USEPA KERR LAB
919 Kerr Research Dr.
Ada, OK 74820

8ME801SF
80A866SF
8IR235SF

ANALYTICAL SAMPLE RECORD

(For samples to be submitted to Shaw Env.)

RICK WILKEN

Technical Directive #: EPA GP 363

Project Name: Pavillion Groundwater

For Shaw Env. use only — Sample Received on: 4/19/12 at: 1:30 pm — Received by: T. Johnson, T. Thompson & T. Perry
Log-in by: T. Johnson, T. Thompson & T. Perry — Date: 4/19/12 — Sample STAD Set Number: 6051

SAMPLE INFORMATION: (Matrix: W = Water, S/S = Soil/Sediment, O = Others; Container types: G = Glass, P = Plastic, O = Others)

ANALYSES / PARAMETERS (Number of containers and type, e.g., 2G, 3P, etc.)

#	Sample I.D.	Sample Collection Date	Sample Collection Time	Sample Matrix (use the codes)	Total Number of Containers	Metals	dissolved gases	RSKSOP-259	RSKSOP-112	Anions	Nutrients	DIC/TIC DOC/TOC	Isotopes-H2O	Comments
1	FieldBlk 2	4/18/12	9:00 A	W	~~15~~ 14	2P	2G	2G	2G	1P	1P	4G	~~1G~~	metals: filtered / unfiltered < HNO3 preserved
2	EquipBlk 2	4/18/12	10:00 A	W	14	2P	2G	2G	2G	1P	1P	4G	—	Nutrients: H2SO4 Preserved
3	TripBlk 2	4/18/12	1:00 P	W	4	—	2G	2G	—	—	—	—	—	DOC: H3PO4 preserved
4	PGDW05-0412	4/18/12	12:00 P	W	15	2P	2G	2G	2G	1P	1P	4G	1G	RSKSOP-259: TSP preserved
5														RSKSOP-112: NaOH preserve
6														Dissolved gases: TSP preserved
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Sample Submitted by: Rick Wilken Date: 4/18/2012

Remarks:

EPAPAV0048755

Analytical Sample ID Report

Site Name: Pavillion Groundwater

1D or Work Request: 8ME801SF, EPA GP363, 8IR235SF, 8OA866SF
Originator: Wilkin

Sample Set: 6511
Date Received: 4/19/2012
Date Logged: 4/19/2012
Log-in by: Thompson, Tiffany

Sample ID	SampleName	Date Collected	Matrix	DIC - Aqueous	DOC - Shimadzu	GC-dissolved gases (C1-C4)	GC/MS-VOA headspace (BTEXX	HPLC-volatile acids (C2-C4)	ICP-MS (standard suite)-analys	ICP-MS (standard suite)-with d	ICP-OES (standard suite)-analy	ICP-OES (standard suite)-with	Isotope Ratio-Picarro CRDS	Multiple Anion by CE - Cl & S	Multiple Anion by Lachat - NO	Single Anion by CE - Br	Single Anion by CE - Fl	Comments
6511-01	FieldBlk 2	04/18/2012	W	1	1	1	1	1	1	1	1	1		1	1	1	1	
6511-02	EquipBlk 2	04/18/2012	W	1	1	1	1	1	1	1	1	1		1	1	1	1	
6511-03	TripBlk 2	04/18/2012	W			1	1											
6511-04	PGDW05-0412	04/18/2012	W	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

General Sample Set Comments

EPAPAV0048756

USEPA KERR LAB
919 Kerr Research Dr.
Ada, OK 74820

Internal Chain of Custody Sample Sheet

(For samples submitted to Shaw Env. and Infra. Inc.)

Technical Directive #: 8OA866SF

Project Name: Pavillion Groundwater

For Shaw Env. use only **Sample Received on:** 4/19/2012 **Time:** 1:30 PM **Received by:** T. Johnston/T.Thompson/T. Perry

Log-in by: T. Johnston/T.Thompson/T. Perry **Date:** 4/19/2012 **Time:** 1:30 PM **Location:** lab 125 **STAD Sample Set Number:** 6511

SAMPLE INFORMATION: (**Matrix:** W = Water, S/S = Soil/Sediment, O = Others; **Container types:** G = Glass, P = Plastic, O = Others)

ANALYSES / PARAMETERS (Number of containers and type, e.g., 2G, 3P, etc.)

Sample Submitted by: Rick Wilkin Date: 4/18/2012

Remarks:

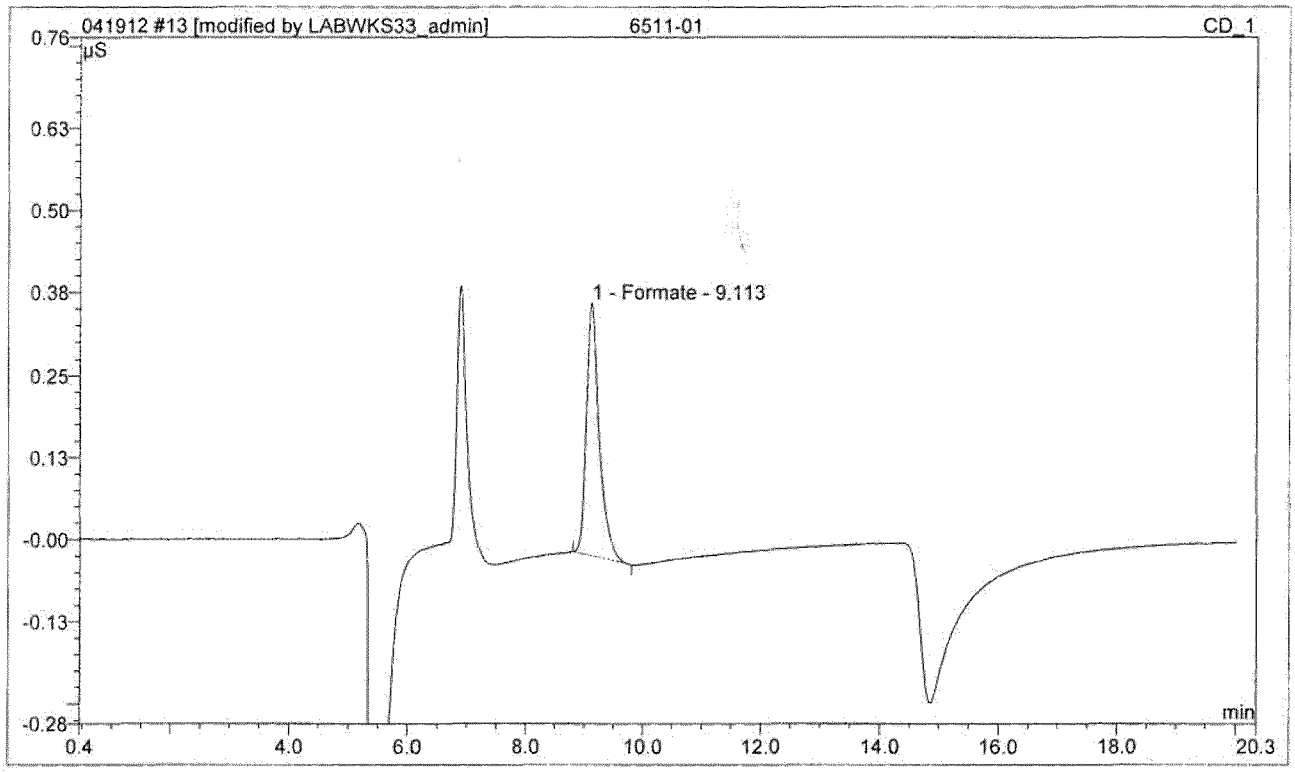
#	Sample I.D.	Sample Collection Information Date	Time	Sample Matrix (use the codes)	Total Number of Containers	LMWA								Comments
1	FieldBlk 2	4/18/2012	9:00 AM	W	2	X								
2	EquipBlk 2	4/18/2012	10:00 AM	W	2	X								
3	TripBlk 2	4/18/2012	1:00 PM	W										
4	PGDW05-0412	4/18/2012	12:00 PM	W	2	X								
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														

Reliquished by: [signature]	Date/Time: 4/19/12 3:55pm	Location: 125	→	Received by: [signature]	Date/Time: 4/19/12 4:05pm	Location: MBCTR2
Reliquished by:	Date/Time:	Location:	→	Received by:	Date/Time:	Location:
Reliquished by:	Date/Time:	Location:	→	Received by:	Date/Time:	Location:
Reliquished by:	Date/Time:	Location:	→	Received by:	Date/Time:	Location:
Reliquished by:	Date/Time:	Location:	→	Received by:	Date/Time:	Location:

EPAPAV00048757

13 6511-01

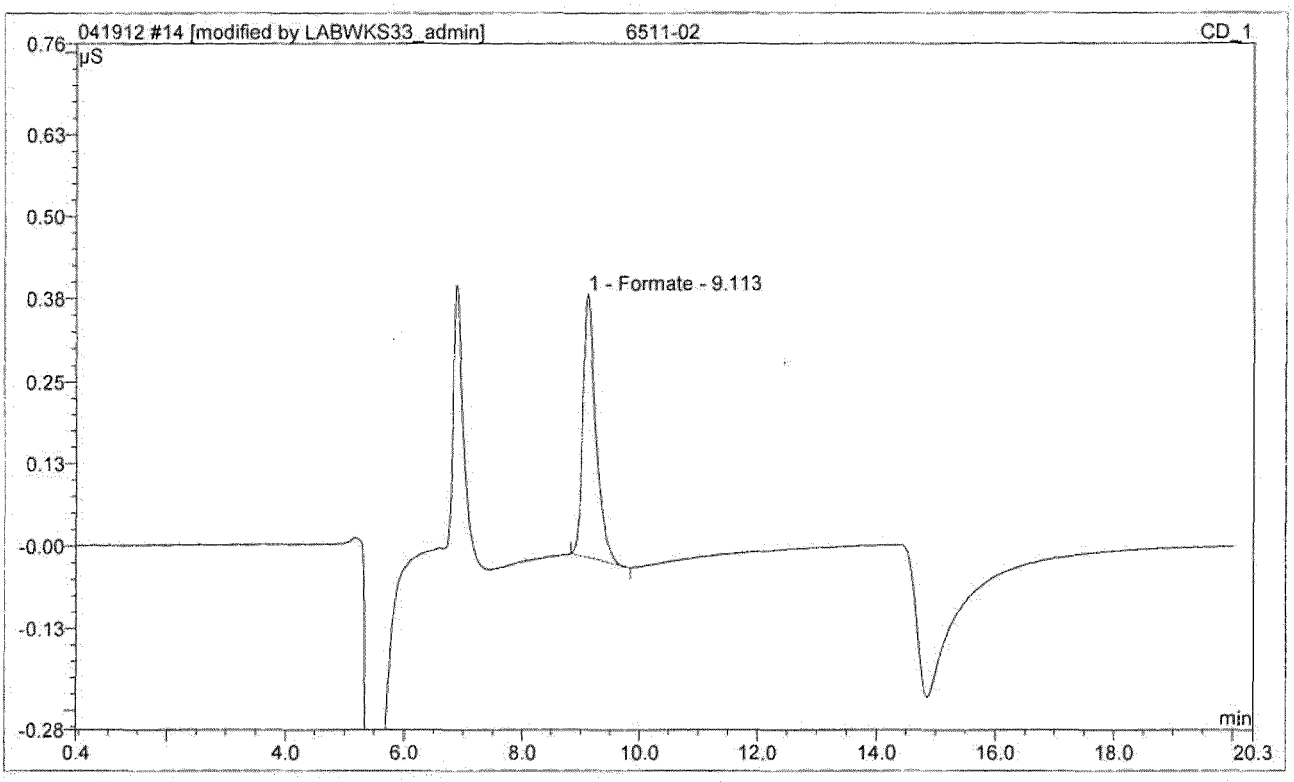
Sample Name:	**6511-01**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 19:22**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	9.11	Formate	0.383	0.0977038975	100.00	1.769	BMB*
Total:			0.383	0.098	100.00	1.769	

14 6511-02

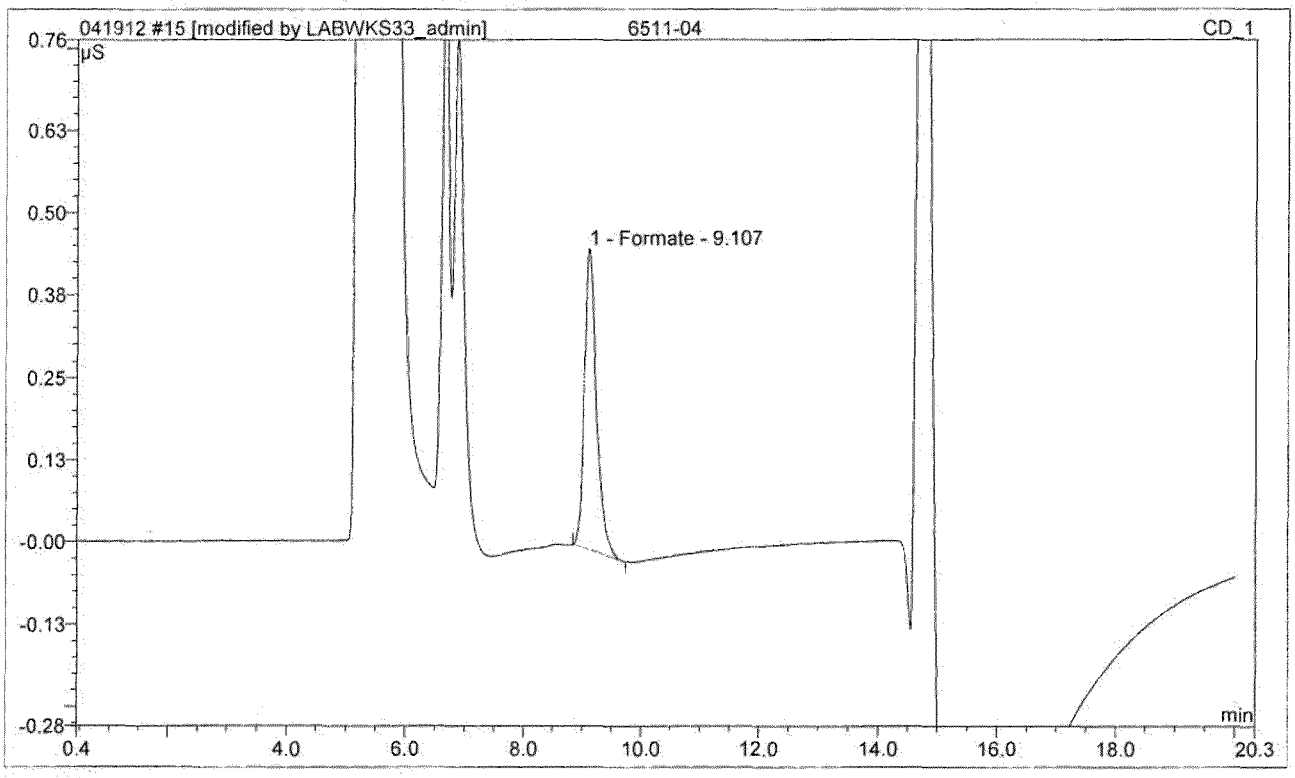
Sample Name:	**6511-02**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 19:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	9.11	Formate	0.399	0.1013022308	100.00	1.834	BMB*
Total:			0.399	0.101	100.00	1.834	

15 6511-04

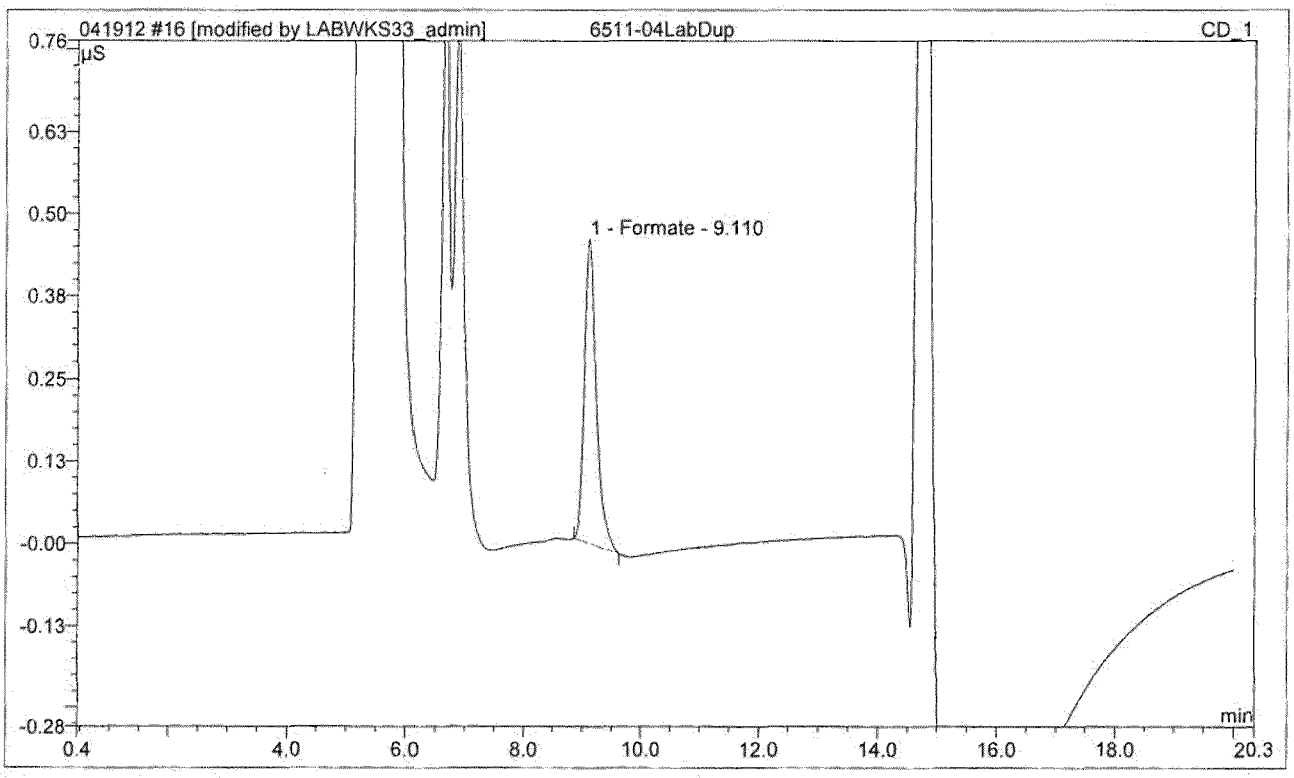
Sample Name:	**6511-04**	*Injection Volume:*	**25.0**
Vial Number:	**8**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 20:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	9.11	Formate	0.457	0.1084963639	100.00	1.962	BMB*
Total:			0.457	0.108	100.00	1.962	

16 6511-04LabDup

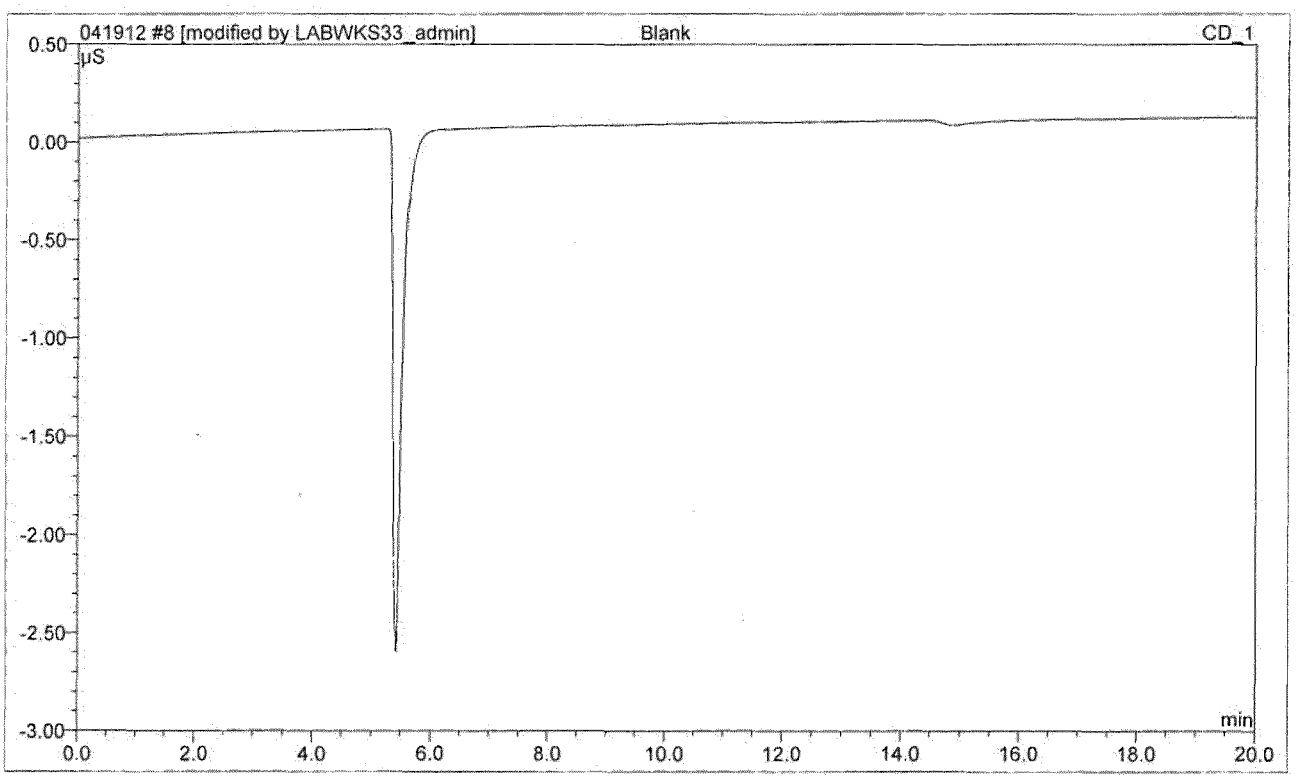
Sample Name:	**6511-04LabDup**	*Injection Volume:*	**25.0**
Vial Number:	**9**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 20:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	9.11	Formate	0.462	0.1094838806	100.00	1.979	BMB*
Total:			0.462	0.109	100.00	1.979	

8 Blank

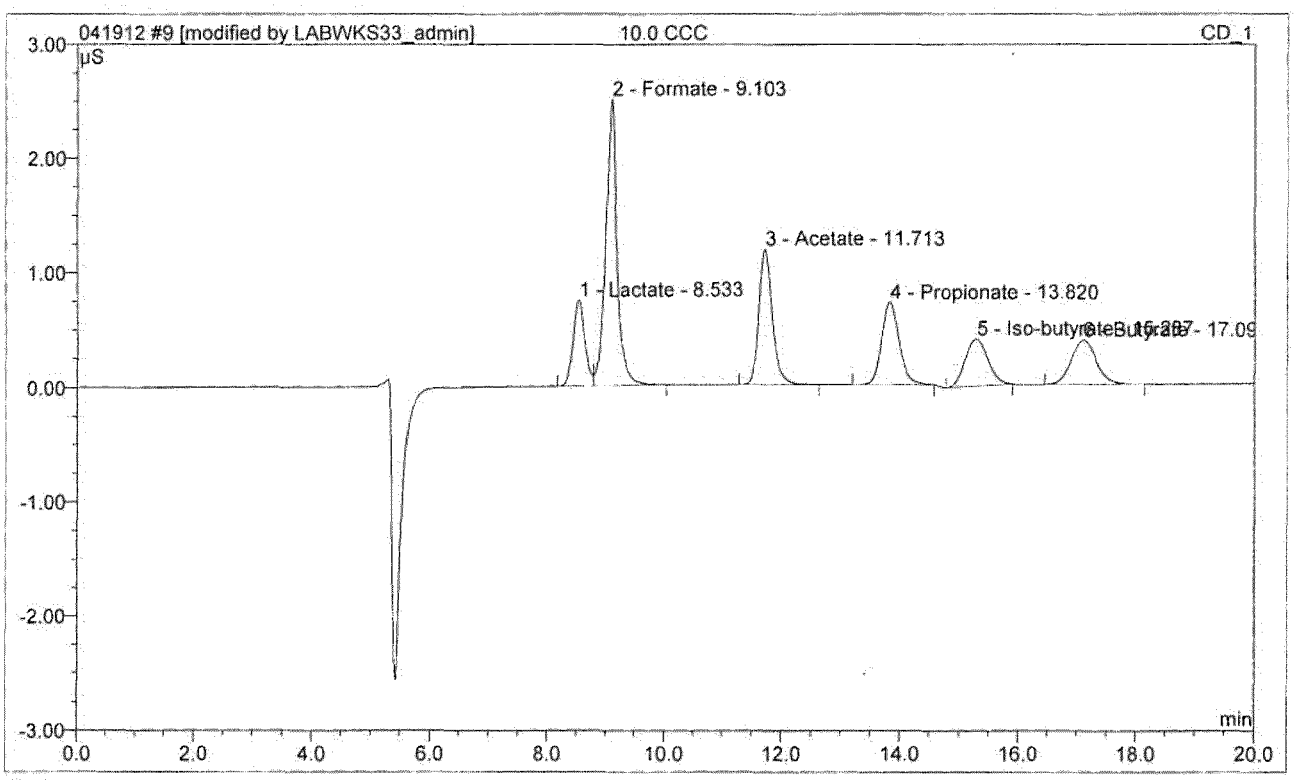
Sample Name:	**Blank**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 17:23**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

9 10.0 CCC

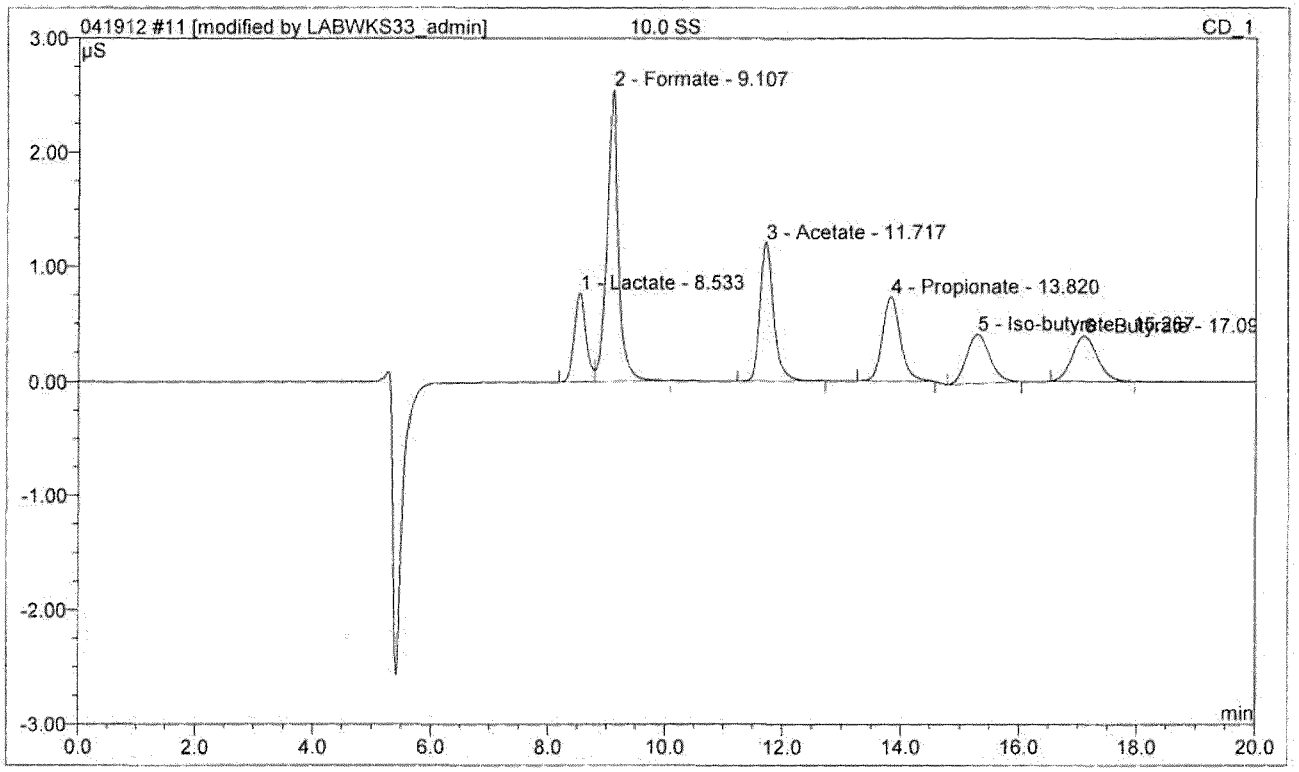
Sample Name:	**10.0 CCC**	*Injection Volume:*	**25.0**
Vial Number:	**2**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 17:47**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	8.53	Lactate	0.747	0.1739184623	10.39	9.313	BM
2	9.10	Formate	2.496	0.5590985025	33.40	9.995	MB
3	11.71	Acetate	1.179	0.3130596254	18.70	9.981	BM
4	13.82	Propionate	0.712	0.2500285437	14.94	10.351	BMB
5	15.29	Iso-butyrate	0.410	0.1839445954	10.99	10.189	BMB*
6	17.09	Butyrate	0.383	0.1936670284	11.57	10.346	BMB
Total:			5.927	1.674	100.00	60.177	

11 10.0 SS

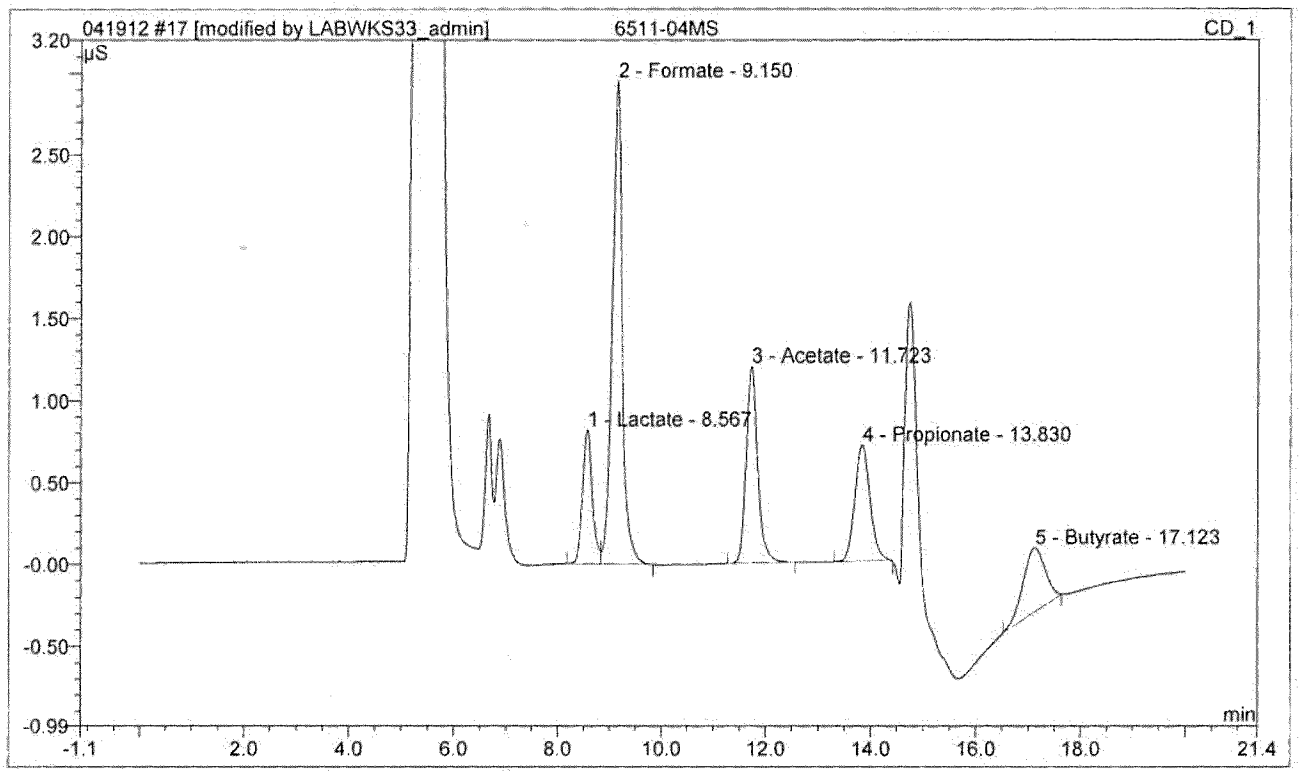
Sample Name:	**10.0 SS**	*Injection Volume:*	**25.0**
Vial Number:	**4**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 18:34**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	8.53	Lactate	0.767	0.1781240122	10.43	9.538	BM
2	9.11	Formate	2.541	0.5686361856	33.30	10.166	MB
3	11.72	Acetate	1.206	0.3205278086	18.77	10.219	BMB
4	13.82	Propionate	0.726	0.2535696103	14.85	10.497	BM
5	15.29	Iso-butyrate	0.422	0.1925495285	11.28	10.663	BMB*
6	17.10	Butyrate	0.388	0.1941874284	11.37	10.374	BM
Total:			6.051	1.708	100.00	61.457	

17 6511-04MS

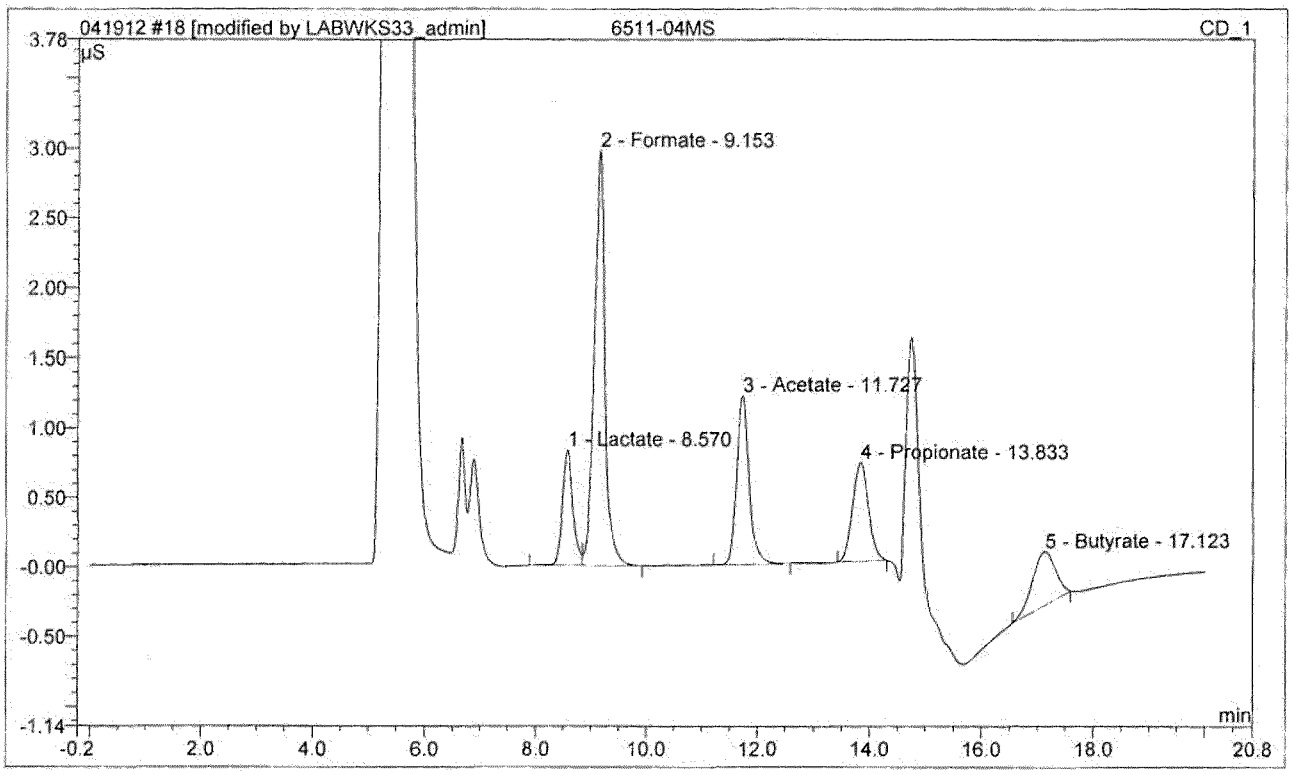
Sample Name:	**6511-04MS**	*Injection Volume:*	**25.0**
Vial Number:	**10**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 20:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	8.57	Lactate	0.820	0.1790183121	11.35	9.586	BM *
2	9.15	Formate	2.952	0.6562198668	41.60	11.727	MB*
3	11.72	Acetate	1.202	0.3108311921	19.71	9.910	BMB
4	13.83	Propionate	0.710	0.2389181940	15.15	9.892	BM
5	17.12	Butyrate	0.392	0.1924045285	12.20	10.279	BMB*
Total:			6.077	1.577	100.00	51.394	

18 6511-04MS D

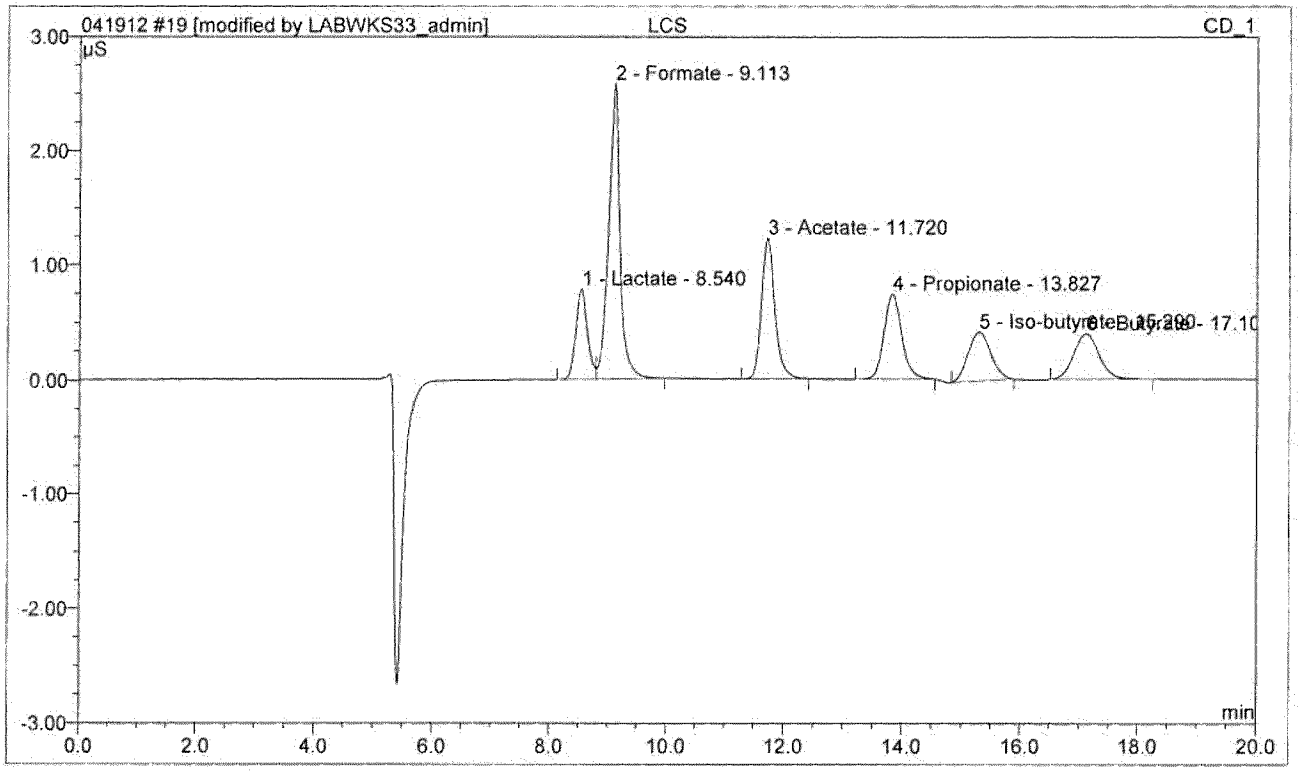
Sample Name:	**6511-04MS**	*Injection Volume:*	**25.0**
Vial Number:	**11**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 21:20**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	8.57	Lactate	0.835	0.1842924787	11.65	9.868	BM *
2	9.15	Formate	2.975	0.6628280666	41.89	11.845	MB*
3	11.73	Acetate	1.218	0.3153480920	19.93	10.054	BMB
4	13.83	Propionate	0.712	0.2350610274	14.85	9.732	BMB*
5	17.12	Butyrate	0.388	0.1849555287	11.69	9.882	BMB*
Total:			6.128	1.582	100.00	51.382	

19 LCS

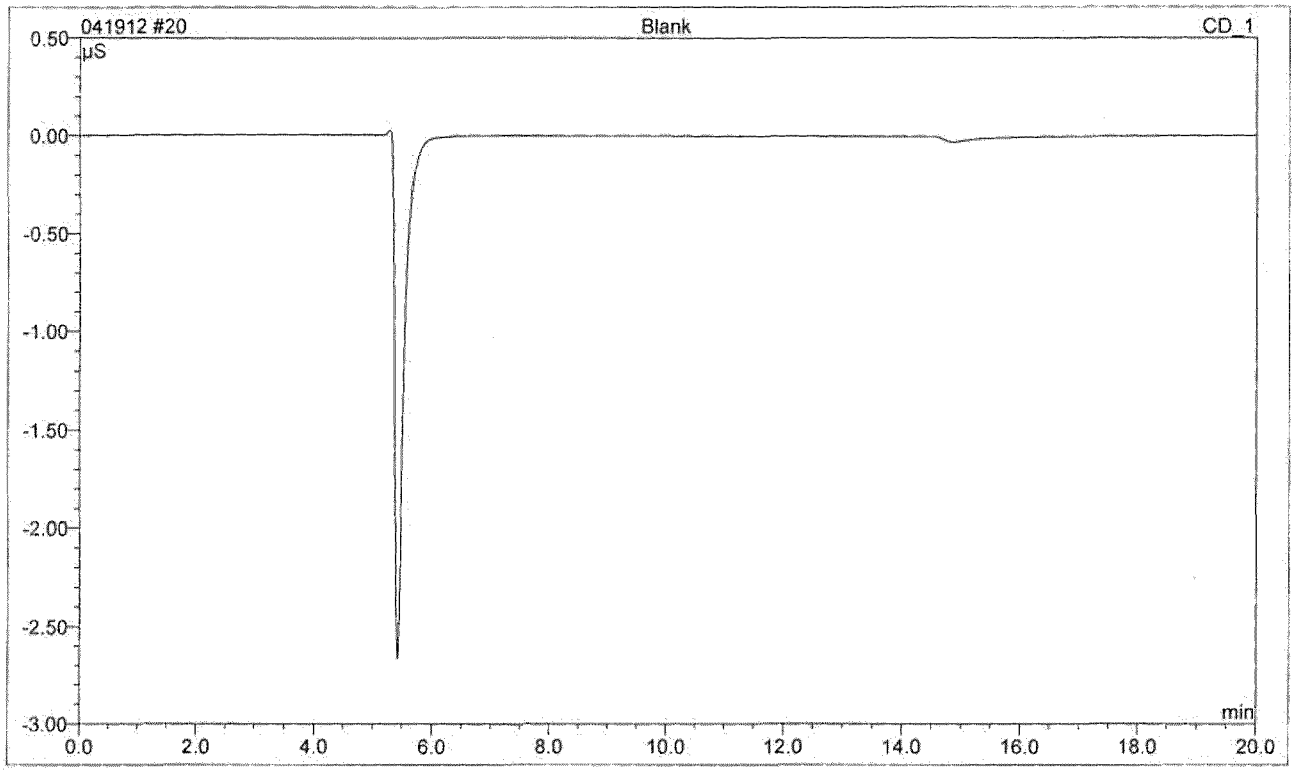
Sample Name:	**LCS**	*Injection Volume:*	**25.0**
Vial Number:	**12**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 21:44**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	8.54	Lactate	0.780	0.1805524621	10.54	9.668	BM
2	9.11	Formate	2.568	0.5717678022	33.37	10.221	MB
3	11.72	Acetate	1.219	0.3203719086	18.70	10.214	BMB
4	13.83	Propionate	0.734	0.2560573935	14.95	10.600	BMB
5	15.29	Iso-butyrate	0.420	0.1872211953	10.93	10.370	BMB*
6	17.10	Butyrate	0.392	0.1972849117	11.52	10.539	BMB
Total:			6.113	1.713	100.00	61.612	

20 Blank

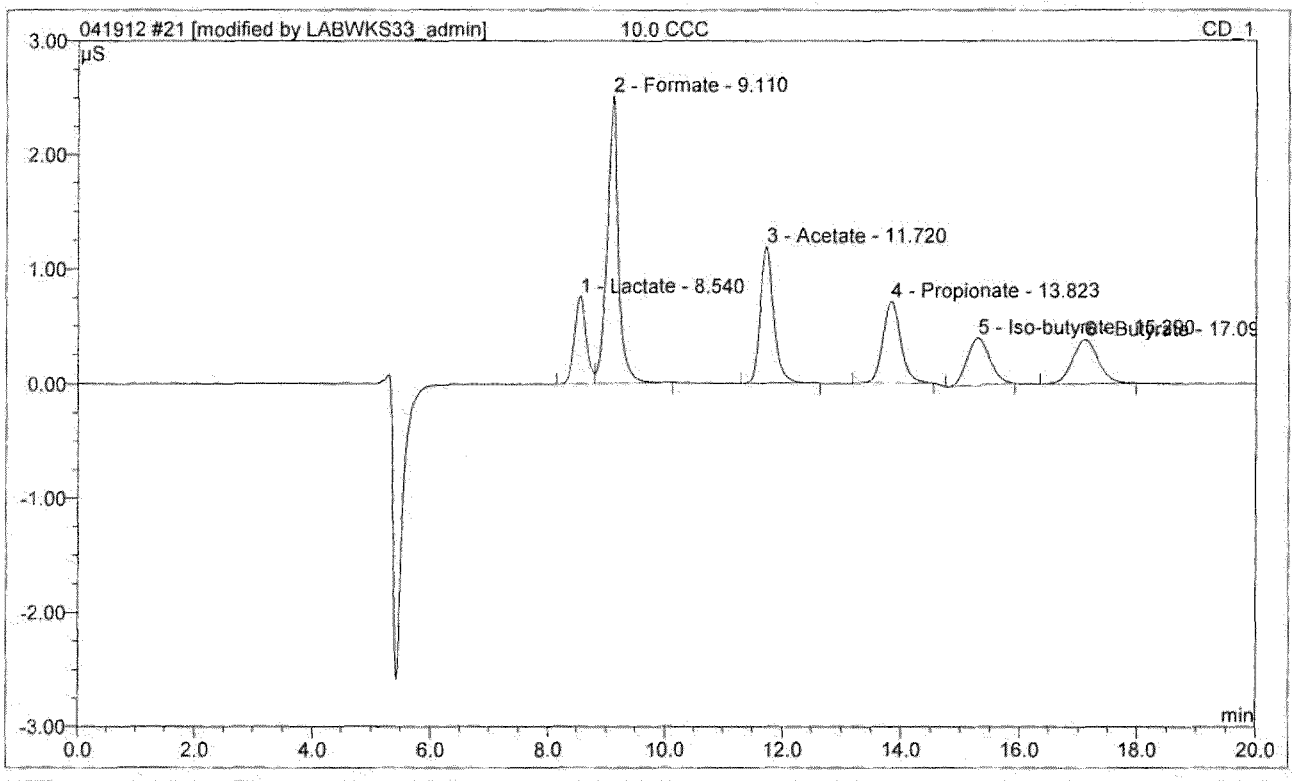
Sample Name:	**Blank**	*Injection Volume:*	**25.0**
Vial Number:	**13**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 22:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	

21 10.0 CCC

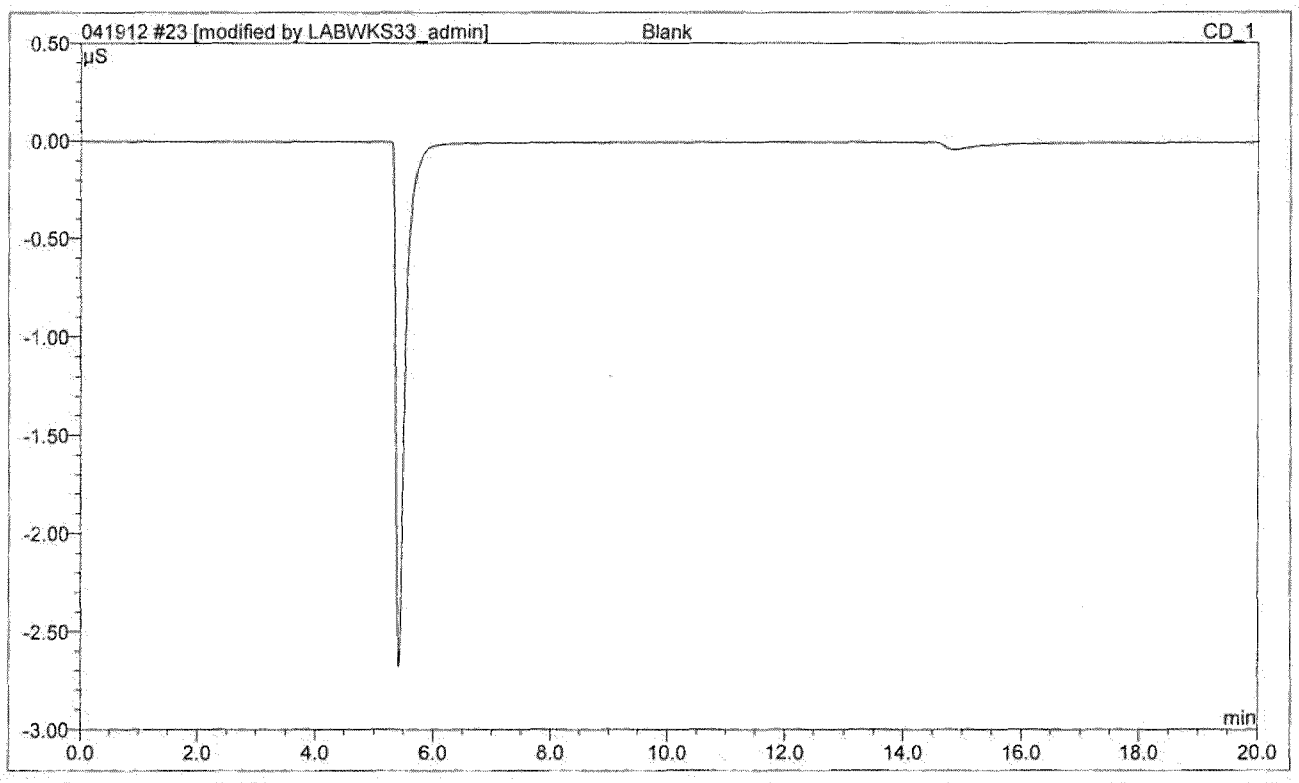
Sample Name:	**10.0 CCC**	*Injection Volume:*	**25.0**
Vial Number:	**14**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 22:31**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
1	8.54	Lactate	0.759	0.1755910122	10.46	9.403	BM
2	9.11	Formate	2.513	0.5602849525	33.38	10.017	MB
3	11.72	Acetate	1.188	0.3138307921	18.70	10.006	BMB
4	13.82	Propionate	0.713	0.2487315437	14.82	10.297	BM
5	15.29	Iso-butyrate	0.411	0.1842373787	10.98	10.206	BMB*
6	17.10	Butyrate	0.384	0.1957557117	11.66	10.457	BM
Total:			5.969	1.678	100.00	60.386	

23 Blank

Sample Name:	**Blank**	*Injection Volume:*	**25.0**
Vial Number:	**16**	*Channel:*	**CD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICE AS1 Program**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ICE AS1 Method New 1 over Y**	*Dilution Factor:*	**1.0000**
Recording Time:	**4/19/2012 23:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**20.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount mg/L	Type
Total:			0.000	0.000	0.00	0.000	