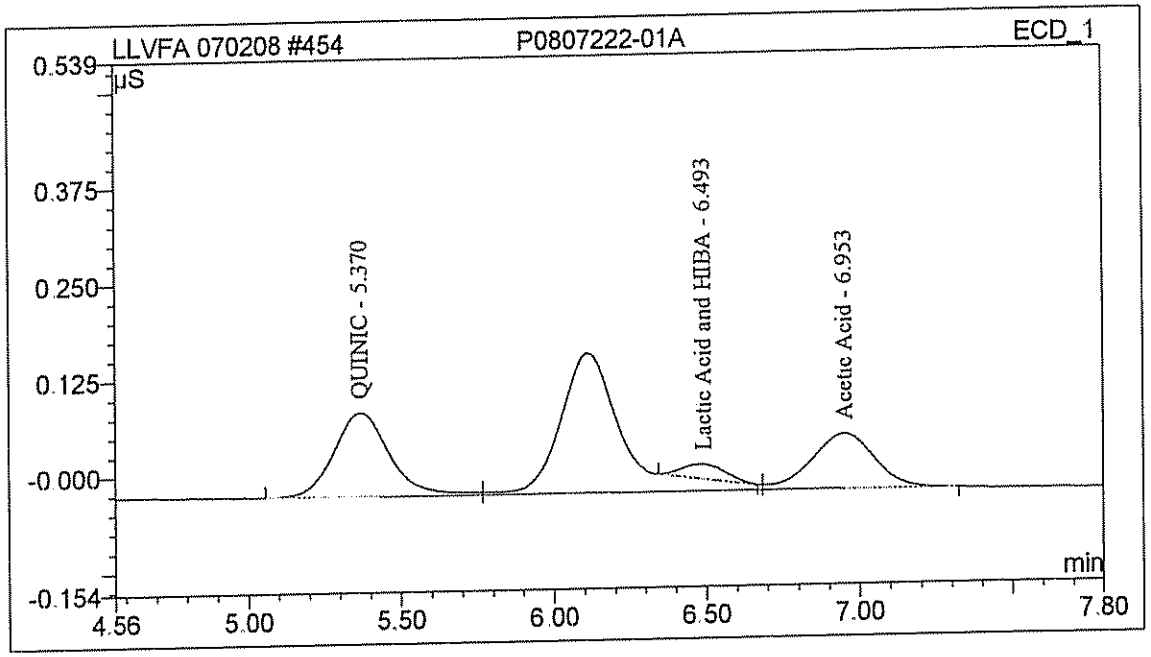


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-01A	**Sequence No:**	454
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:	7/30/2008 8:36 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	5.370	0.023	0.109	BM	n.a.
4	Lactic Acid and HIBA	6.493	0.003	0.019	Rd	0.1137
5	Acetic Acid	6.953	0.017	0.072	MB	0.1420
6	FORMIC	9.633	0.008	0.030	BMB	n.a.
7	BAK	20.153	0.358	1.688	BMB	n.a.

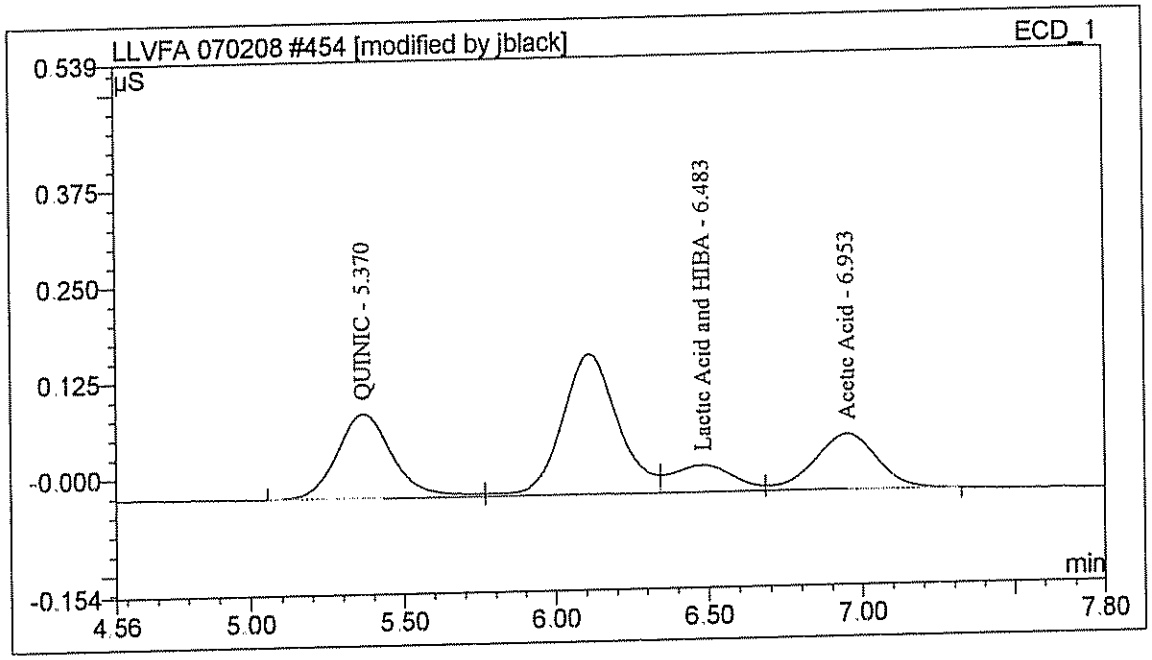


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-01A	**Sequence No:**	454
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:	7/30/2008 8:36 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	5.370	0.023	0.109	BM	n.a.
4	Lactic Acid and HIBA	6.483	0.008	0.035	M *	0.1634
5	Acetic Acid	6.953	0.017	0.072	MB	0.1420
6	FORMIC	9.633	0.008	0.030	BMB	n.a.
7	BAK	20.153	0.358	1.688	BMB	n.a.

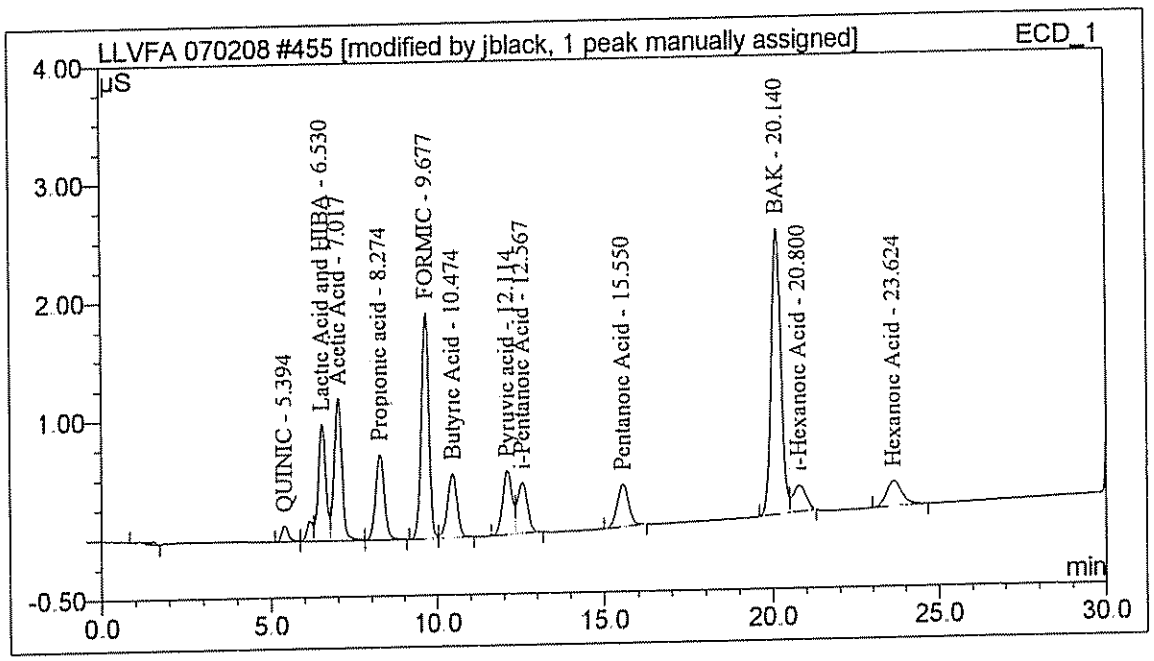


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-01A-MS	**Sequence No:**	455
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:	7/30/2008 9:17 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	5.394	0.031	0.131	BM *	n.a.
4	Lactic Acid and HIBA	6.530	0.253	0.974	M *	2.4430
5	Acetic Acid	7.017	0.317	1.195	M	2.3159
6	Propionic acid	8.274	0.221	0.712	MB	2.1503
7	FORMIC	9.677	0.511	1.898	BM	n.a.
8	Butyric Acid	10.474	0.178	0.534	MB	2.0540
9	Pyruvic acid	12.114	0.177	0.537	BM ^	2.3395
10	i-Pentanoic Acid	12.567	0.149	0.426	MB	2.0856
11	Pentanoic Acid	15.550	0.140	0.358	BMB	1.9813
12	BAK	20.140	0.811	2.406	BM *	n.a.
13	i-Hexanoic Acid	20.800	0.099	0.222	MB*	1.7755
14	Hexanoic Acid	23.624	0.119	0.215	BMB	2.0571



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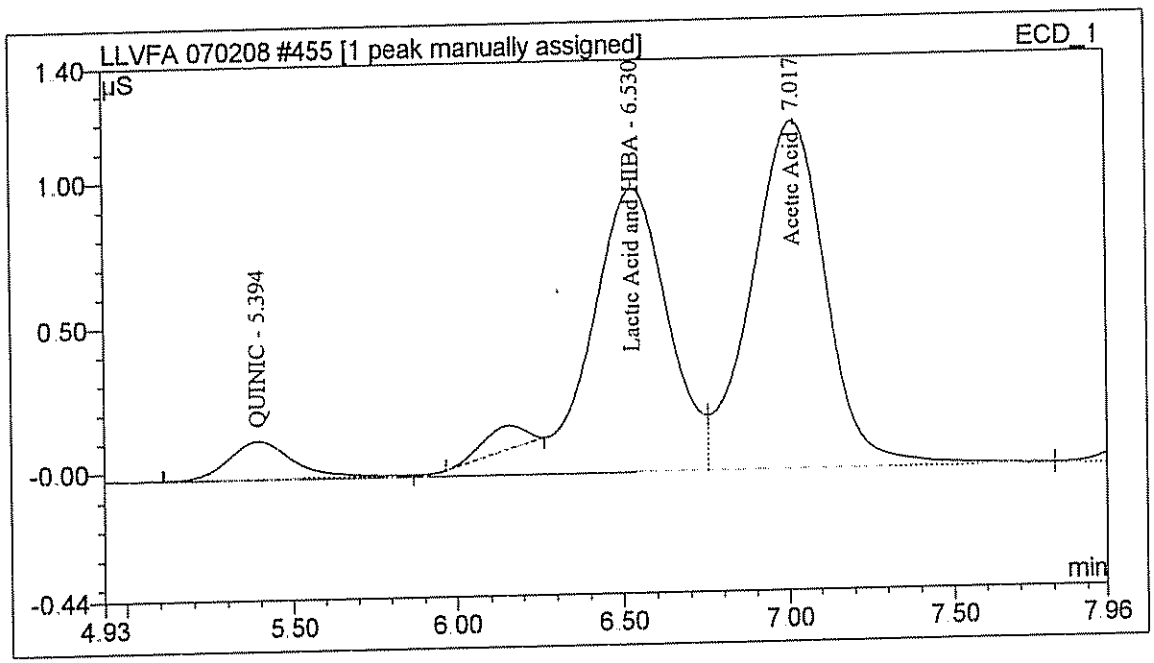
Sample Analysis Report

Sample Name:	P0807222-01A-MS	**Sequence No:**	455
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:	7/30/2008 9:17 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	5.394	0.029	0.130	Ru	n.a.
4	Lactic Acid and HIBA	6.530	0.276	0.974	BM	2.6480
5	Acetic Acid	7.017	0.317	1.195	M	2.3159
6	Propionic acid	8.274	0.221	0.712	MB	2.1503
7	FORMIC	9.677	0.511	1.898	BM	n.a.
8	Butyric Acid	10.474	0.178	0.534	MB	2.0540
9	Pyruvic acid	12.114	0.177	0.537	BM ^	2.3395
10	i-Pentanoic Acid	12.567	0.149	0.426	MB	2.0856
11	Pentanoic Acid	15.550	0.140	0.358	BMB	1.9813
12	BAK	20.160	0.309	1.408	BMB	n.a.
13	i-Hexanoic Acid	20.827	0.052	0.147	BMB	0.9671
14	Hexanoic Acid	23.624	0.119	0.215	BMB	2.0571



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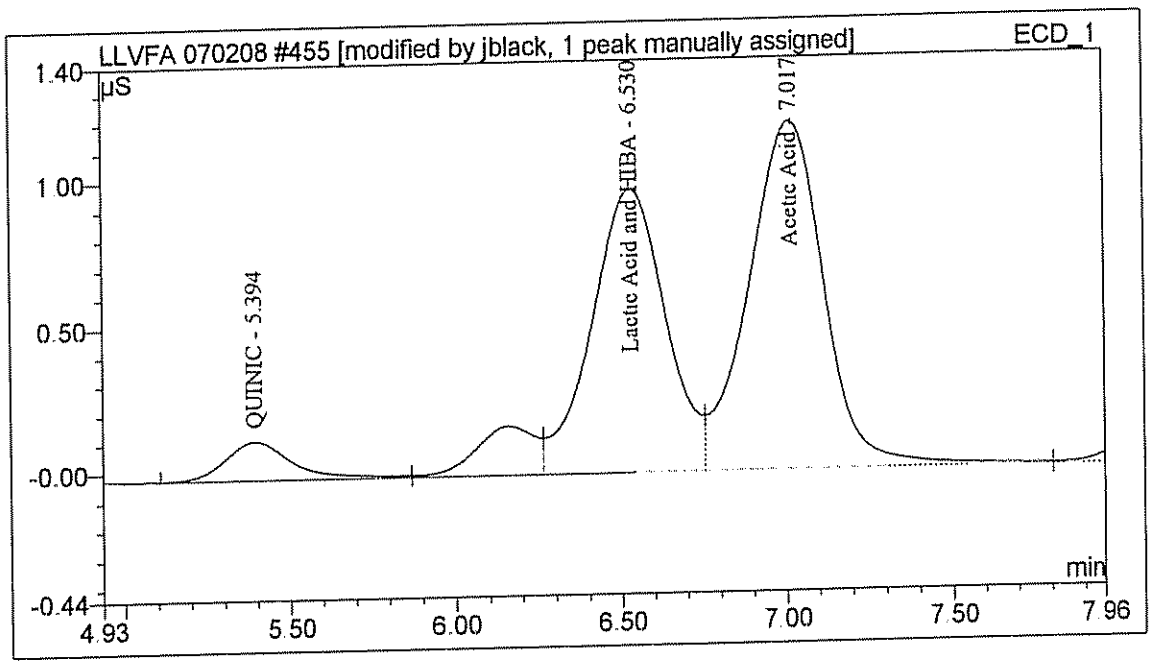
Sample Analysis Report

Sample Name:	P0807222-01A-MS	**Sequence No:**	455
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:	7/30/2008 9:17 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	5.394	0.031	0.131	BM *	n.a.
4	Lactic Acid and HIBA	6.530	0.253	0.974	M *	2.4430
5	Acetic Acid	7.017	0.317	1.195	M	2.3159
6	Propionic acid	8.274	0.221	0.712	MB	2.1503
7	FORMIC	9.677	0.511	1.898	BM	n.a.
8	Butyric Acid	10.474	0.178	0.534	MB	2.0540
9	Pyruvic acid	12.114	0.177	0.537	BM ^	2.3395
10	i-Pentanoic Acid	12.567	0.149	0.426	MB	2.0856
11	Pentanoic Acid	15.550	0.140	0.358	BMB	1.9813
12	BAK	20.160	0.309	1.408	BMB	n.a.
13	i-Hexanoic Acid	20.827	0.052	0.147	BMB	0.9671
14	Hexanoic Acid	23.624	0.119	0.215	BMB	2.0571

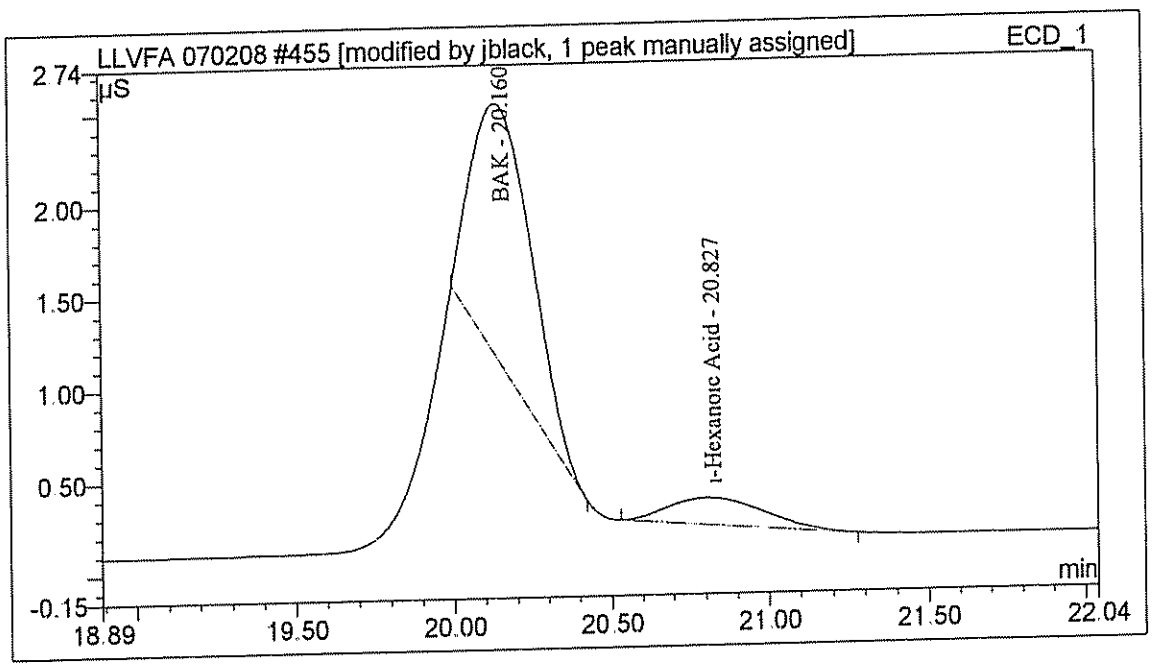


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-01A-MS	**Sequence No:**	455
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:	7/30/2008 9:17 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	5.394	0.031	0.131	BM *	n.a.
4	Lactic Acid and HIBA	6.530	0.253	0.974	M *	2.4430
5	Acetic Acid	7.017	0.317	1.195	M	2.3159
6	Propionic acid	8.274	0.221	0.712	MB	2.1503
7	FORMIC	9.677	0.511	1.898	BM	n.a.
8	Butyric Acid	10.474	0.178	0.534	MB	2.0540
9	Pyruvic acid	12.114	0.177	0.537	BM ^	2.3395
10	i-Pentanoic Acid	12.567	0.149	0.426	MB	2.0856
11	Pentanoic Acid	15.550	0.140	0.358	BMB	1.9813
12	BAK	20.160	0.309	1.408	BMB	n.a.
13	i-Hexanoic Acid	20.827	0.052	0.147	BMB	0.9671
14	Hexanoic Acid	23.624	0.119	0.215	BMB	2.0571



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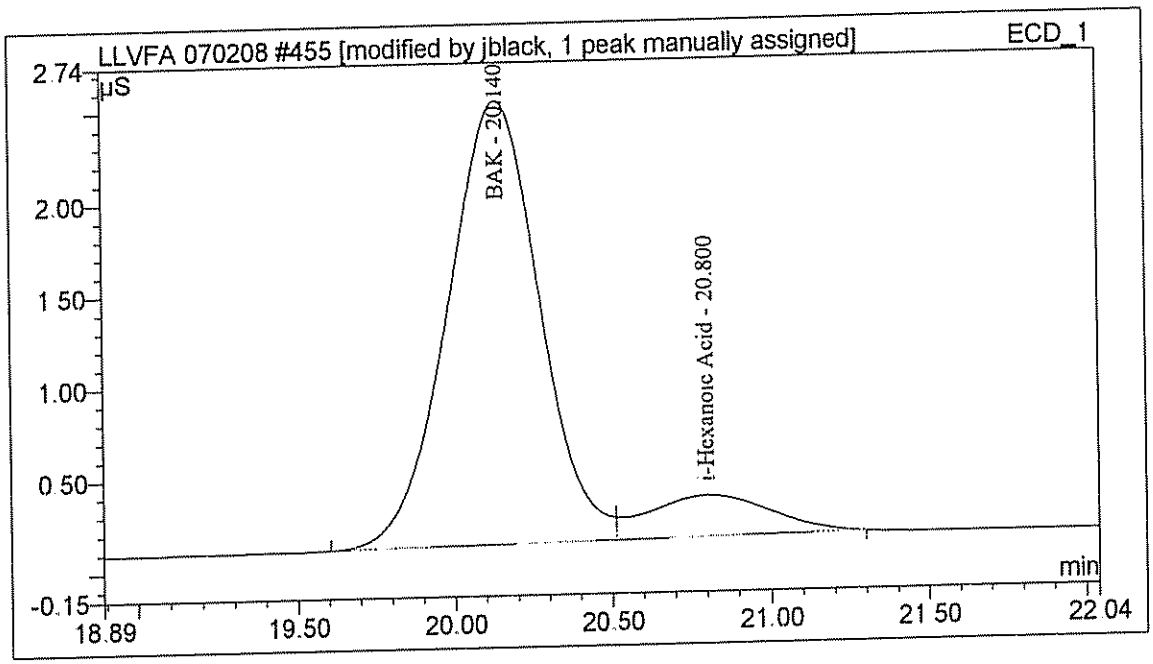
Sample Analysis Report

Sample Name:	P0807222-01A-MS	**Sequence No:**	455
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:	7/30/2008 9:17 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	5.394	0.031	0.131	BM *	n.a.
4	Lactic Acid and HIBA	6.530	0.253	0.974	M *	2.4430
5	Acetic Acid	7.017	0.317	1.195	M	2.3159
6	Propionic acid	8.274	0.221	0.712	MB	2.1503
7	FORMIC	9.677	0.511	1.898	BM	n.a.
8	Butyric Acid	10.474	0.178	0.534	MB	2.0540
9	Pyruvic acid	12.114	0.177	0.537	BM ^	2.3395
10	i-Pentanoic Acid	12.567	0.149	0.426	MB	2.0856
11	Pentanoic Acid	15.550	0.140	0.358	BMB	1.9813
12	BAK	20.140	0.811	2.406	BM *	n.a.
13	i-Hexanoic Acid	20.800	0.099	0.222	MB*	1.7755
14	Hexanoic Acid	23.624	0.119	0.215	BMB	2.0571

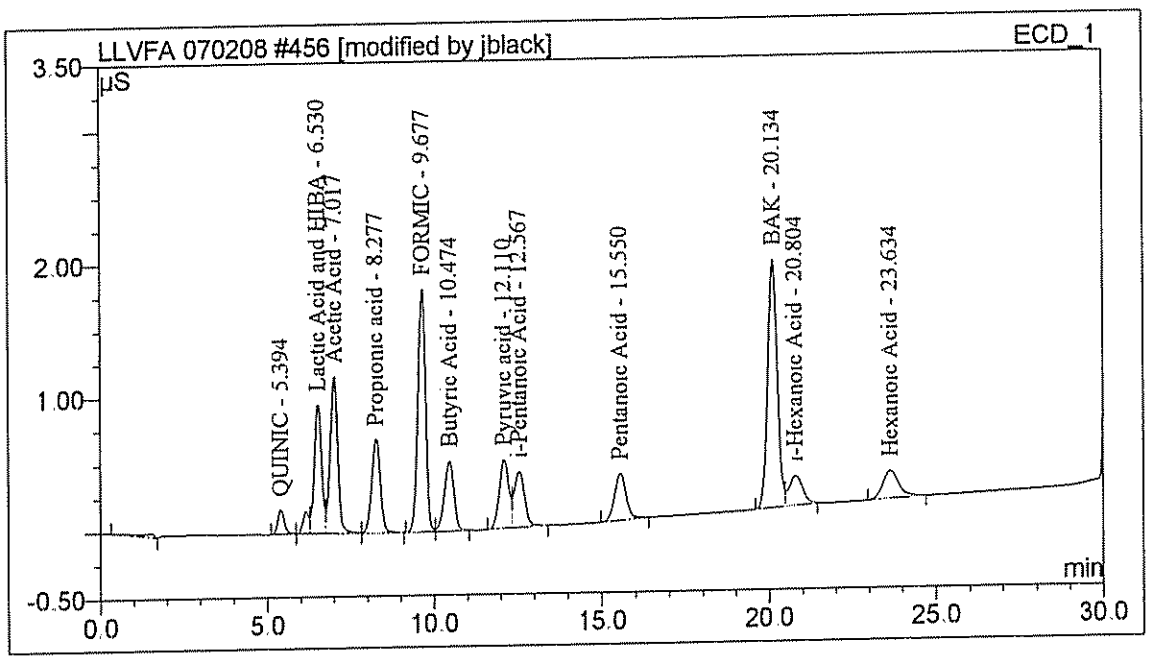


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-01A-MSD	**Sequence No:**	456
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:	7/30/2008 9:58 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	5.394	0.042	0.183	BM *	n.a.
4	Lactic Acid and HIBA	6.530	0.246	0.964	M *	2.3842
5	Acetic Acid	7.017	0.310	1.174	M	2.2641
6	Propionic acid	8.277	0.216	0.699	MB	2.1013
7	FORMIC	9.677	0.487	1.818	BM	n.a.
8	Butyric Acid	10.474	0.173	0.520	MB	1.9936
9	Pyruvic acid	12.110	0.169	0.514	BM	2.2452
10	i-Pentanoic Acid	12.567	0.149	0.417	MB	2.0806
11	Pentanoic Acid	15.550	0.138	0.349	BMB	1.9559
12	BAK	20.134	0.623	1.858	BM *	n.a.
13	i-Hexanoic Acid	20.804	0.103	0.220	MB*	1.8427
14	Hexanoic Acid	23.634	0.114	0.207	BMB	1.9809

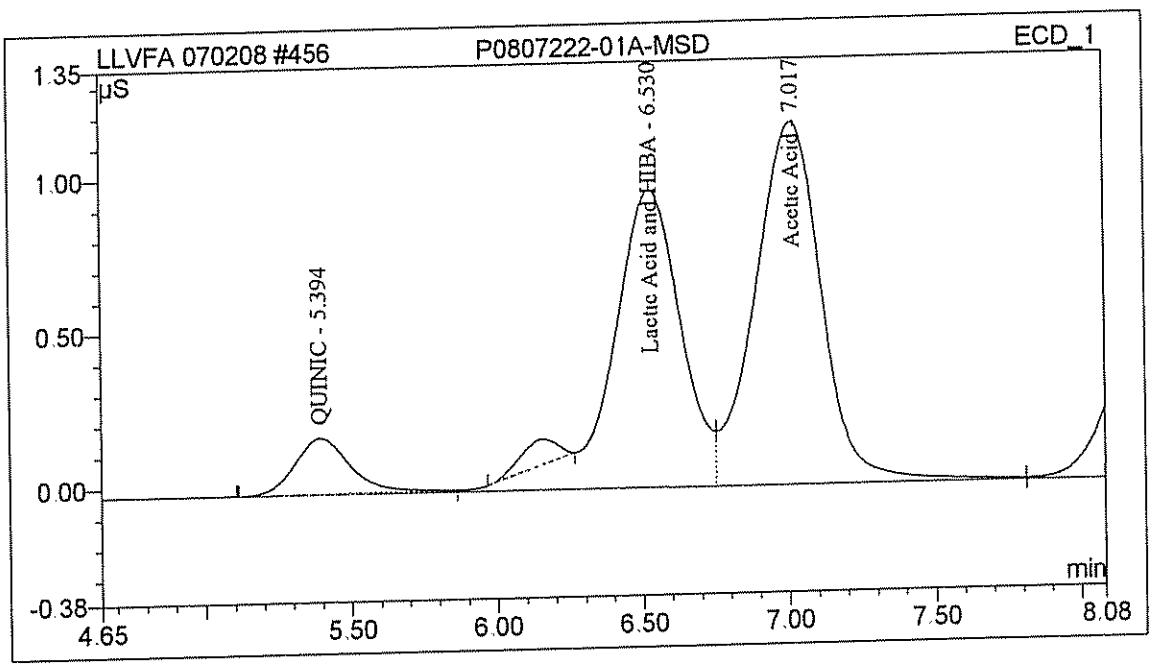


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-01A-MSD	**Sequence No:**	456
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:	7/30/2008 9:58 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	5.394	0.039	0.180	Ru	n.a.
4	Lactic Acid and HIBA	6.530	0.270	0.964	BM	2.5932
5	Acetic Acid	7.017	0.310	1.174	M	2.2641
6	Propionic acid	8.277	0.216	0.699	MB	2.1013
7	FORMIC	9.677	0.487	1.818	BM	n.a.
8	Butyric Acid	10.474	0.173	0.520	MB	1.9936
9	i-Pentanoic Acid	12.110	0.169	0.514	BM	2.3532
10	Pyruvic acid	12.567	0.149	0.417	MB	2.0098
11	Pentanoic Acid	15.550	0.138	0.349	BMB	1.9559
12	BAK	20.154	0.228	1.059	BMB	n.a.
13	i-Hexanoic Acid	20.824	0.054	0.149	BMB	1.0012
14	Hexanoic Acid	23.634	0.114	0.207	BMB	1.9809



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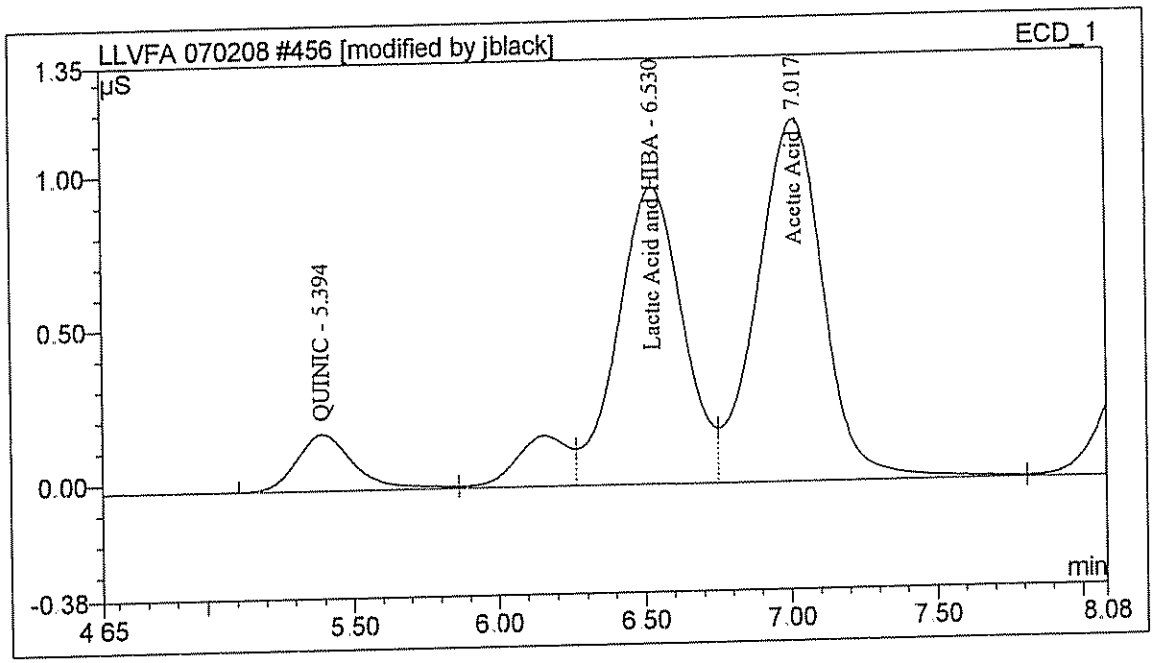
Sample Analysis Report

Sample Name:	P0807222-01A-MSD	**Sequence No:**	456
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:	7/30/2008 9:58 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	5.394	0.042	0.183	BM *	n.a.
4	Lactic Acid and HIBA	6.530	0.246	0.964	M *	2.3842
5	Acetic Acid	7.017	0.310	1.174	M	2.2641
6	Propionic acid	8.277	0.216	0.699	MB	2.1013
7	FORMIC	9.677	0.487	1.818	BM	n.a.
8	Butyric Acid	10.474	0.173	0.520	MB	1.9936
9	Pyruvic acid	12.110	0.169	0.514	BM	2.2452
10	i-Pentanoic Acid	12.567	0.149	0.417	MB	2.0806
11	Pentanoic Acid	15.550	0.138	0.349	BMB	1.9559
12	BAK	20.154	0.228	1.059	BMB	n.a.
13	i-Hexanoic Acid	20.824	0.054	0.149	BMB	1.0012
14	Hexanoic Acid	23.634	0.114	0.207	BMB	1.9809

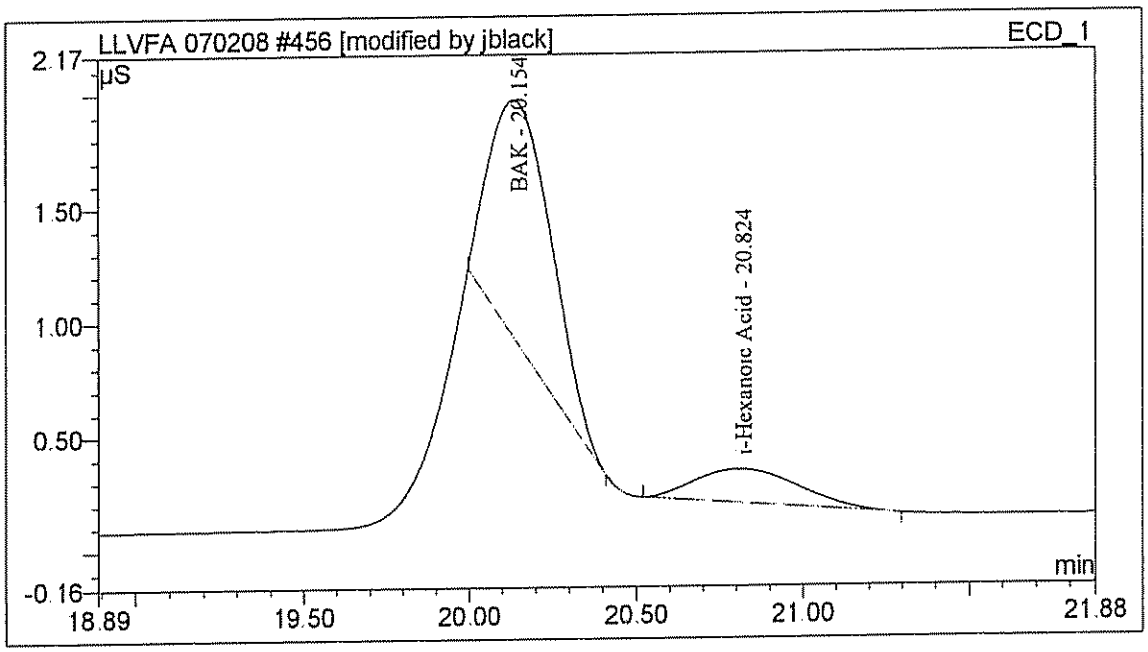


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-01A-MSD	**Sequence No:**	456
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:	7/30/2008 9:58 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	5.394	0.042	0.183	BM *	n.a.
4	Lactic Acid and HIBA	6.530	0.246	0.964	M *	2.3842
5	Acetic Acid	7.017	0.310	1.174	M	2.2641
6	Propionic acid	8.277	0.216	0.699	MB	2.1013
7	FORMIC	9.677	0.487	1.818	BM	n.a.
8	Butyric Acid	10.474	0.173	0.520	MB	1.9936
9	Pyruvic acid	12.110	0.169	0.514	BM	2.2452
10	i-Pentanoic Acid	12.567	0.149	0.417	MB	2.0806
11	Pentanoic Acid	15.550	0.138	0.349	BMB	1.9559
12	BAK	20.154	0.228	1.059	BMB	n.a.
13	i-Hexanoic Acid	20.824	0.054	0.149	BMB	1.0012
14	Hexanoic Acid	23.634	0.114	0.207	BMB	1.9809

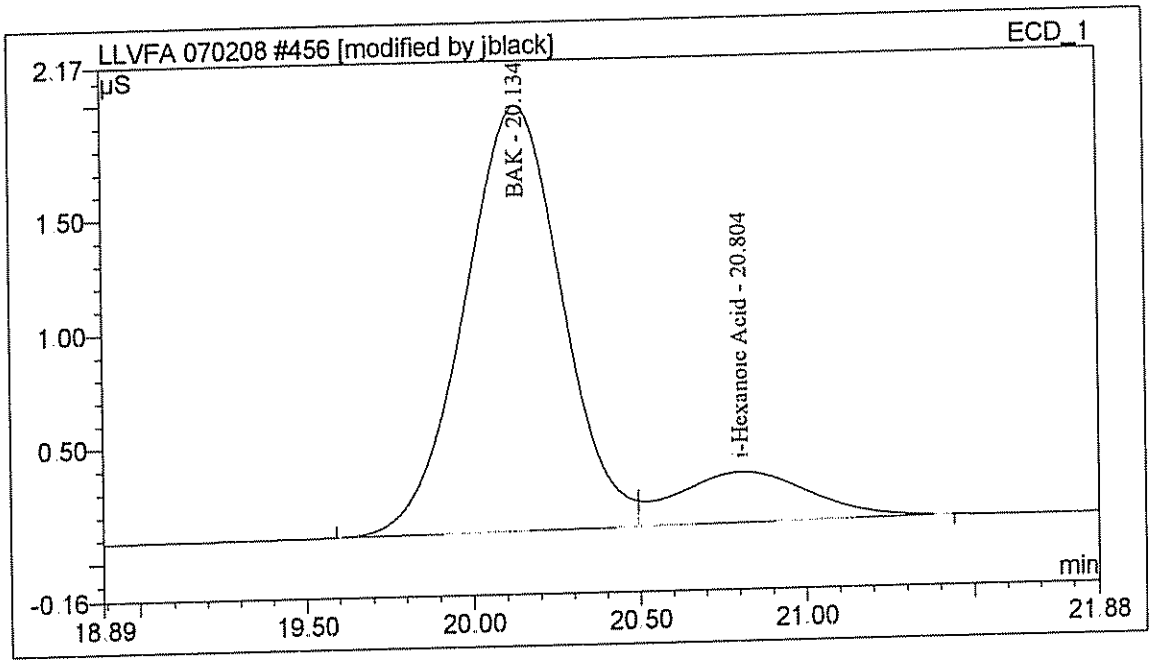


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-01A-MSD	**Sequence No:**	456
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:	7/30/2008 9:58 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	5.394	0.042	0.183	BM *	n.a.
4	Lactic Acid and HIBA	6.530	0.246	0.964	M *	2.3842
5	Acetic Acid	7.017	0.310	1.174	M	2.2641
6	Propionic acid	8.277	0.216	0.699	MB	2.1013
7	FORMIC	9.677	0.487	1.818	BM	n.a.
8	Butyric Acid	10.474	0.173	0.520	MB	1.9936
9	Pyruvic acid	12.110	0.169	0.514	BM	2.2452
10	i-Pentanoic Acid	12.567	0.149	0.417	MB	2.0806
11	Pentanoic Acid	15.550	0.138	0.349	BMB	1.9559
12	BAK	20.134	0.623	1.858	BM *	n.a.
13	i-Hexanoic Acid	20.804	0.103	0.220	MB*	1.8427
14	Hexanoic Acid	23.634	0.114	0.207	BMB	1.9809

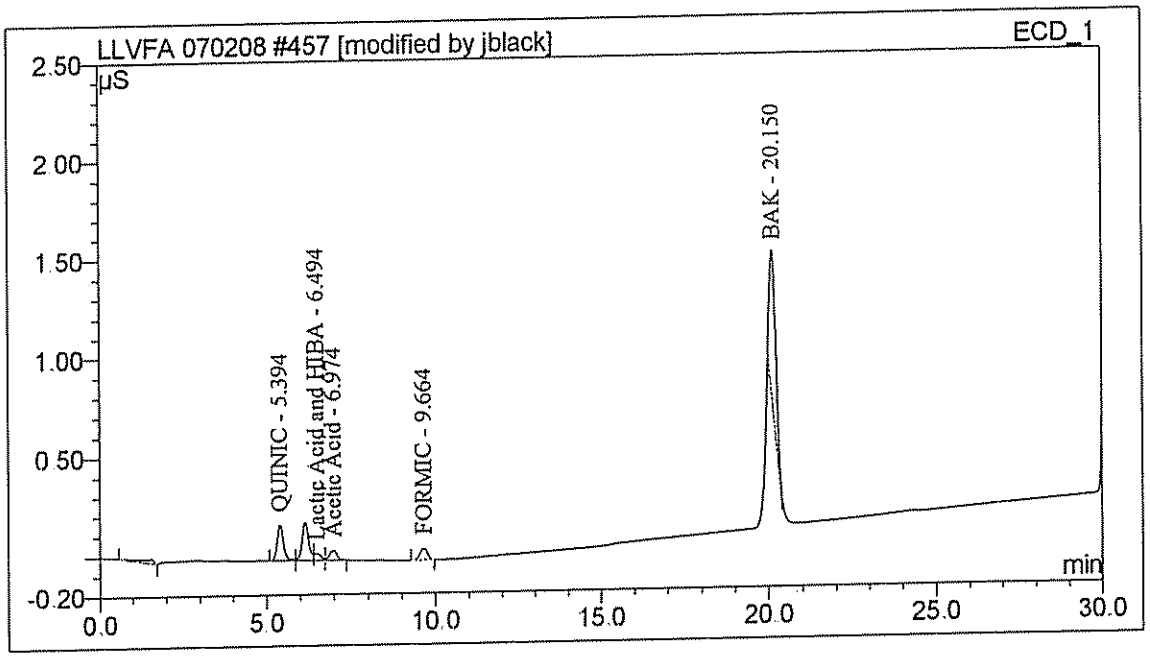


MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-02A	**Sequence No:**	457
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:	7/30/2008 10:39 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	5.394	0.040	0.180	BM	n.a.
4	Lactic Acid and HIBA	6.494	0.008	0.035	M *	0.1585
5	Acetic Acid	6.974	0.013	0.050	MB	0.1086
6	FORMIC	9.664	0.015	0.058	BMB	n.a.
7	BAK	20.150	0.165	0.777	BMB	n.a.

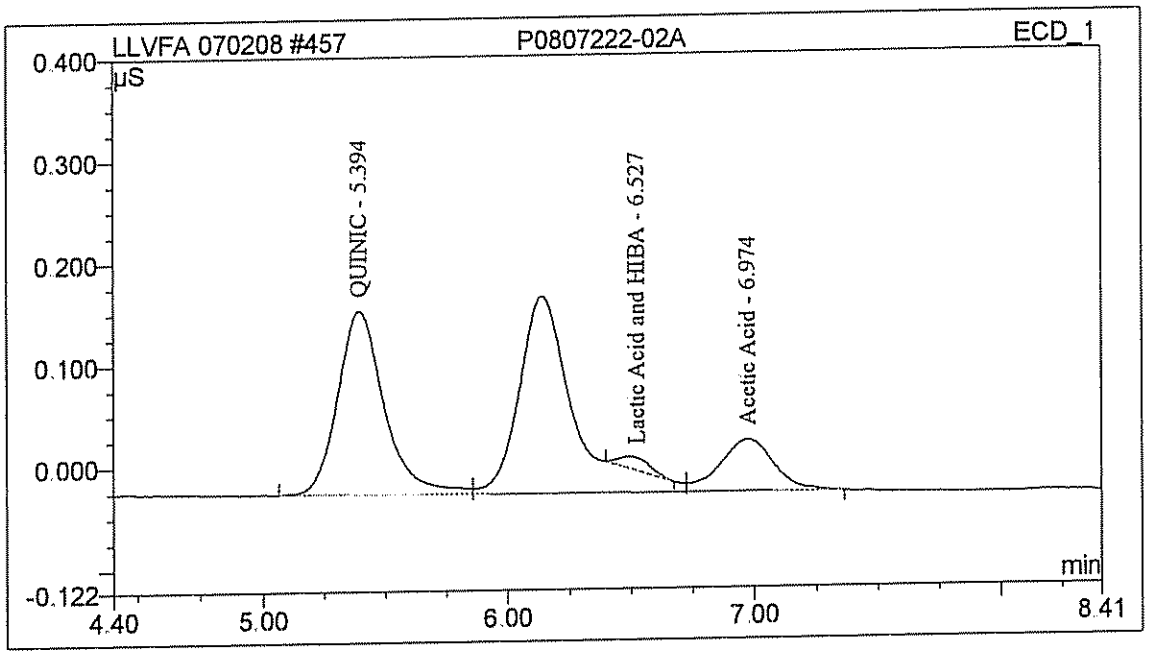


MICROSEEPS

Sample Analysis Report

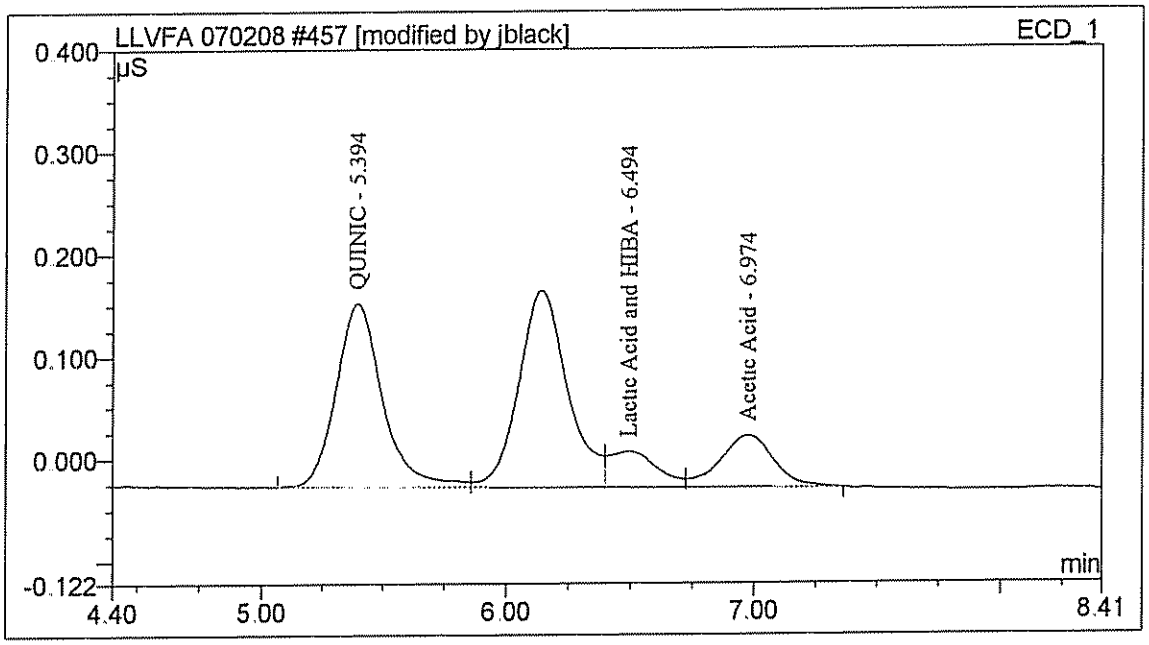
Sample Name:	P0807222-02A	**Sequence No:**	457
Sequence Name:	LLVFA 070208	**Instrument ID:**	SEMIVOL13
Program Method:	PWM070716AA	**Injection vol.:**	1.0
Quantitation Method:	pat mm red01	**Dilution Factor:**	1.0000
Date Time Collected:	7/30/2008 10:39 PM	**Analytical Method:**	AM23G
System Operator:	jblack	**Sample Amt.:**	1.0000

Peak No.	Component Name	Retention Time	Area µS*min	Height µS	Type	Amount PPM
2	QUINIC	5.394	0.040	0.180	BM	n.a.
4	Lactic Acid and HIBA	6.527	0.002	0.012	Rd	0.0999
5	Acetic Acid	6.974	0.013	0.050	MB	0.1086
6	FORMIC	9.664	0.015	0.058	BMB	n.a.
7	BAK	20.150	0.165	0.777	BMB	n.a.



MICROSEEPS

Sample Analysis Report

Sample Name:	P0807222-02A	**Sequence No:**	457
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:	7/30/2008 10:39 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	5.394	0.040	0.180	BM	n.a.
4	Lactic Acid and HIBA	6.494	0.008	0.035	M *	0.1585
5	Acetic Acid	6.974	0.013	0.050	MB	0.1086
6	FORMIC	9.664	0.015	0.058	BMB	n.a.
7	BAK	20.150	0.165	0.777	BMB	n.a.