



# FORMATION PRESSURE WORKSHEET

Well Name : 35/11-10      Rig : West Vanguard      Date : 1997-06-04

Pressure Units : Bars      RKB-MSL : 22 m.      MSL-SBed: 353.5 m.      Witnessed by : Hinderaker/Nyby/Watts

Run No./ Test No.	Depth		Initial Hydrostatic Pressure		Formation Pressure		Final Hydrostatic Pressure		Time hh:mm		Formation Pressure sg EMD	Test Temp degC	Good Data? Y/N	Sample Information			Remarks Mobility (mD/Cp)
	mMD RKB	mTVD RKB	CQG	Strain	CQG	Strain	CQG	Strain	Set	Retract				Main Fluid Type	HC Gravity g/cc	Sample Vol, cc	
1A/1	1972	1971.9	241.34	242.36	200.30	201.33	241.33	242.3	21:07	21:10	1.03	58	Y				309.8
1A/2	1974	1973.9	241.57	242.56	200.33	201.36	241.56	242.5	21:17	21:19	1.03	59	Y				728.2
1A/3	1979	1978.9	242.19	243.17	200.43	200.46	242.17	243.2	21:25	21:27	1.03	59.5	Y				9876.3
1A/4	1982	1981.9	242.55	243.53	200.51	200.50	242.54	243.5	21:33	21:34	1.03	60	Y				8489.2
1A/5	1984	1983.9	242.80	243.77	200.55	200.56	242.78	243.8	21:42	21:43	1.03	60.7	Y				2687.5
1A/6	1989	1988.9	243.40	244.66	200.77	201.79	243.38	244.3	21:47	21:51	1.03	61.2	Y				598.4
1A/7	1992.5	1992.4	243.82	244.79	201.02	202.04	243.80	244.8	21:55	21:57	1.03	61.8	Y				4607.7
1A/8	1996.5	1996.4	244.30	245.30	201.30	202.32	244.28	245.3	22:02	22:04	1.03	62.2	Y				1864.0
1A/9	2002	2001.9	244.97	246.50	201.71	202.73	244.95	245.9	22:08	22:11	1.03	62.7	Y				19.5
1A/10	2006.5	2006.4	245.51	246.50	202.01	203.0	245.49	246.5	22:18	22:20	1.03	63.3	Y				137.8
1A/11	2011	2010.9	246.05	247.0			246.02		22:26				N				Plugged probe
1A/12	2011.5	2011.4	246.08	247.1			246.04		22:40				N				Plugged probe
1A/13	1990	1989.9	243.37	244.4	200.80	201.9	243.43		22:54	22:56			Y				4361.6
1A/14	2018	2017.9	246.92	247.9	203.04	204.1	246.88	247.9	23:04	23:06	1.03	65.2	Y				315.9
1A/15	2024.5	2024.4	247.66	248.7	203.67	204.7	247.63	248.6	23:13	23:15	1.03	65.7	Y				407.2
1A/16	2026.5	2026.4	247.87	248.9	203.87	204.9	247.85	248.9	23:22	23:25	1.03	66	Y				664.9

NB: Fmtn Press sg calculated from RKB



## FORMATION PRESSURE WORKSHEET

Well Name :		35/11-10		Rig :		West Vangard		Date :		05-06.06.97							
Pressure Units :		Bars		RKB-MSL :		22 m.		MSL-SBed:		353.5 m.		Witnessed by :		Rokke/Hinderaker/Watta/Knape			
Run No./ Test No.	Depth	Depth	Initial Hydrostatic Pressure		Formation Pressure		Final Hydrostatic Pressure		Time hh:mm		Formation Pressure	Test Temp	Good Data?	Sample Information			Remarks  Mobility [mD/cp]
1B	mMD RKB	mTVD RKB	CQG	Strain	CQG	Strain	CQG	Strain	Set	Retract	sg EMD	degC	Y/N	Fluid Type	HC Gravity g/cc	Sample Vol, cc	
1B/1	2028,5	2028,4							01:29	01:34			N				Not stabilized the temperature
1B/2	2036	2035,9							01:38	01:47	1,03		N				Not stabilized the temperature
1B/3	2028,5	2028,4	251,12	251,98	204,08	205,11	250,96	251,97	01:58	02:23	1,03	59,9	Y				620
1B/4	2036	2035,9	251,92	252,93	205,46	206,48	251,91	252,9	02:27	02:31	1,03	66,1	Y				7257,5
1B/5	2038	2037,9	252,17	253,16	205,53	206,55	252,16	253,16	02:35	02:39	1,03	66,5	Y				2125,5
1B/6	2040,5	2040,4	252,47	253,46	205,71	206,72	252,46	253,46	02:41	02:48	1,03	66,9	Y				2839,4
1B/7	2043,5	2043,4	252,84	253,81	205,92	206,93	252,82	253,81	02:49	02:52	1,03	67,3	Y				2173,6
1B/8	2048,5	2048,4	253,45	254,44	206,26	207,29	253,43	254,43	02:54	02:57	1,03	67,7	Y				2739,6
1B/9	2051,5	2051,4	253,8	254,8	206,47	207,5	253,78	254,8	03:00	03:05	1,03	68,1	Y				781,6
1B/10	2053	2052,9	253,98	254,96	206,58	207,6	253,96	254,96	03:06	03:11	1,03	68,5	Y				319,6
1B/11	2055	2054,9	254,2	255,22	206,75	207,78	254,2	255,21	03:13	03:19	1,03	68,9	Y				389,5
1B/12	2060,5	2060,4	254,9	255,9	207,3	208,34	254,88	255,89	03:21	03:25	1,03	69,3	Y				1947
1B/13	2067,5	2067,4	255,76	256,76			255,74	255,76	03:27	03:30	1,03		N				Tight
1B/14	2070,5	2070,4	256,1	257,13	208,3	209,33	256,09	257,11	03:33	03:40	1,03	70,2	Y				1076,3
1B/15	2076	2075,9	256,78	257,8	208,84	209,89	256,76	257,79	03:41	03:46	1,03	70,7	Y				104
1B/16	2098,5	2098,4	259,56	260,58	211,08	212,11	259,54	260,54	03:49	03:56	1,03	71,4	Y				39
1B/17	2101,5	2101,4	259,92	260,92	211,37	212,4	259,91	260,9	03:59	04:04	1,03	72	Y				2047,8
1B/18	2113	2112,9	261,4	262,38	212,51	213,52	261,33	262,33	04:07	04:11	1,03	72,7	Y				348
1B/19	2036,5	2036,4	251,85	252,96	205,44	206,58	251,82	252,88	04:34	04:40	1,03	66,2	Y				10137

NB: Fmtn Press sg calculated from RKB



## FORMATION PRESSURE WORKSHEET

Well Name : 35/11-10      Rig : West Vanguard      Date : 05-06.06.97

Pressure Units : Bars      RKB-MSL : 22 m.      MSL-SBed: 353.5 m.      Witnessed by : Rokke/Hinderaker/Watts/Knape

Run No./ Test No.	Depth	Depth	Initial Hydrostatic Pressure		Formation Pressure		Final Hydrostatic Pressure		Time		Formation Pressure	Test Temp	Good Data?	Sample Information			Remarks
			CQG	Strain	CQG	Strain	CQG	Strain	Set	Retract				sg EMD	degC	Y/N	
1B/20	2068	2067.9											Y/N				Mobility too low for sampling
1B/21	2070.1	2070.0											Y/N				Mobility too low for sampling
1B/22	2070.6	2070.5	255.91	256.61	208.21	208.84			05:30		1.03	79.2	Y	Water	1.01	1 Gal	Chamber GA33. Analysed by
											1.03	79.0	Y	Water	1.01	450cc	Petrotech on rig. Bottle AA644
							255.52	256.29	16:35		1.03	79.0	Y	Water	1.01	450cc	Bottle AA649
1B/23	2036.1	2036.0	251.31	252.12	205.44	206.05	251.31	252.00	16:50	17:10	1.03	75.5	Y/N				Aborted sampling due to possible gas/condensate
1B/24	2048.5	2048.4	252.89	253.68	206.22	206.83			18:00		1.03	76.8	Y	Oil	0.71	2 3/4 G	Chamber DB11
											1.03	77.1	Y	Oil	0.71	2 3/4 G	Chamber DB90026
											1.03	77.1	Y	Oil	0.71	450cc	Bottle AA144. Analysed by Petrotech on rig.
											1.03	77.0	Y	Oil	0.71	450cc	Bottle AA190
											1.03	77.0	Y	Oil	0.71	450cc	Bottle AA609
							252.89	253.59	23:00		1.03	77.1	Y	Oil	0.71	450cc	Bottle AA650

NB: Fmtn Press sg calculated from RKB

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## FORMATION PRESSURE WORKSHEET

Well Name :		35/11-10		Rig :		West Vanguard		Date :		1997-06-07								
Pressure Units :		Bars		RKB-MSL :		22 m.		MSL-SBed:		353.5 m.		Witnessed by :		Rokke/Knape/Nyby				
Run No./ Test No.	Depth	Depth	Initial Hydrostatic Pressure		Formation Pressure		Final Hydrostatic Pressure		Time		Formation Pressure	Test Temp	Good Data?	Sample Information			Remarks	
			mMD RKB	mTVD RKB	CQG	Strain	CQG	Strain	CQG	Strain				Set	Retract	sg EMD		degC
1C																		
1C/1	1996.5	1996.4	248.76	246.85	202.27	201.92			04:40		1.03	72.9	Y	oil	1.71	2 3/4 G	Chamber DB24	
											1.03	73.0	Y	oil	1.71	450cc	Bottle AA168	
											1.03	72.9	Y	oil	1.71	450cc	Bottle AA173	
											1.03	73.2	Y	oil	1.71	1 Gal	Chamber GA132	
											1.03	73.3	Y	oil	1.71	450cc	Bottle AA605	
							246.43	247.16	08:00		1.03	73.3	Y	oil	1.71	450cc	Bottle AA677. Analysed by	
																	Petrotech on rig.	
1C/2	2036	2035.9	251.34	252.00	205.48	206.06			09:00		1.03	78.1	Y	oil/condens	?	450cc	Bottle AA608	
							251.37	252.04	12:00		1.03	78.7	Y	oil/condens	?	450cc	Bottle AA648	

NB: Fmtn Press sg calculated from RKB



## FORMATION PRESSURE WORKSHEET

Well Name :		35/11-10		Rig :		West Vanguard		Date :		14-15.06.97							
Pressure Units :		Bars		RKB-MSL :		22 m.		MSL-SBed:		353.5 m.		Witnessed by :		Hinderaker/Nyby/Knape/Frimann-Dahl			
Run No/ Test No.	Depth	Depth	Initial Hydrostatic		Formation Pressure		Final Hydrostatic		Time		Formation	Test Temp	Good	Sample Information			Mobility, mD/dp
			Pressure		Qtz	Strain	Qtz	Strain	Qtz	Strain				hh:mm	Pressure	Data?	
2D	mMD RKB	mTVD RKB	Qtz	Strain	Qtz	Strain	Qtz	Strain	Set	Retract	sg EMD	degC	Y/N	Fluid Type	g/cc	Vol, cc	
2D/1	2035,8	2035,7	254,27	254	205,44	205,57	254,39	254,51	04:48	04:54	1,03		Y				11308
2D/2	2037,2	2037,1	254,4	254,54	205,46	205,65	253,33	253,49	04:59	05:05	1,03		Y				3109
2D/3	2275,0	2274,8	282,48	282,52	229,85	229,95	282,29	282,36	05:25	05:37	1,03		Y				1213
2D/4	2277,0	2276,8		282,57					05:36	05:40			N				Tight
2D/5	2277,5	2277,3		282,59					05:44	05:50			N				Tight
2D/6	2297,0	2296,8	284,9	285,06	231,55	231,76	284,79	284,99	05:57	06:01	1,03		Y				6915
2D/7	2299,1	2298,8	285,05	285,25	231,57	231,84	285,03	285,27	06:06	06:11	1,03		Y				4659
2D/8	2300,5	2300,3	285,23	285,45	231,69	231,95	285,22	285,46	06:13	06:16	1,03		Y				3228
2D/9	2303,5	2303,3	285,62	285,85	231,88	232,15	285,59	285,82	06:20	06:23	1,03		Y				660
2D/10	2306,5	2306,3	285,99	286,22	232,09	232,36	285,97	286,2	06:26	06:30	1,03		Y				695
2D/11	2309,5	2309,3	286,35	286,57	232,29	232,56	286,34	286,57	06:32	06:38	1,03		Y				711
2D/12	2330,0	2329,8	288,94	289,15	234,26	234,51	288,83	289,04	06:39	06:47	1,03		Y				1790
2D/13	2340,5	2340,3	290,13	290,35	235,30	235,58	290,12	290,36	06:51	07:00	1,03		Y				441
2D/14	2345,5	2345,3	290,76	291	235,79	236,08	290,73	290,99	07:05	07:10	1,03		Y				1470
2D/15	2352,5	2352,3	291,63	291,87	236,48	236,79	291,61	291,86	07:14	07:20	1,03		Y				363
2D/16	2355,5	2355,3	292	292,26	236,77	237,09	291,95	292,22	07:24	07:34	1,03		Y				1511
2D/17	2373,5	2373,8	294,24	294,48	238,58	238,88	254,16	294,43	07:38	07:47	1,03		Y				725

NB: Fmtn Press sg calculated from RKB



## FORMATION PRESSURE WORKSHEET

Well Name :		35/11-10		Rig :		West Vangard		Date :		14-15.06.97							
Pressure Units :		Bars		RKB-MSL :		22 m.		MSL-SBed: 353.5		m.		Witnessed by :		Hinderaker/Nyby/Knape/Frimann-Dahl			
Run No./ Test No.	Depth	Depth	Initial Hydrostatic		Formation Pressure		Final Hydrostatic		Time		Formation	Test Temp	Good	Sample Information			
	mMD RKB	mTVD RKB	Qtz	Strain	Qtz	Strain	Qtz	Strain	Set	Retract	sg EMD	degC	Data?	Main	HC Gravity	Sample	Mobility, mD/dp
2D																	
2D/18	2648,0	2647,6	327,86						08:18	08:20	1,03		N				Tight
2D/19	2648,3	2647,9	327,57						08:26	08:30	1,03		N				Tight
2D/20	2654,0	2653,6	328,26	328,38	270,02	270,17	328,21	270,17	08:34	08:42	1,03		Y				193
2D/21	2657,0	2656,6	328,62	328,72	270,08	270,23	328,57	270,23	08:48	08:52	1,03		Y				582
2D/22	2658,5	2658,1	328,8	328,9	270,13	270,28	328,78	270,28	08:56	09:06	1,03		Y				45
2D/23	2677,5	2677,1	331,22	331,29	271,15	271,25	331,12	331,19	09:10	09:19	1,03		Y				212
2D/24	2679,5	2679,1	331,39	331,45	271,26	271,37	331,38	331,45	09:23	09:28	1,03		Y				2381
2D/25	2681,5	2681,0	331,63	331,71	271,38	271,51	331,62	331,7	09:31	09:38	1,03		Y				236
2D/26	2693,0	2692,5	333,07						09:42	09:44			N				Tight
2D/27	2693,5	2693,0	333,05						09:48	09:51			N				Tight
2D/28	2713,5	2713,0	335,59	335,68	273,71	273,83	335,45	335,58	09:56	10:05	1,03		Y				52,4
2D/29	2716,0	2715,5	335,81						10:10	10:15			N				Tight
2D/30	2716,5	2716,0	335,84						10:18	10:22			N				Tight
2D/31	2717,0	2716,5	335,9	336,06	274,05	274,23	335,92	336,04	10:24	10:31	1,03		Y				4
2D/32	2721,0	2720,5	336,45	336,58	274,45	274,65	336,43	336,56	10:38	10:43	1,03		Y				51,8
2D/33	2724,0	2723,5	336,8	336,93	274,75	274,95	336,78	336,91	10:50	10:54	1,03		Y				41,5
2D/34	2747,5	2746,9	339,76	339,86	277,11	277,28	339,64	339,74	10:58	11:07	1,03		Y				710

NB: Fmin Press sg calculated from RKB



## FORMATION PRESSURE WORKSHEET

Well Name :		35/11-10		Rig :		West Vanguard		Date :		14-15.06.97						
Pressure Units :		Bars		RKB-MSL :		22 m.		MSL-SBed:		353.5 m.		Witnessed by :		Hinderaker/Nyby/Knape/Frimann-Dahl		
Run No./2D	Depth	Depth	Initial Hydrostatic Pressure		Formation Pressure		Final Hydrostatic Pressure		Time		Formation Pressure	Test Temp	Good Data?	Sample Information		Mobility, mD/dp
Test No.	mMD RKB	mTVD RKB	Qtz	Strain	Qtz	Strain	Qtz	Strain	Set	Retract	sg EMD	degC	Y/N	Main Fluid Type	HC Gravity g/cc	
2D/35	2755,5	2754,9	340,64	340,73	277,88	278,06	340,6	340,71	11:11	11:16	1,03		Y			254
2D/36	2763,5	2762,9	341,62	341,73	278,68	278,86	341,58	341,69	11:19	11:25	1,03		Y			370
2D/37	2767,5	2766,9	342,09	342,21	279,07	279,27	342,07	342,19	11:30	11:36	1,03		Y			142
2D/38	2772,5	2771,9	342,7	342,84	279,58	279,79	342,68	342,83	11:40	11:50	1,03		Y			104
2D/39	2798,0	2797,3	345,86	345,98	282,12	282,32	345,78	345,9	11:54	12:02	1,03		Y			181
2D/40	2820,5	2819,8	348,53	348,66	284,37	284,58	348,51	348,64	12:10	12:15	1,03		Y			372
2D/41	2833,5	2832,8	350,12	350,27	285,66	285,9	350,1	350,25	12:22	12:30	1,03		Y			888
2D/42	2870,5	2869,8	354,7	354,84	289,35	289,57	354,61	354,77	12:37	12:42	1,03		Y			510
2D/43	2713,5	2713,0	335,758	335,8	273 625				13:45							Drained 300.7ltr.
	2713,5		335,759	335,8	273 625						1,03	101.1	N	Water	450cc	Failure bottle AA677
	2713,5		335,76	335,8	273 625						1,03	101.1	Y	Water	450cc	Bottle AA694.
	2713,5		335,761	335,8	273 625						1,03	101.1	Y	Water	1 Gallon	Chamber BB48
	2713,5		335,762	335,8	273 625					02:40	1,03	101.1	Y	Water	450cc	Bottle AA695
2D/44	2679,5	2679,1	331,502	331,63	271.234	271,4			04:10			99.0				Drained 120 ltr
	2679,5	2679,1	331,502	331,63	271.234	271,4					1,03	99.0	Y	Water	2 3/4 Gallon	Chamber DB90026
	2679,5	2679,1	331,502	331,63	271.234	271,4					1,03	99.0	N	Water	450cc	Failure bottle AA144
	2679,5	2679,1	331,502	331,63	271.234	271,4					1,03	99.0	Y	Water	2 3/4 Gallon	Chamber DB24
	2679,5	2679,1	331,502	331,63	271.234	271,4					1,03	99.0	Y	Water	450cc	Bottle AA644
	2679,5	2679,1	331,502	331,63	271.234	271,4			11:48		1,03	99.0	Y	Water	450cc	Bottle AA649

NB: Fmtn Press sg calculated from RKB



## TOTAL CONSUMPTION OF MUD ADDITIVES ON WELL 35/11-10

Section Size	Product/Additive	Total Amount Planned	Total Amount Used	Unit	Difference		Difference in cost	
					Amount	%	%	[kNOK]
12 1/4"	ANCO 208		6000.0	l				
	CELPOL ESL		1800.0	kg				
	FLOWZAN 71006		875.0	kg				
	KCL BRINE		112000.0	l				
	SODA ASH		100.0	kg				
8 1/2"	ANCO 208		11800.0	l				
	ANCO SUPERWASH		500.0	l				
	BARITE		72000.0	kg				
	BENTONITE		4000.0	kg				
	CELPOL ESL		4975.0	kg				
	CITRIC ACID		100.0	kg				
	FLOWZAN 71006		2900.0	kg				
	KCL		750.0	kg				
	KCL BRINE		242000.0	l				
	LIME		20.0	kg				
	SODA ASH		325.0	kg				
SODIUM BICARBONATE		100.0	kg					
0.0	ANCO 208		9000.0	l				
	BARITE		115000.0	kg				
	CELPOL ESL		3450.0	kg				
	CMC EHV		500.0	kg				
	FLOWZAN 71006		1100.0	kg				
	KCL BRINE		148000.0	l				

Norsk Hydro

DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS FOR WELL 35/11-10

Hole section: WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel10	Gel110		
	[m]			Visc	Out	Test													
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
17-may-1997 23:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0

Hole section: 36" WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel10	Gel110		
	[m]			Visc	Out	Test													
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
18-may-1997 22:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
19-may-1997 22:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
20-may-1997 22:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
21-may-1997 22:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0

Hole section: 17 1/2" WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel10	Gel110		
	[m]			Visc	Out	Test													
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
22-may-1997 22:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
23-may-1997 22:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
24-may-1997 22:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
25-may-1997 22:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
26-may-1997 22:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
27-may-1997 22:00	0	0	SPUD MUD	100.0	1.05	0.0									0.0	0.0	0.0	0.0	0.0
28-may-1997 21:30	1152	1152	ANCO 2000	100.0	1.25	0.0	60	37	28	18			7	5	50.0	23.0	7.0	3.0	5.0

See also the report 'DAILY MUD PROPERTIES : OTHER PARAMETERS'

Norsk Hydro

DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS FOR WELL 35/11-10

Hole section: 12 1/4" WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel0	Gel10		
	[m]			Visc		Out							Test						
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
29-may-1997 23:00	1191	1191	ANCO 2000	100.0	1.25	0.0	64	41	30	20			8	6	50.0	23.0	9.0	3.0	6.0
30-may-1997 23:00	1906	1906	ANCO 2000	70.0	1.25	0.0	61	43	35	25			9	8	50.0	18.0	12.5	5.0	9.5

Hole section: 8 1/2" WATER BASED SYSTEM

Date	Depth		Mud Type	Funnel	Dens	Mudtmp	Fann Readings						Rheo	PV	YP	Gel0	Gel10		
	[m]			Visc		Out							Test						
	MD	TVD		[sec]	[sg]	[DegC]	600	300	200	100	60	30	6	3	[DegC]	[mPas]	[Pa]	[Pa]	[Pa]
31-may-1997 18:30	1975	1975	ANCO 2000	69.0	1.25	0.0	62	43	35	25			9	8	50.0	19.0	12.0	5.0	9.0
01-jun-1997 23:30	2008	2008	ANCO 2000	68.0	1.26	0.0	63	45	37	27			11	9	50.0	18.0	14.0	5.0	10.0
02-jun-1997 18:15	2078	2078	ANCO 2000	68.0	1.26	0.0	63	45	37	27			11	9	50.0	18.0	14.0	5.0	10.0
03-jun-1997 18:15	2078	2078	ANCO 2000	68.0	1.26	0.0	63	45	37	27			11	9	50.0	18.0	14.0	5.0	10.0
04-jun-1997 20:00	2267	2267	ANCO 2000	68.0	1.26	0.0	60	41	37	27			11	9	50.0	19.0	11.0	5.0	10.0
05-jun-1997 21:00	2268	2268	ANCO 2000	66.0	1.25	0.0	60	41	36	26			11	8	50.0	19.0	11.0	5.0	10.0
06-jun-1997 22:00	2268	2268	ANCO 2000	63.0	1.25	0.0	60	41	35	26			10	7	50.0	19.0	11.0	4.5	10.0
07-jun-1997 19:00	2296	2296	ANCO 2000	63.0	1.25	0.0	60	41	35	26			10	7	50.0	19.0	11.0	4.5	10.0
08-jun-1997 21:15	2362	2362	ANCO 2000	62.0	1.25	0.0	60	41	34	26			10	8	50.0	19.0	11.0	4.5	10.0
09-jun-1997 15:00	2675	2675	ANCO 2000	63.0	1.25	0.0	61	44	36	28			11	9	50.0	17.0	13.5	4.5	10.0
10-jun-1997 15:00	2722	2721	ANCO 2000	64.0	1.25	0.0	61	44	36	28			11	9	50.0	17.0	13.5	5.0	10.0
11-jun-1997 22:00	2770	2769	ANCO 2000	66.0	1.25	0.0	61	44	36	27			11	9	50.0	17.0	14.0	5.0	10.0
12-jun-1997 20:15	2950	2949	ANCO 2000	60.0	1.25	0.0	59	43	37	29			11	9	50.0	16.0	14.0	5.0	10.0
13-jun-1997 20:50	2950	2949	ANCO 2000	63.0	1.25	0.0	60	44	37	29			11	9	50.0	16.0	14.0	5.0	10.0
14-jun-1997 21:00	2950	2949	ANCO 2000	64.0	1.25	0.0	60	44	37	29			11	9	50.0	16.0	14.0	5.0	10.0
15-jun-1997 21:00	2950	2949	ANCO 2000	64.0	1.25	0.0	60	44	37	29			11	9	50.0	16.0	14.0	5.0	10.0
16-jun-1997 21:00	2950	2949	ANCO 2000	64.0	1.25	0.0	60	44	37	29			11	9	50.0	16.0	14.0	5.0	10.0
17-jun-1997 22:00	2950	2949	ANCO 2000	67.0	1.25	0.0	59	44	37	28			10	9	50.0	15.0	15.0	5.0	10.0
18-jun-1997 20:30	2950	2949	ANCO 2000	78.0	1.25	0.0	63	46	38	29			10	9	50.0	17.0	15.0	5.0	10.0
19-jun-1997 21:00	2950	2949	ANCO 2000	81.0	1.26	0.0									50.0	16.0	15.0	5.0	9.0

See also the report 'DAILY MUD PROPERTIES : OTHER PARAMETERS'

Norsk Hydro

DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS FOR WELL 35/11-10

Hole section: 8 1/2"

WATER BASED SYSTEM

Date	Depth [m]	Mud Type	Funnel Visc [sec]	Dens [sg]	Mudtmp Out [DegC]	Fann Readings								Rheo Test [DegC]	PV [mPas]	YP [Pa]	Gel10 [Pa]	Gel10 [Pa]
20-jun-1997 21:30	2950 2949	ANCO 2000	81.0	1.26	0.0	60	45	38	29			11	10	50.0	15.0	15.0	5.0	9.0
21-jun-1997 21:30	2950 2949	ANCO 2000	67.0	1.26	0.0	60	45	38	29			11	10	50.0	15.0	15.0	5.0	9.0
22-jun-1997 21:30	1888 1888	ANCO 2000	70.0	1.26	0.0	63	47	39	30			12	10	50.0	16.0	16.0	5.0	10.0

See also the report 'DAILY MUD PROPERTIES : OTHER PARAMETERS'

Norsk Hydro

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 35/11-10

Hole section:

WATER BASED SYSTEM

Date	Depth		Mud Type	Dens	Filtrate		Filt.cake		HPHT	pH	Alcalinity			Inhib	K+	CL-	Ca++	Mg++	Tot	Percentage			CEC	ASG	LGS
	[m]	MD			TVD	[API]	[HPHT]	[API]			[HPHT]	Press/Temp	Pm							Pf	Mf	Chem			
17-may-1997 23:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0

Hole section: 36\*

WATER BASED SYSTEM

Date	Depth		Mud Type	Dens	Filtrate		Filt.cake		HPHT	pH	Alcalinity			Inhib	K+	CL-	Ca++	Mg++	Tot	Percentage			CEC	ASG	LGS
	[m]	MD			TVD	[API]	[HPHT]	[API]			[HPHT]	Press/Temp	Pm							Pf	Mf	Chem			
18-may-1997 22:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
19-may-1997 22:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
20-may-1997 22:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
21-may-1997 22:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0

Hole section: 17 1/2\*

WATER BASED SYSTEM

Date	Depth		Mud Type	Dens	Filtrate		Filt.cake		HPHT	pH	Alcalinity			Inhib	K+	CL-	Ca++	Mg++	Tot	Percentage			CEC	ASG	LGS
	[m]	MD			TVD	[API]	[HPHT]	[API]			[HPHT]	Press/Temp	Pm							Pf	Mf	Chem			
22-may-1997 22:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
23-may-1997 22:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
24-may-1997 22:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
25-may-1997 22:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
26-may-1997 22:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
27-may-1997 22:00	0	0	SPUD MUD	1.05	0.0	0.0	0	0	0/0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0.0	0.0	0.0	0	0.0	0
28-may-1997 21:30	1152	1152	ANCO 2000	1.25	3.0	0.0	0	0	0/0	8.0	0.0	0.1	0.7	144	75500	59000	280	0	460	10.5	0.0	0.0	0	0.0	1

Hole section: 12 1/4\*

WATER BASED SYSTEM

Date	Depth		Mud Type	Dens	Filtrate		Filt.cake		HPHT	pH	Alcalinity			Inhib	K+	CL-	Ca++	Mg++	Tot	Percentage			CEC	ASG	LGS
	[m]	MD			TVD	[API]	[HPHT]	[API]			[HPHT]	Press/Temp	Pm							Pf	Mf	Chem			
29-may-1997 23:00	1191	1191	ANCO 2000	1.25	2.6	0.0	0	0	0/0	9.0	0.0	0.2	0.9	144	75500	66000	480	0	700	10.0	0.0	0.0	0	0.0	11
30-may-1997 23:00	1906	1906	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.1	0.4	144	75500	67000	300	0	400	11.5	0.0	0.2	0	0.0	36

Hole section: 8 1/2\*

WATER BASED SYSTEM

Date	Depth		Mud Type	Dens	Filtrate		Filt.cake		HPHT	pH	Alcalinity			Inhib	K+	CL-	Ca++	Mg++	Tot	Percentage			CEC	ASG	LGS
	[m]	MD			TVD	[API]	[HPHT]	[API]			[HPHT]	Press/Temp	Pm							Pf	Mf	Chem			
31-may-1997 18:30	1975	1975	ANCO 2000	1.25	2.6	0.0	0	0	0/0	8.0	0.0	0.1	0.4	146	76600	68000	280	0	380	11.5	0.0	0.2	0	0.0	33
01-jun-1997 23:30	2008	2008	ANCO 2000	1.26	2.5	0.0	0	0	0/0	8.0	0.0	0.1	0.5	146	76600	67000	320	0	420	12.0	0.0	0.2	0	0.0	46
02-jun-1997 18:15	2078	2078	ANCO 2000	1.26	2.5	0.0	0	0	0/0	8.0	0.0	0.1	0.4	146	76600	67000	320	0	400	12.0	0.0	0.2	0	0.0	46
03-jun-1997 18:15	2078	2078	ANCO 2000	1.26	2.5	0.0	0	0	0/0	8.0	0.0	0.1	0.4	146	76600	67000	320	0	400	12.0	0.0	0.2	0	0.0	46
04-jun-1997 20:00	2267	2267	ANCO 2000	1.26	2.5	0.0	0	0	0/0	8.0	0.0	0.1	0.4	146	76600	67000	320	0	440	12.1	0.0	0.2	0	0.0	68

See also the report 'DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS'

Norsk Hydro

DAILY MUD PROPERTIES : OTHER PARAMETERS FOR WELL 35/11-10

Hole section: 8 1/2"

WATER BASED SYSTEM

Date	Depth [m]	Mud Type	Dens [sg]	Filtrate				HPHT [psi/DegC]	pH	Alcalinity			Inhib [Kg/m3]	K+	CL-	Ca++	Mg++	Tot [mg]	Percentage				CEC [Kg/m3]	ASG [sg]	LGS [Kg/m3]
				API	HPHT	API	HPHT			Press	Temp	Pm							Pf	Mf	Chem	hard			
05-jun-1997 21:00	2268	2268	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.1	0.4	145	76000	68000	320	0	440	12.1	0.0	0.3	0	0.0	65
06-jun-1997 22:00	2268	2268	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.1	0.4	145	76000	67000	340	0	420	12.1	0.0	0.3	0	0.0	68
07-jun-1997 19:00	2296	2296	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.0	0.5	150	78700	68000	380	0	440	12.2	0.0	0.3	12	0.0	71
08-jun-1997 21:15	2362	2362	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.0	0.5	152	79700	69000	380	0	440	12.3	0.0	0.3	14	0.0	74
09-jun-1997 15:00	2675	2675	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.0	0.5	130	68200	70000	380	0	480	12.3	0.0	0.3	12	0.0	71
10-jun-1997 15:00	2722	2721	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.0	0.5	135	70800	70000	380	0	480	12.3	0.0	0.3	13	0.0	71
11-jun-1997 22:00	2770	2769	ANCO 2000	1.25	2.4	0.0	0	0	0/0	8.0	0.0	0.0	0.5	135	70800	70000	360	0	440	12.3	0.0	0.3	13	0.0	71
12-jun-1997 20:15	2950	2949	ANCO 2000	1.25	2.6	0.0	0	0	0/0	8.0	0.0	0.0	0.5	135	68200	70000	380	0	460	12.6	0.0	0.3	14	0.0	87
13-jun-1997 20:50	2950	2949	ANCO 2000	1.25	2.6	0.0	0	0	0/0	8.0	0.0	0.0	0.5	135	68200	70000	380	0	460	12.5	0.0	0.3	14	0.0	82
14-jun-1997 21:00	2950	2949	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.0	0.5	135	70800	70000	380	0	480	12.5	0.0	0.3	14	0.0	82
15-jun-1997 21:00	2950	2949	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.0	0.5	135	70800	70000	380	0	480	12.5	0.0	0.3	14	0.0	82
16-jun-1997 21:00	2950	2949	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.0	0.5	135	70800	70000	380	0	480	12.5	0.0	0.3	14	0.0	82
17-jun-1997 22:00	2950	2949	ANCO 2000	1.25	2.5	0.0	0	0	0/0	8.0	0.0	0.0	0.5	135	70800	70000	380	0	480	12.5	0.0	0.3	15	0.0	82
18-jun-1997 20:30	2950	2949	ANCO 2000	1.25	2.6	0.0	0	0	0/0	8.0	0.0	0.0	0.5	135	70800	71000	380	0	460	13.5	0.0	0.3	14	0.0	137
19-jun-1997 21:00	2950	2949	ANCO 2000	1.26	2.5	0.0	0	0	0/0	8.0	0.0	0.0	0.6	140	70800	71000	380	0	460	13.5	0.0	0.3	14	0.0	117
20-jun-1997 21:30	2950	2949	ANCO 2000	1.26	2.6	0.0	0	0	0/0	8.0	0.0	0.0	0.6	140	73400	71000	380	0	480	13.5	0.0	0.2	14	0.0	117
21-jun-1997 21:30	2950	2949	ANCO 2000	1.26	2.6	0.0	0	0	0/0	8.1	0.0	0.0	0.6	140	73400	70500	420	0	500	13.5	0.0	0.2	14	0.0	119
22-jun-1997 21:30	1888	1888	ANCO 2000	1.26	2.8	0.0	0	0	0/0	8.5	0.0	0.0	0.6	140	73400	70500	640	0	760	13.5	0.0	0.2	14	0.0	119

See also the report 'DAILY MUD PROPERTIES : RHEOLOGY PARAMETERS'



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Title	Geochemical reservoir correlation of wells 35/11-4 and 35/11-10
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**OLJEDIREKTORATET**

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Document category	Report	Document ID	R-077934	Amendment no.	
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SCM reference	29-00-NH-G15-00034	Tag no.	
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Quadrant/Block/Well	35/11-4 and 35/11-10	Licence no.	090	Project	2004509
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Rev./ status	Date	Reason for issue	Author	Contr.	Disc. appr.	Proj. appr.	Hydro appr.
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Title: Geochemical reservoir correlation of wells 35/11-4 and 35/11-10

No.:

Rev.: 0

Date: 1998-03-06

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The evaluated samples in this study were:

S-Depth(m)	E-Depth(m)	Well	Type	Name
1996.50	1996.50	35/11-10	OIL	MDT677
2000.00	2003.00	35/11-4 R	OIL	DST4B
2048.50	2048.50	35/11-10	OIL	MDT144
2034.00	2046.00	35/11-4 R	OIL	DST3
2274.00	2274.00	35/11-10	COCH	
2280.80	2280.80	35/11-10	COCH	
2298.40	2298.40	35/11-10	COCH	
2304.80	2304.80	35/11-10	OIL	MDT608
2284.30	2291.30	35/11-4 R	OIL	DST2
2679.50	2679.50	35/11-10	OIL	MDT644
2674.50	2682.00	35/11-4 R	OIL	DST1

The analytical and preparative methods employed in this study comprised geochemical screening, gas characterization and bitumen characterization. Screening consisted of Rock Eval pyrolysis. Gas characterization included gas volumetric and stable isotope analyses. Bitumen characterization included solvent extraction followed by asphaltene precipitation, preparative group type separation by MPLC<sup>2</sup> and analytical group type separation by TLC-FID<sup>3</sup> (Iatroscan). Rock extracts and the oil samples were further analyzed by gas chromatography (GC-FID) of saturated hydrocarbons, analysis of the saturated and aromatic hydrocarbon fractions by gas chromatography-mass spectrometry (GC-MSD<sup>4</sup>) and analysis of stable carbon isotopes (both fractions and gaseous compounds).

Reservoir gas analysis were undertaken out by IFE (Kjeller, Norway), and isotope analysis of the hydrocarbon fractions were carried out by Geolab Nor (Trondheim, Norway). All other analytical and interpretative work was carried out at the Norsk Hydro E&P Research Centre in Bergen, Norway.

The analyses were carried out according to the guidelines in the Norwegian Industry Guide to Organic Geochemical Analyses (NIGOGA<sup>5</sup>).

Samples which are annotated "NSO1..." represents the internal North Sea reference oil and reflects the analytical repeatability.

2 Medium Pressure/Performance Liquid Chromatography  
 3 Thin Layer Chromatography with Flame Ionisation Detection  
 4 Gas Chromatography - Mass Selective Detector  
 5 The Norwegian Industry Guide to Organic Geochemical Analyses, 3rd edition, 1993

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**Table 8.1: Gas composition data**

**8.2: Gas isotope data**

Extraction/Deasphalting data  
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**Extraction/Deasphalting data**

NOR	35/11-10	COCH	-9999.99	SI	Rock Weight	E O M										Asphaltene Precipitation						
			+9999.99			Aliquot							Int.std.	EOM		C5		Tare	Gros	mg	%	
			En depth			Lithology	kg/t	(g)	ml	ml	I (mg)	II (mg)		III (mg)	Ave (mg)	mg	%					μ
Cty	Well	Type	En depth	Lithology	kg/t	(g)	ml	ml	I (mg)	II (mg)	III (mg)	Ave (mg)	mg	%	μ	μ	(mg)	ml	Tare	Gros	mg	%
NOR	35/11-10	COCH	2274.00		29.27	2.25	10.00	0.50	3.50	3.50		3.50	70.0	3.11	100		63.0	12.3	3543	3555	1.2	1.90
NOR	35/11-10	COCH	2280.80		2.56	10.23	10.00	0.50	2.40	2.40		2.40	48.0	0.47	100		43.2	8.4	3676	3787	11.1	25.69
NOR	35/11-10	COCH	2298.40		18.02	4.24	10.00	0.50	3.70	3.80		3.75	75.0	1.77	100		67.5	13.2	3642	3652	1.0	1.48

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**Table 1: Solvent extraction**

Extraction/Deasphalting data  
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**Extraction/Deasphalting data - Internal Standards**

		Maltenes		Internal Standard Calculations												
Well	En depth	mg	μIC6	1/EOM 1/mg	C12D26 μg	C16D34 μg	C20D42 μg	C24D50 μg	C30D62 μg	24βαα ng	d8N ng	d10BF ng	d10P ng	d12C ng	Name	Sample
35/11-10	2274.00	61.8	685	0.0143	200	200	198	202	108	20.6	37.1	35.7	37.1	37.1		629472
35/11-10	2280.80	32.1	365	0.0208	200	200	198	202	108	30.0	54.2	52.1	54.2	54.2		629473
35/11-10	2298.40	66.5	740	0.0133	200	200	198	202	108	19.2	34.7	33.3	34.7	34.7		629471

IATROSCAN - Calculated Weight% / SARA

Petroleum Geochemistry Group

Research Centre Bergen

25-Nov-1997



COMPOSITION OF EXTRACTS/OILS WELL

Well	St.Depth (m)	En.Depth (m)	Type	Lithology	Name	Calculated Weight %			HC TOTAL	ASPH%	Non-HC TOTAL	TOT HC /Non-HC	Analysing Company
						SAT	ARO	NSO					
NOR 35/11-4 R	2000.00	2003.00	OIL		DST4B				0.0	1.3	0.0		NORSK HYDRO
NOR 35/11-4 R	2000.00	2003.00	OIL		DST4B				0.0	1.5	0.0		NORSK HYDRO
NOR 35/11-4 R	2034.00	2046.00	OIL		DST3				0.0	0.4	0.0		NORSK HYDRO
NOR 35/11-4 R	2034.00	2046.00	OIL		DST3				0.0	0.5	0.0		NORSK HYDRO
NOR 35/11-4 R	2284.30	2291.30	OIL		DST2				0.0	0.4	0.0		NORSK HYDRO
NOR 35/11-4 R	2284.30	2291.30	OIL		DST2				0.0	0.5	0.0		NORSK HYDRO
NOR 35/11-4 R	2674.50	2682.00	OIL		DST1				0.0	0.2	0.0		NORSK HYDRO
NOR 35/11-4 R	2674.50	2682.00	OIL		DST1				0.0	0.5	0.0		NORSK HYDRO
NOR 35/11-10	1996.50	1996.50	OIL		MDT677	75.2	21.0	3.7	96.2	0.1	3.8	25.3	NORSK HYDRO
NOR 35/11-10	2048.50	2048.50	OIL		MDT144	75.9	19.6	4.4	95.5	0.1	4.5	21.2	NORSK HYDRO
NOR 35/11-10	2274.00	2274.00	COCH			71.4	21.5	5.2	92.9	1.9	7.1	13.2	NORSK HYDRO
NOR 35/11-10	2280.80	2280.80	COCH			44.2	17.0	13.2	61.1	25.7	38.9	1.6	NORSK HYDRO
NOR 35/11-10	2298.40	2298.40	COCH			70.8	21.1	6.7	91.8	1.5	8.2	11.2	NORSK HYDRO
NOR 35/11-10	2304.80	2304.80	OIL		MDT608	72.6	21.3	6.0	93.9	0.1	6.1	15.4	NORSK HYDRO
NOR 35/11-10	2679.50	2679.50	OIL		MDT644	73.5	21.2	5.2	94.7	0.1	5.3	17.8	NORSK HYDRO



COMPOSITION OF deasphalted EXTRACTS/OILS

Well	St.Depth (m)	En.Depth (m)	Type	Lithology	Name	SAT(%)	ARO(%)	NSO(%)	Non-HC TOTAL	TOT HC /Non-HC	Analysing Company
NOR 35/11-4 R	2000.00	2003.00	OIL		DST4B	62.0	31.5	6.5	6.5	14.4	NORSK HYDRO
NOR 35/11-4 R	2000.00	2003.00	OIL		DST4B	62.0	32.0	4.5	6.0	15.7	NORSK HYDRO
NOR 35/11-4 R	2034.00	2046.00	OIL		DST3	59.0	34.5	6.5	6.5	14.4	NORSK HYDRO
NOR 35/11-4 R	2034.00	2046.00	OIL		DST3	57.5	37.5	4.5	5.0	19.0	NORSK HYDRO
NOR 35/11-4 R	2284.30	2291.30	OIL		DST2	58.5	36.0	5.5	5.5	17.2	NORSK HYDRO
NOR 35/11-4 R	2284.30	2291.30	OIL		DST2	61.0	35.0	3.5	4.0	24.0	NORSK HYDRO
NOR 35/11-4 R	2674.50	2682.00	OIL		DST1	65.5	30.5	4.0	4.0	24.0	NORSK HYDRO
NOR 35/11-4 R	2674.50	2682.00	OIL		DST1	64.5	31.5	3.5	4.0	24.0	NORSK HYDRO
NOR 35/11-10	1996.50	1996.50	OIL		MDT677	62.0	33.0	5.0	5.0	19.0	NORSK HYDRO
NOR 35/11-10	2048.50	2048.50	OIL		MDT144	63.0	31.0	6.0	6.0	15.7	NORSK HYDRO
NOR 35/11-10	2274.00	2274.00	COCH			59.0	34.0	7.0	7.0	13.3	NORSK HYDRO
NOR 35/11-10	2280.80	2280.80	COCH			45.0	33.0	22.0	22.0	3.5	NORSK HYDRO
NOR 35/11-10	2298.40	2298.40	COCH			58.0	33.0	9.0	9.0	10.1	NORSK HYDRO
NOR 35/11-10	2304.80	2304.80	OIL		MDT608	59.0	33.0	8.0	8.0	11.5	NORSK HYDRO
NOR 35/11-10	2679.50	2679.50	OIL		MDT644	60.0	33.0	7.0	7.0	13.3	NORSK HYDRO

S-Depth(m)	E-Depth(m)	Well	Type	Name	Sequence	Filename	Instrument	Method	Version	Remarks	Signal	HEPTANE_V	ISOHEPTANE_V
1996.50	1996.50	w35/11-10	OIL	MDT677	2.00	MDT677.D	AC/HP6890	C5_20	C520D_A.M		AM	18.68	1.34
2000.00	2003.00	w35/11-4 R	OIL	DST4B	2.00	o351108b	HP5880	C4_20	C4_20_A		AM	19.49	1.46
2000.00	2003.00	w35/11-4 R	OIL	DST4B	16.00	oils_35	HP5880	C4_20	C4_20_A		AM	19.60	1.45
2048.50	2048.50	w35/11-10	OIL	MDT144	3.00	MDT144.D	AC/HP6890	C5_20	C520D_A.M		AM	18.68	1.34
2034.00	2046.00	w35/11-4 R	OIL	DST3	3.00	o351108b	HP5880	C4_20	C4_20_A		AM	18.32	1.36
2034.00	2046.00	w35/11-4 R	OIL	DST3	17.00	oils_35	HP5880	C4_20	C4_20_A		AM	18.53	1.35
2304.80	2304.80	w35/11-10	OIL	MDT608	4.00	MDT608.D	AC/HP6890	C5_20	C520D_A.M		AM	18.49	1.33
2284.30	2291.30	w35/11-4 R	OIL	DST2	4.00	o351108b	HP5880	C4_20	C4_20_A		AM	18.39	1.42
2284.30	2291.30	w35/11-4 R	OIL	DST2	18.00	oils_35	HP5880	C4_20	C4_20_A		AM	18.47	1.30
2679.50	2679.50	w35/11-10	OIL	MDT644	5.00	MDT644.D	AC/HP6890	C5_20	C520D_A.M		AM	19.10	1.17
2674.50	2682.00	w35/11-4 R	OIL	DST1	5.00	o351108b	HP5880	C4_20	C4_20_A		AM	18.99	1.29
2674.50	2682.00	w35/11-4 R	OIL	DST1	19.00	oils_35	HP5880	C4_20	C4_20_A		AM	18.21	1.25

Table 3 C5-20 hydrocarbons, ratios

E-Depth(m)	Well	Type	PARAFFINICIT	AROMA_NH	PR_NC7	PHY_NC18	NC6_BENZENE	NC7_TOLUENE	M_P1%WT	M_P23%WT	M_P33%WT
1996.50	w35/11-10	OIL	0.53	1.03	0.57	0.36	1.44	0.59	0.72	0.42	0.13
2003.00	w35/11-4 R	OIL	0.57	0.87	0.61	0.37	1.89	0.79	1.37	0.84	0.23
2003.00	w35/11-4 R	OIL	0.58	0.79	0.65	0.36	2.12	0.88	1.36	0.84	0.23
2048.50	w35/11-10	OIL	0.53	1.03	0.57	0.37	1.46	0.59	0.72	0.42	0.14
2046.00	w35/11-4 R	OIL	0.51	1.08	0.60	0.36	1.65	0.65	0.78	0.46	0.13
2046.00	w35/11-4 R	OIL	0.52	0.85	0.65	0.37	2.03	0.79	0.80	0.48	0.13
2304.80	w35/11-10	OIL	0.52	1.02	0.57	0.37	1.46	0.59	0.76	0.44	0.14
2291.30	w35/11-4 R	OIL	0.52	1.04	0.61	0.35	1.72	0.68	0.82	0.50	0.14
2291.30	w35/11-4 R	OIL	0.53	0.88	0.65	0.36	1.88	0.77	0.83	0.48	0.13
2679.50	w35/11-10	OIL	0.56	0.41	0.85	0.46	6.59	2.02	1.27	0.80	0.26
2682.00	w35/11-4 R	OIL	0.56	0.76	0.72	0.38	3.97	1.33	1.26	0.80	0.23
2682.00	w35/11-4 R	OIL	0.51	0.60	0.72	0.39	4.74	1.45	1.25	0.81	0.22

Table 3 C5-20 hydrocarbons, ratios

E-Depth(m)	Well	Type	M_N16%WT	M_N15%WT	M_N25%WT	M_6RP%NORM	M_5RP%NORM	M_3RP%NORM	M_P2N2%WT	M_N2_P3	M_P3N2_P2
1996.50	w35/11-10	OIL	2.59	0.21	0.23	72.34	12.07	15.59	0.65	1.68	0.85
2003.00	w35/11-4 R	OIL	4.16	0.36	0.42	69.24	12.99	17.77	1.26	1.81	0.78
2003.00	w35/11-4 R	OIL	3.89	0.37	0.41	67.79	13.65	18.56	1.25	1.83	0.76
2048.50	w35/11-10	OIL	2.58	0.21	0.22	72.26	12.08	15.66	0.65	1.66	0.85
2046.00	w35/11-4 R	OIL	2.73	0.22	0.25	72.02	12.37	15.61	0.71	1.89	0.84
2046.00	w35/11-4 R	OIL	2.54	0.23	0.25	69.83	13.34	16.83	0.73	1.94	0.79
2304.80	w35/11-10	OIL	2.75	0.22	0.24	72.53	12.07	15.40	0.68	1.69	0.85
2291.30	w35/11-4 R	OIL	2.80	0.22	0.26	71.45	12.35	16.21	0.76	1.88	0.80
2291.30	w35/11-4 R	OIL	2.64	0.24	0.26	70.27	13.45	16.28	0.74	2.03	0.81
2679.50	w35/11-10	OIL	2.90	0.45	0.45	59.73	18.55	21.72	1.25	1.74	0.88
2682.00	w35/11-4 R	OIL	3.22	0.39	0.43	63.42	16.27	20.31	1.23	1.87	0.83
2682.00	w35/11-4 R	OIL	3.34	0.42	0.43	63.87	16.43	19.70	1.24	1.94	0.82

Table 3 C5-20 hydrocarbons, ratios

E-Depth(m)	Well	Type	SUM_C7_NC7	AROMATICITY	PR_PHY	SUM_NC6_19	M_P1%NC619	M_P23%NC619	M_P33%NC619	M_N16%NC619
1996.50	w35/11-10	OIL	4.25	1.70	1.78	107.57	6.71	3.94	1.25	24.07
2003.00	w35/11-4 R	OIL	4.11	1.27	2.00	130.81	10.50	6.39	1.77	31.78
2003.00	w35/11-4 R	OIL	4.08	1.14	2.03	122.75	11.09	6.84	1.83	31.69
2048.50	w35/11-10	OIL	4.25	1.70	1.76	106.04	6.80	4.00	1.27	24.32
2046.00	w35/11-4 R	OIL	4.34	1.53	1.97	111.00	7.02	4.14	1.20	24.60
2046.00	w35/11-4 R	OIL	4.29	1.27	1.97	100.96	7.90	4.77	1.29	25.15
2304.80	w35/11-10	OIL	4.28	1.70	1.79	110.38	6.89	4.01	1.27	24.88
2291.30	w35/11-4 R	OIL	4.30	1.46	1.95	112.53	7.30	4.41	1.23	24.84
2291.30	w35/11-4 R	OIL	4.25	1.30	1.96	103.46	7.98	4.66	1.25	25.50
2679.50	w35/11-10	OIL	4.34	0.50	2.11	124.81	10.16	6.39	2.07	23.27
2682.00	w35/11-4 R	OIL	4.26	0.75	2.19	133.33	9.47	6.00	1.73	24.12
2682.00	w35/11-4 R	OIL	4.48	0.69	2.13	121.14	10.35	6.65	1.85	27.54

Table 3 C5-20 hydrocarbons, ratios

E-Depth(m)	Well	Type	M_N15%NC619	M_N25%NC619	M_P2N2%NC619
1996.50	w35/11-10	OIL	1.92	2.09	6.03
2003.00	w35/11-4 R	OIL	2.76	3.20	9.59
2003.00	w35/11-4 R	OIL	3.03	3.35	10.19
2048.50	w35/11-10	OIL	1.95	2.11	6.11
2046.00	w35/11-4 R	OIL	1.95	2.27	6.41
2046.00	w35/11-4 R	OIL	2.31	2.50	7.27
2304.80	w35/11-10	OIL	1.99	2.15	6.16
2291.30	w35/11-4 R	OIL	1.98	2.31	6.72
2291.30	w35/11-4 R	OIL	2.35	2.53	7.19
2679.50	w35/11-10	OIL	3.64	3.59	9.98
2682.00	w35/11-4 R	OIL	2.96	3.23	9.23
2682.00	w35/11-4 R	OIL	3.50	3.58	10.23

**Table 3 C5-20 hydrocarbons, ratios**

Code	S-Depth(m)	E-Depth(m)	Well	Type	Name	Sequence	Filename	Instrument	Method	Version	Remarks	Signal
10US	1996.50	1996.50	w35/11-10	OIL	MDT677	3	SA351110	HP6890	GC-FID-SAT	FID_S_D		AM
4US	2000.00	2003.00	w35/11-4 R	OIL	DST4B	3	351108s2	HP5890II	GC-FID-SAT	fid_sat3		AM
10LS	2048.50	2048.50	w35/11-10	OIL	MDT144	4	SA351110	HP6890	GC-FID-SAT	FID_S_D		AM
4LS	2034.00	2046.00	w35/11-4 R	OIL	DST3	4	351108s2	HP5890II	GC-FID-SAT	fid_sat3		AM
10_2274	2274.00	2274.00	w35/11-10	COCH		7	SA351110	HP6890	GC-FID-SAT	FID_S_D		AM
10_2281	2280.80	2280.80	w35/11-10	COCH		8	SA351110	HP6890	GC-FID-SAT	FID_S_D		AM
10_2298	2298.40	2298.40	w35/11-10	COCH		9	SA351110	HP6890	GC-FID-SAT	FID_S_D	Some loss of asphalthenes	AM
10F	2304.80	2304.80	w35/11-10	OIL	MDT608	5	SA351110	HP6890	GC-FID-SAT	FID_S_D		AM
4F	2284.30	2291.30	w35/11-4 R	OIL	DST2	6	351108s2	HP5890II	GC-FID-SAT	fid_sat3		AM
10N	2679.50	2679.50	w35/11-10	OIL	MDT644	6	SA351110	HP6890	GC-FID-SAT	FID_S_D		AM
4E	2674.50	2682.00	w35/11-4 R	OIL	DST1	5	351108s2	HP5890II	GC-FID-SAT	fid_sat3		AM
nso1_02	nso1_02	nso1_02		oil	dst1	2	SA351110	HP6890	GC-FID-SAT	FID_S_D	Lab.ref.psu/ref-NSO1	AM
nso1_10	nso1_10	nso1_10		oil	dst1	10	SA351110	HP6890	GC-FID-SAT	FID_S_D	Lab.ref.psu/ref-NSO1	AM
nso1-02B	nso1-02B	nso1-02B		oil	dst1	2	351108s2	HP5890II	GC-FID-SAT	FID_SAT3	Lab.Ref. psu/ref-NSO1	AM

**Table 4 Saturated hydrocarbons, ratios**

E-Depth(m)	Well	Type	PR_NC17	PH_NC18	PRN17_PHN18	PR_PH	NC17_NC17C27	CPI_1	CPI_2
1996.50	w35/11-10	OIL	0.54	0.38	1.43	1.67	0.67	1.07	0.97
2003.00	w35/11-4 R	OIL	0.61	0.42	1.46	1.66	0.71	1.04	0.95
2048.50	w35/11-10	OIL	0.58	0.38	1.51	1.78	0.68	1.07	0.96
2046.00	w35/11-4 R	OIL	0.59	0.41	1.43	1.59	0.71	1.04	0.93
2274.00	w35/11-10	COCH	0.61	0.38	1.59	1.81	0.66	1.04	0.95
2280.80	w35/11-10	COCH	0.56	0.38	1.47	1.68	0.69	1.10	0.99
2298.40	w35/11-10	COCH	0.56	0.37	1.52	1.70	0.68	1.03	0.94
2304.80	w35/11-10	OIL	0.54	0.38	1.44	1.68	0.69	1.08	0.97
2291.30	w35/11-4 R	OIL	0.60	0.41	1.45	1.59	0.71	1.07	0.92
2679.50	w35/11-10	OIL	0.82	0.46	1.78	2.08	0.69	1.08	0.96
2682.00	w35/11-4 R	OIL	0.71	0.44	1.62	1.79	0.71	1.09	0.95
nsol_02		oil	0.57	0.49	1.15	1.39	0.77	1.02	0.90
nsol_10		oil	0.57	0.48	1.17	1.41	0.79	1.04	0.91
nsol-02B		oil	0.62	0.47	1.31	1.52	0.75	1.05	0.93

**Table 4 Saturated hydrocarbons, ratios**

Code	S-Depth(m)	E-Depth(m)	Well	Type	Name	Seq.#	Filename	Instrument	Method	Version	Remarks	Signal	%29aaS	%29bb	%27ster
10US	1996.50	1996.50	w35/11-10	OIL	MDT677	3	SA351110	HP5973A	GC-MSD-SAT	MSD_S_D		AM	50	71	33
4US	2000.00	2003.00	w35/11-4 R	OIL	DST4B	24	351108S1	HP5971A	GC-MSD-SAT	MSD_S_C		AM	50	66	33
10LS	2048.50	2048.50	w35/11-10	OIL	MDT144	4	SA351110	HP5973A	GC-MSD-SAT	MSD_S_D		AM	49	71	33
4LS	2034.00	2046.00	w35/11-4 R	OIL	DST3	25	351108S1	HP5971A	GC-MSD-SAT	MSD_S_C		AM	47	67	34
10_2274	2274.00	2274.00	w35/11-10	COCH		7	SA351110	HP5973A	GC-MSD-SAT	MSD_S_D		AM	49	70	33
10_2281	2280.80	2280.80	w35/11-10	COCH		8	SA351110	HP5973A	GC-MSD-SAT	MSD_S_D		AM	46	68	33
10_2298	2298.40	2298.40	w35/11-10	COCH		9	SA351110	HP5973A	GC-MSD-SAT	MSD_S_D	Some loss of asphaltthenes	AM	48	70	34
10F	2304.80	2304.80	w35/11-10	OIL	MDT608	5	SA351110	HP5973A	GC-MSD-SAT	MSD_S_D		AM	49	70	33
4F	2284.30	2291.30	w35/11-4 R	OIL	DST2	27	351108S1	HP5971A	GC-MSD-SAT	MSD_S_C		AM	45	64	35
10N	2679.50	2679.50	w35/11-10	OIL	MDT644	6	SA351110	HP5973A	GC-MSD-SAT	MSD_S_D		AM	46	71	29
4E	2674.50	2682.00	w35/11-4 R	OIL	DST1	26	351108S1	HP5971A	GC-MSD-SAT	MSD_S_C		AM	49	69	30
nso1_02	nso1_02	nso1_02		oil		2	HP5973A	HP5973A	GC-MSD-SAT	MSD_S_D	Lab.ref.psu/ref-NSO1	AM	48	67	32
nso1_10	nso1_10	nso1_10		oil		10	HP5973A	HP5973A	GC-MSD-SAT	MSD_S_D	Lab.ref.psu/ref-NSO1	AM	48	67	32
nso1_20s	nso1_20s	nso1_20s		oil		20	351108S1	HP5971A	GC-MSD-SAT	MSD_S_C	Lab.ref.psu/ref-NSO1	AM	47	62	32
nso1_30s	nso1_30s	nso1_30s		oil		30	351108S1	HP5971A	GC-MSD-SAT	MSD_S_C	Lab.ref.psu/ref-NSO1	AM	49	64	34

Table 5 Saturated biomarkers, ratios

E-Depth(m)	Well	Type	%28ster	%29ster	%30ster	%Preg	%20/3	%23/3	%24/4	%Tri	%27Ts	%28ab	%29Ts	%25nor30ab	%29ab	%30ba	%30D	%30G	%32abS	%35ab
1996.50	w35/11-10	OIL	24	34	9	13	14	55	47	9	70	17	42	2	34	9	28	7	58	41
2003.00	w35/11-4 R	OIL	23	34	10	15	17	49	44	9	72	16	43	3	33	10	30	9	60	41
2048.50	w35/11-10	OIL	23	34	10	13	13	53	43	9	72	19	42	3	35	9	29	8	58	41
2046.00	w35/11-4 R	OIL	24	33	9	15	15	50	43	10	73	16	43	2	32	9	27	9	60	41
2274.00	w35/11-10	COCH	24	33	10	13	13	55	43	9	72	18	43	2	35	9	29	7	59	40
2280.80	w35/11-10	COCH	25	33	9	15	14	53	45	9	70	19	41	3	36	9	29	8	60	41
2298.40	w35/11-10	COCH	24	33	9	13	13	52	41	9	71	17	42	3	34	9	29	8	59	40
2304.80	w35/11-10	OIL	24	33	10	13	13	53	42	9	71	17	42	2	34	8	27	7	60	41
2291.30	w35/11-4 R	OIL	23	32	10	16	14	46	40	10	70	17	42	3	33	9	28	10	59	39
2679.50	w35/11-10	OIL	25	36	9	8	13	51	49	5	41	23	24	2	41	12	14	6	58	39
2682.00	w35/11-4 R	OIL	25	36	10	8	22	48	52	6	51	23	29	4	42	10	22	8	58	36
nsol_02		oil	25	31	12	17	10	48	38	7	54	25	29	10	37	9	13	7	59	43
nsol_10		oil	25	32	11	16	10	49	39	7	53	26	29	10	38	9	12	6	59	45
nsol_20s		oil	26	30	12	21	11	45	38	7	54	23	29	8	37	9	12	8	57	47
nsol_30s		oil	25	30	11	19	12	46	37	8	53	25	28	8	38	8	13	7	57	45

Table 5 Saturated biomarkers, ratios

E-Depth(m)	Well	Type	%27hop	%28hop	%29hop	%30hop	%31hop	%32hop	%33hop	%34hop	%35hop	Ho/St1	Ho/St2
1996.50	w35/11-10	OIL	11	4	11	20	20	14	10	6	4		2
2003.00	w35/11-4 R	OIL	11	4	10	21	19	15	10	6	4	2	2
2048.50	w35/11-10	OIL	11	4	11	20	19	14	10	6	4		2
2046.00	w35/11-4 R	OIL	11	4	10	22	18	14	10	6	4	2	2
2274.00	w35/11-10	COCH	11	4	11	20	19	14	10	6	4		2
2280.80	w35/11-10	COCH	11	4	11	20	19	14	10	6	4		2
2298.40	w35/11-10	COCH	11	4	11	20	19	14	10	7	4		2
2304.80	w35/11-10	OIL	11	4	11	20	19	14	10	6	4		2
2291.30	w35/11-4 R	OIL	12	4	10	22	19	14	9	6	4	2	2
2679.50	w35/11-10	OIL	9	6	14	22	19	13	9	5	3		2
2682.00	w35/11-4 R	OIL	10	6	15	22	18	12	8	5	3	1	2
nso1_02		oil	8	6	13	20	18	13	11	6	5		3
nso1_10		oil	8	6	14	20	18	13	10	6	5		3
nso1_20s		oil	8	5	13	20	18	12	11	7	6	3	3
nso1_30s		oil	9	6	14	21	17	12	10	6	5	2	3

**Table 5 Saturated biomarkers, ratios**

Code	S-Depth(m)	E-Depth(m)	Well	Type	Name	Sequence	Filename	Instrument	Method	Version	Remarks	Signal
10US	1996.50	1996.50	w35/11-10	OIL	MDT677	16	SA351110	HP5973A	GC-MSD-ARO	MSD_A_D		AM
4US	2000.00	2003.00	w35/11-4 R	OIL	DST4B	53	351108S1	HP5971A	GC-MSD-ARO	MSD_A_C		AM
10LS	2048.50	2048.50	w35/11-10	OIL	MDT144	17	SA351110	HP5973A	GC-MSD-ARO	MSD_A_D		AM
4LS	2034.00	2046.00	w35/11-4 R	OIL	DST3	54	351108S1	HP5971A	GC-MSD-ARO	MSD_A_C		AM
10_2274	2274.00	2274.00	w35/11-10	COCH		20	SA351110	HP5973A	GC-MSD-ARO	MSD_A_D		AM
10_2281	2280.80	2280.80	w35/11-10	COCH		21	SA351110	HP5973A	GC-MSD-ARO	MSD_A_D		AM
10_2298	2298.40	2298.40	w35/11-10	COCH		22	SA351110	HP5973A	GC-MSD-ARO	MSD_A_D	Some loss of asphalthenes	AM
10F	2304.80	2304.80	w35/11-10	OIL	MDT608	18	SA351110	HP5973A	GC-MSD-ARO	MSD_A_D		AM
4F	2284.30	2291.30	w35/11-4 R	OIL	DST2	56	351108S1	HP5971A	GC-MSD-ARO	MSD_A_C		AM
10N	2679.50	2679.50	w35/11-10	OIL	MDT644	19	SA351110	HP5973A	GC-MSD-ARO	MSD_A_D		AM
4E	2674.50	2682.00	w35/11-4 R	OIL	DST1	55	351108S1	HP5971A	GC-MSD-ARO	MSD_A_C		AM
NSO1_15	NSO1_15	NSO1_15		oil	dst1	15	SA351110	HP5973A	GC-MSD-ARO	MSD_A_D	Lab.ref.psu/ref-NSO1	AM
NSO1_23	NSO1_23	NSO1_23		oil	dst1	23	SA351110	HP5973A	GC-MSD-ARO	MSD_A_D	Lab.ref.psu/ref-NSO1	AM
NSO1_27	NSO1_27	NSO1_27		oil	dst1	27	SA351110	HP5973A	GC-MSD-ARO	MSD_A_D	Lab.ref.psu/ref-NSO1	AM
NSO1_31A	NSO1_31A	NSO1_31A		oil	dst1	31	351108S1	HP5971A	GC-MSD-ARO	MSD_A_C	Lab.ref.psu/ref-NSO1	AM
NSO1_40A	NSO1_40A	NSO1_40A		oil	dst1	40	351108S1	HP5971A	GC-MSD-ARO	MSD_A_C	Lab.ref.psu/ref-NSO1	AM
NSO1_50A	NSO1_50A	NSO1_50A		oil	dst1	50	351108S1	HP5971A	GC-MSD-ARO	MSD_A_C	Lab.ref.psu/ref-NSO1	AM
NSO1_59A	NSO1_59A	NSO1_59A		oil	dst1	59	351108S1	HP5971A	GC-MSD-ARO	MSD_A_C	Lab.ref.psu/ref-NSO1	AM

Table 6 Aromatic hydrocarbons, ratios

E-Depth(m)	Well	Type	NAPHTALENE	C1_NAPH	C2_NAPH	C3_NAPH	PHEN	C2_PHEN	C1_PHEN	MPI1	F1	F2	DNR	%TAS	DBT	P	F_P	BP_16DMN
1996.50	w35/11-10	OIL	1921.51	5183.84	5193.49	2882.70	521.99	702.45	1021.77	0.67	0.47	0.26	3.50	42.31	0.03	0.75	0.38	
2003.00	w35/11-4 R	OIL	1751.58	4067.02	4504.25	2679.85	367.98	525.45	752.60	0.69	0.47	0.26	2.98	47.75	0.04	0.90	0.48	
2048.50	w35/11-10	OIL	1924.16	4491.68	4810.52	2863.50	494.08	712.31	1054.66	0.72	0.47	0.26	3.32	41.12	0.03	0.76	0.38	
2046.00	w35/11-4 R	OIL	1686.23	4199.33	5227.79	3114.26	421.53	658.54	890.46	0.71	0.47	0.26	1.77	49.68	0.05	1.00	0.45	
2274.00	w35/11-10	COCH	157.83	2028.62	4502.43	3524.37	607.67	907.36	1293.76	0.71	0.47	0.26	3.12	44.94	0.03	0.68	0.29	
2280.80	w35/11-10	COCH	4404.62	7311.86	8618.68	6230.18	1863.67	2851.83	3827.08	0.71	0.48	0.28	2.58	58.24	0.04	0.38	0.62	
2298.40	w35/11-10	COCH	178.76	2010.21	4718.37	3874.99	677.11	943.53	1345.93	0.70	0.48	0.26	3.07	43.44	0.03	0.69	0.28	
2304.80	w35/11-10	OIL	2122.93	4439.87	4598.51	2929.44	522.11	715.90	1031.42	0.69	0.47	0.27	3.30	44.63	0.03	0.69	0.50	
2291.30	w35/11-4 R	OIL	1764.48	4653.59	5139.33	3152.17	425.92	580.70	837.70	0.69	0.48	0.26	3.34	51.23	0.04	0.75	0.45	
2679.50	w35/11-10	OIL	778.67	1742.01	1990.76	1425.99	105.98	157.79	205.27	0.62	0.44	0.24	3.28	20.57	0.02	0.56	0.16	
2682.00	w35/11-4 R	OIL	1294.23	3305.16	3823.50	2607.61	267.51	399.03	544.34	0.69	0.47	0.26	3.43	50.04	0.03	0.87	0.27	
NSO1_15		oil	964.61	2524.15	3359.08	2390.12	291.95	531.07	658.09	0.66	0.44	0.24	2.96	22.69	0.07	0.43	0.35	
NSO1_23		oil	1026.76	2815.44	3536.64	2418.16	296.41	534.29	665.62	0.64	0.43	0.23	2.95	22.09	0.07	0.44	0.34	
NSO1_27		oil	1008.61	2941.44	3541.64	2350.50	290.37	528.85	668.35	0.64	0.43	0.23	3.00	22.31	0.07	0.44	0.34	
NSO1_31A		oil	867.46	2023.26	3045.62	2457.04	237.64	455.44	552.49	0.65	0.43	0.23	2.90	25.80	0.07	0.57	0.40	
NSO1_40A		oil	902.19	2065.02	2875.78	2288.71	240.01	442.39	547.69	0.63	0.43	0.23	2.87	26.95	0.07	0.53	0.40	
NSO1_50A		oil	876.11	2137.01	2977.75	2364.39	241.59	468.29	563.05	0.62	0.42	0.23	2.60	27.55	0.07	0.54	0.37	
NSO1_59A		oil	833.03	2161.54	2919.28	2471.50	226.27	501.07	549.30	0.65	0.43	0.23	2.48	27.44	0.09	0.61	0.38	

Table 6 Aromatic hydrocarbons, ratios

E-Depth(m)	Well	Type	2MN_1MN	2EN_1EN	4_1_MDBT	3MPR
1996.50	w35/11-10	OIL	1.42	2.57	6.88	4.65
2003.00	w35/11-4 R	OIL	1.35	2.27	6.31	4.07
2048.50	w35/11-10	OIL	1.35	2.50	6.65	4.73
2046.00	w35/11-4 R	OIL	1.28	2.20	6.45	3.63
2274.00	w35/11-10	COCH	1.38	2.47	7.21	4.41
2280.80	w35/11-10	COCH	1.24	2.32	8.54	5.58
2298.40	w35/11-10	COCH	1.36	2.43	6.88	4.51
2304.80	w35/11-10	OIL	1.35	2.47	6.97	4.26
2291.30	w35/11-4 R	OIL	1.35	2.48	6.32	3.91
2679.50	w35/11-10	OIL	1.52	2.18	4.14	0.37
2682.00	w35/11-4 R	OIL	1.42	2.48	4.99	1.21
NSO1_15		oil	1.27	2.15	3.02	1.75
NSO1_23		oil	1.28	2.09	3.02	1.80
NSO1_27		oil	1.28	2.03	3.01	1.80
NSO1_31A		oil	1.27	1.99	2.85	1.56
NSO1_40A		oil	1.25	1.93	2.93	1.45
NSO1_50A		oil	1.21	1.90	2.98	1.41
NSO1_59A		oil	1.17	1.85	3.09	1.26

**Table 6 Aromatic hydrocarbons, ratios**

S-depth,m	E-depth,m	Well	Type	Name	Company	c13extr	c13sat	c13aro	c13nso	c13asph
1996.50	1996.50	w35/11-10	OIL	MDT677	GEOLABNOR		-28.0	-27.2		
2000.00	2000.00	w35/11-4	OIL	RFT2F	GEOLABNOR	-27.9	-28.4	-27.5	-26.6	-27.4
2000.00	2003.00	w35/11-4 R	OIL	DST4B	GEOLABNOR	-27.5	-28.2	-27.0	-26.7	-27.5
2048.50	2048.50	w35/11-10	OIL	MDT144	GEOLABNOR		-28.1	-27.3		
2038.00	2038.00	w35/11-4	OIL	RFT2E	GEOLABNOR	-27.9	-28.5	-27.4	-26.7	-27.1
2034.00	2046.00	w35/11-4 R	OIL	DST3	GEOLABNOR	-27.7	-28.3	-27.0	-26.7	-27.6
2274.00	2274.00	w35/11-10	COCH		GEOLABNOR		-28.2	-27.3		
2280.80	2280.80	w35/11-10	COCH		GEOLABNOR		-28.3	-26.9		
2298.40	2298.40	w35/11-10	COCH		GEOLABNOR		-28.2	-27.4		
2304.80	2304.80	w35/11-10	OIL	MDT608	GEOLABNOR		-28.3	-27.3		
2290.00	2290.00	w35/11-4	OIL	RFT2D	GEOLABNOR	-28.8	-28.6	-27.5	-26.9	-27.1
2284.30	2291.30	w35/11-4 R	OIL	DST2	GEOLABNOR	-27.7	-28.4	-27.3	-26.7	-27.6
2634.50	2634.50	w35/11-4	OIL	RFT2C	GEOLABNOR	-28.4	-28.3	-27.4		-26.8
2678.00	2678.00	w35/11-4	OIL	RFT2B	GEOLABNOR	-27.5	-28.1	-27.1	-27.6	-27.4
2679.50	2679.50	w35/11-10	OIL	MDT644	GEOLABNOR		-27.8	-27.2		
2674.50	2682.00	w35/11-4 R	OIL	DST1	GEOLABNOR	-27.4	-27.8	-26.6	-26.2	-27.3

**Table 7 13C isotope data on hydrocarbon fractions**



ISOTOPE ANALYSIS NOR : 35/11-10

Well	Name	Type	TOP (m)	BOTTOM (m)	Meth	dDC1	Etha	Prop	Buta	IBut	13CO2	18CO2
35/11-10	MDT677	GAS	1996.50	1996.50	-40.5	-182.0	-30.1	-28.2	-27.6	-23.6	-14.2	-12.1
35/11-10	MDT144	GAS	2048.50	2048.50	-40.4	-182.0	-30.2	-28.2	-28.6	-25.1	-14.2	-11.1
35/11-10	MDT608	GAS	2304.80	2304.80	-40.5	-183.0	-30.2	-28.0	-27.9	-24.9	-11.6	-11.6
35/11-10	MDT644	GAS	2679.50	2679.50	-43.8	-209.0	-30.6	-29.3	-28.9	-25.3	-12.1	-9.3

Table 8: Gas composition and isotope data



**GAS VOLUME COMPOSITION DATA NOR : 35/11-10**

Well	Name	Type	TOP (m)	BOTTOM (m)	C1(%)	C2(%)	C3(%)	iC4(%)	nC4(%)	iC5(%)	nC5(%)	CO2(%)	C1-C5(%)	Total(%)	Wetness(%)	iC4/nC4(%)
35/11-10	MDT677	GAS	1996.50	1996.50	89.02	5.89	2.59	0.27	0.77	0.19	0.20	1.07	98.93	100.00	9.66	0.36
35/11-10	MDT144	GAS	2048.50	2048.50	89.65	5.63	2.33	0.23	0.61	0.14	0.17	1.25	98.75	100.00	8.94	0.38
35/11-10	MDT608	GAS	2304.80	2304.80	84.43	7.42	4.68	0.56	1.56	0.29	0.31	0.76	99.25	100.00	14.41	0.36
35/11-10	MDT644	GAS	2679.50	2679.50	84.04	8.67	4.31	0.44	1.01	0.20	0.20	1.13	98.87	100.00	14.65	0.44

## **Appendix 1:**

### **GC/FID, C5-20 hydrocarbons reports and chromatograms**

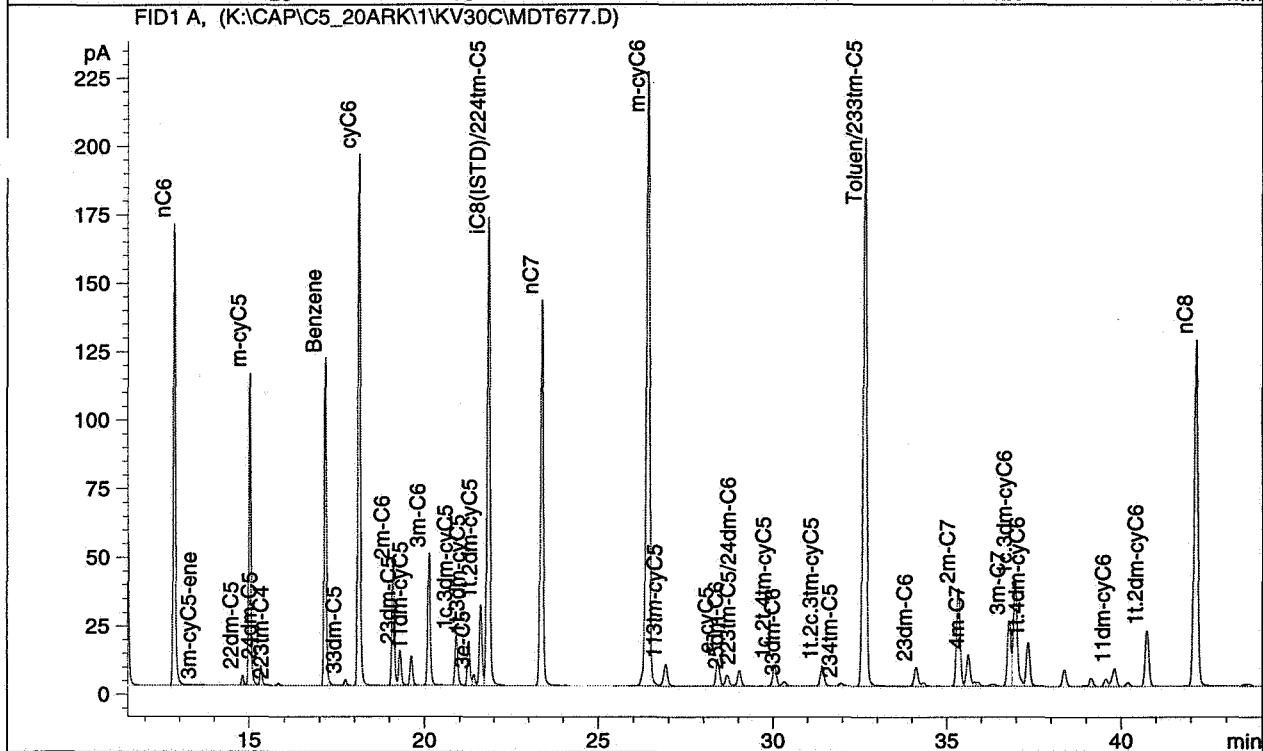
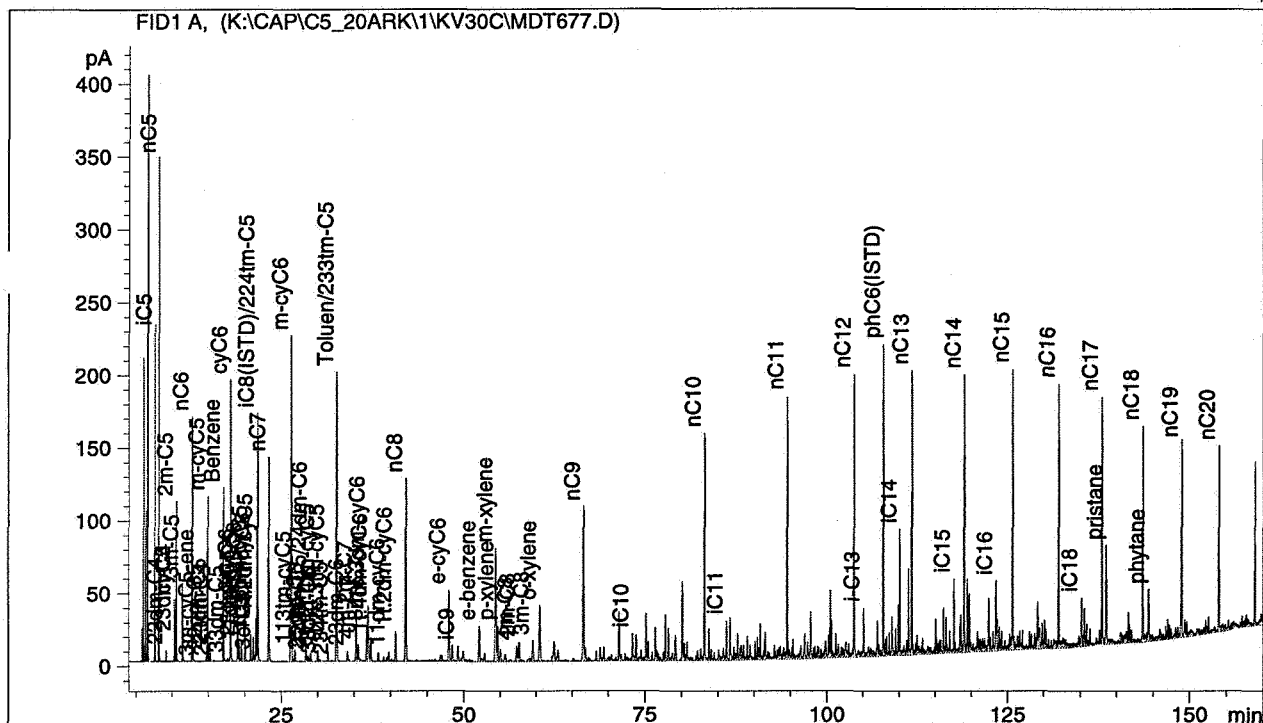
Sample Name: mdt677 35/11-10

Sample info:

Injection Date : 1997-10-27 16:52:07  
 Signal : Area, ISTD's  
 Acq Operator : linda  
 Seq Line : 2  
 Vial No. : 2  
 Inj. No. : 1  
 Inj. Vol. : -  
 Acq. Method : C520IN\_A.M  
 Analysis Method : K:\CAM\GEOKJEMI\HPCHEM\1\METHODS\C5\_20\C520D\_A.M  
 Last Changed : Tue, 28. Oct. 1997, 09:21:08 am  
 (modified after loading)



Method C1-20, GC/FID, peak processing only, 04.03.97



Sample Name: mdt677 35/11-10

Sample info:

Scanned By : Signal  
 Calibration Data Modified : Wed, 23. Jul. 1997, 11:27:42 am  
 Multiplier : 1.000000  
 Dilution(1/mg sample) : 0.002461  
 Uncalibrated Peaks : not reported



#	Compound	Amount ug/mg	Area	Resp. ratio	Rt. min.
1	iC5	3.85	424	1.00	7.67
2	nC5	6.16	679	1.00	8.21
3	22dm-C4	0.17	19	1.00	9.26
4	cyC5	0.99	109	1.00	10.38
5	23dm-C4	0.44	48	1.00	10.44
6	2m-C5	3.04	335	1.00	10.64
7	3m-C5	1.89	209	1.00	11.52
8	nC6	6.49	716	1.00	12.85
9	3m-cyC5-ene	0.00	0	1.00	13.60
10	22dm-C5	0.14	16	1.00	14.82
11	m-cyC5	4.18	460	1.00	15.02
12	24dm-C5	0.29	33	1.00	15.34
13	223tm-C4	0.00	0	1.00	15.68
14	Benzene	4.51	519	1.00	17.17
15	33dm-C5	0.10	11	1.00	17.75
16	cyC6	8.47	933	1.00	18.14
17	2m-C6	1.99	219	1.00	19.12
18	23dm-C5	0.62	69	1.00	19.31
19	11dm-cyC5	0.54	59	1.00	19.63
20	3m-C6	2.25	248	1.00	20.14
21	1c.3dm-cyC5	0.89	98	1.00	20.91
22	1t.3dm-cyC5	0.82	91	1.00	21.27
23	3e-C5	0.19	21	1.00	21.42
24	1t.2dm-cyC5	1.45	160	1.00	21.62
25	iC8 (ISTD) / 224tm-C5	8.98	990	1.00	21.84
26	nC7	7.22	795	1.00	23.38
27	1c.2-dm-cyC5	0.00	0	0.00	0.00
28	m-cyC6	13.59	1498	1.00	26.43
29	113tm-cyC5	0.58	64	1.00	26.93
30	e-cyC5	0.62	69	1.00	28.41
31	25dm-C6	0.30	33	1.00	28.69
32	223tm-C5/24dm-C6	0.38	41	1.00	29.04
33	1c.2t.4tm-cyC5	0.51	56	1.00	30.05
34	33dm-C6	0.11	12	1.00	30.33
35	1t.2c.3tm-cyC5	0.49	54	1.00	31.42
36	234tm-C5	0.07	7	1.00	31.97
37	Toluen/233tm-C5	12.30	1416	1.00	32.65
38	23dm-C6	0.49	54	1.00	34.13
39	2m-C7	2.43	268	1.00	35.35
40	4m-C7	0.77	84	1.00	35.63
41	3m-C7	1.58	175	1.00	36.81
42	1c.3dm-cyC6	2.77	305	1.00	36.99
43	1t.4dm-cyC6	1.07	118	1.00	37.36
44	11dm-cyC6	0.50	56	1.00	39.82
45	1t.2dm-cyC6	1.40	154	1.00	40.75
46	nC8	8.29	913	1.00	42.15
47	e-cyC6	3.99	440	1.00	48.02
48	iC9	0.80	92	1.00	49.23
49	e-benzene	1.90	219	1.00	52.17
50	m-xylene	6.66	767	1.00	54.46
51	p-xylene	1.92	221	1.00	54.72
52	4m-C8	0.92	106	1.00	57.37
53	2m-C8	1.21	139	1.00	57.68
54	3m-C8	1.37	158	1.00	59.59
55	o-xylene	3.42	393	1.00	60.56
56	nC9	7.81	899	1.00	66.62
57	iC10	1.21	140	1.00	73.36
58	nC10	7.96	916	1.00	83.20
59	iC11	1.53	177	1.00	86.24
60	nC11	7.96	916	1.00	94.62
61	nC12	8.61	991	1.00	103.83
62	i-C13	1.69	194	1.00	105.14
63	phC6 (ISTD)	8.98	1034	1.00	107.88
64	iC14	3.70	426	1.00	110.17
65	nC13	8.15	938	1.00	111.84

Data file : K:\CAP\C5\_20ARK\1\KV30C\MDT677.D  
Sample Name: mdt677 35/11-10  
Sample info:

#	Compound	Amount ug/mg	Area	Resp. ratio	Rt. min.
66	iC15	2.17	250	1.00	117.65
67	nC14	8.26	950	1.00	119.09
68	iC16	2.96	341	1.00	123.49
69	nC15	8.47	975	1.00	125.80
70	nC16	7.73	890	1.00	132.08
71	iC18	2.18	251	1.00	135.21
72	nC17	7.43	855	1.00	138.01
73	pristane	4.21	484	1.00	138.60
74	nC18	6.54	753	1.00	143.61
75	phytane	2.36	271	1.00	144.38
76	nC19	6.65	765	1.00	148.94
77	nC20	5.70	656	1.00	154.02

Internal standards for quantification:

ISTD #	Name	Amount ug
1	iC8(ISTD)/224tm-	3650.00
2	phC6(ISTD)	3650.00

\*\*\* End of Report \*\*\*

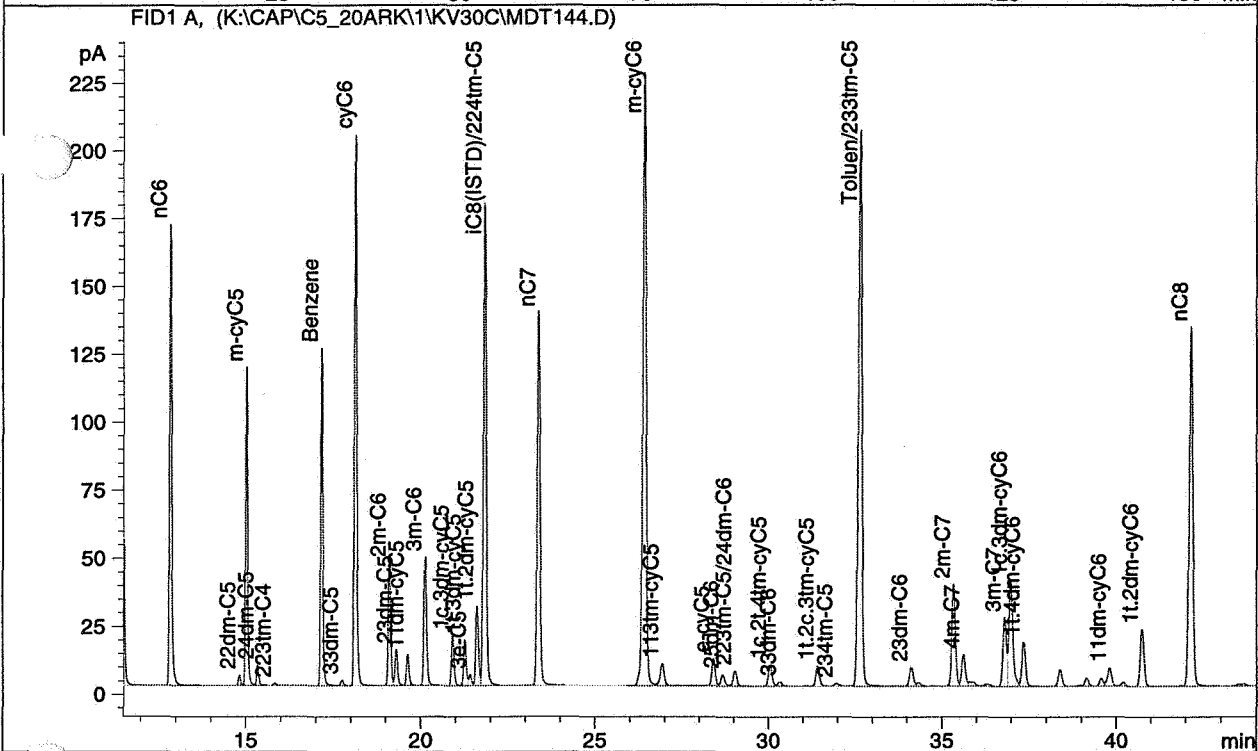
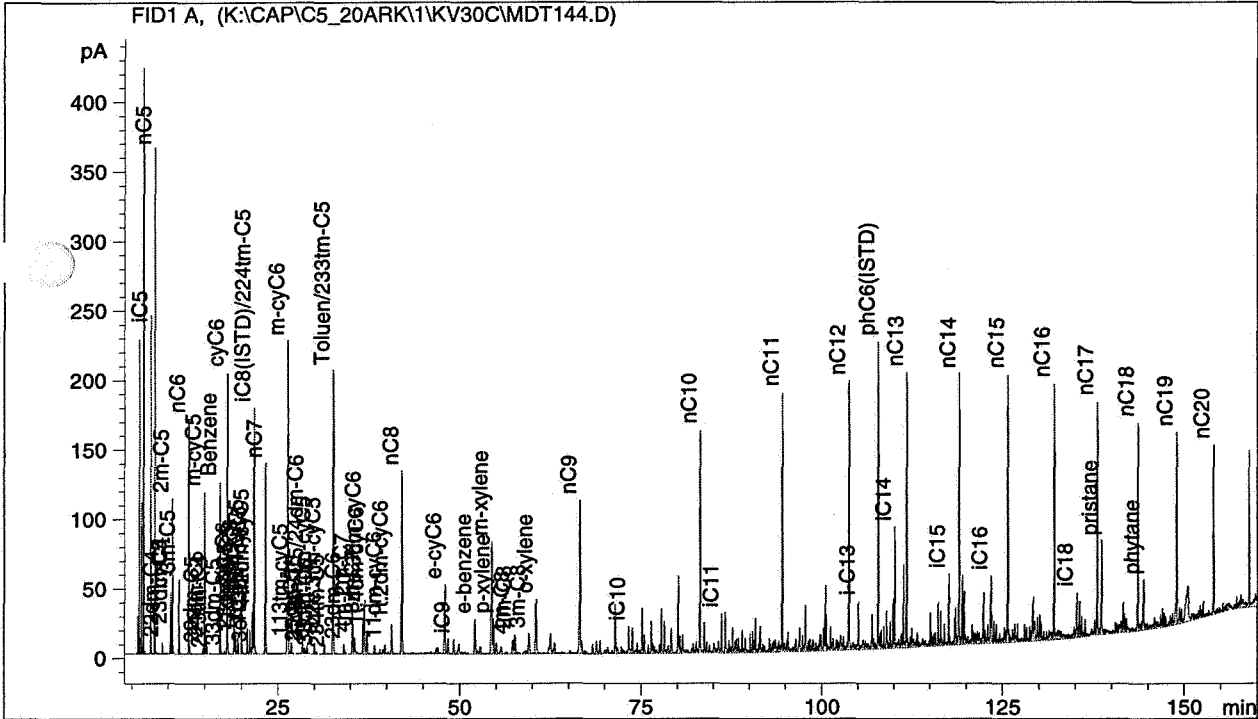
Data file : K:\CAP\C5\_20ARK\1\KV30C\MDT144.D  
 Sample Name: mdt144 35/11-10  
 Sample info:

Injection Date : 1997-10-27 20:04:06  
 Signal : Area, ISTD's  
 Acq Operator : linda  
 Seq Line : 3  
 Vial No. : 3  
 Inj. No. : 1  
 Inj. Vol. : -



Acq. Method : C520IN\_A.M  
 Analysis Method : K:\CAM\GEOKJEMI\HPCHEM\1\METHODS\C5\_20\C520D\_A.M  
 Last Changed : Tue, 28. Oct. 1997, 09:26:02 am  
 (modified after loading)

Method C1-20, GC/FID, peak processing only, 04.03.97



Sample Name: mdt144 35/11-10

Sample info:

Sorted By : Signal  
 Calib. Data Modified : Wed, 23. Jul. 1997,11:27:42 am  
 Multiplier : 1.000000  
 Dilution(1/mg sample) : 0.002499  
 Uncalibrated Peaks : not reported



#	Compound	Amount ug/mg	Area	Resp. ratio	Rt. min.
1	iC5	3.86	435	1.00	7.67
2	nC5	6.19	697	1.00	8.21
3	22dm-C4	0.17	19	1.00	9.26
4	cyC5	0.98	110	1.00	10.37
5	23dm-C4	0.44	49	1.00	10.44
6	2m-C5	3.04	342	1.00	10.63
7	3m-C5	1.89	213	1.00	11.51
8	nC6	6.50	732	1.00	12.85
9	3m-cyC5-ene	0.00	0	0.00	0.00
10	22dm-C5	0.14	16	1.00	14.82
11	m-cyC5	4.16	468	1.00	15.02
12	24dm-C5	0.29	33	1.00	15.34
13	223tm-C4	0.04	4	1.00	15.83
14	Benzene	4.46	527	1.00	17.16
15	33dm-C5	0.10	11	1.00	17.75
16	cyC6	8.45	952	1.00	18.14
17	2m-C6	1.99	224	1.00	19.11
18	23dm-C5	0.62	70	1.00	19.31
19	11dm-cyC5	0.53	60	1.00	19.63
20	3m-C6	2.25	253	1.00	20.13
21	1c.3dm-cyC5	0.89	100	1.00	20.91
22	1t.3dm-cyC5	0.82	92	1.00	21.26
23	3e-C5	0.20	22	1.00	21.41
24	1t.2dm-cyC5	1.45	163	1.00	21.62
25	iC8 (ISTD) /224tm-C5	9.13	1029	1.00	21.84
26	nC7	7.21	812	1.00	23.38
27	1c.2-dm-cyC5	0.00	0	0.00	0.00
28	m-cyC6	13.56	1528	1.00	26.42
29	113tm-cyC5	0.59	66	1.00	26.93
30	e-cyC5	0.62	70	1.00	28.41
31	25dm-C6	0.30	33	1.00	28.68
32	223tm-C5/24dm-C6	0.38	42	1.00	29.04
33	1c.2t.4tm-cyC5	0.51	57	1.00	30.05
34	33dm-C6	0.11	13	1.00	30.33
35	1t.2c.3tm-cyC5	0.49	55	1.00	31.42
36	234tm-C5	0.07	7	1.00	31.96
37	Toluene/233tm-C5	12.23	1443	1.00	32.65
38	23dm-C6	0.48	54	1.00	34.12
39	2m-C7	2.42	273	1.00	35.34
40	4m-C7	0.76	86	1.00	35.62
41	3m-C7	1.58	178	1.00	36.81
42	1c.3dm-cyC6	2.76	311	1.00	36.98
43	1t.4dm-cyC6	1.07	120	1.00	37.35
44	11dm-cyC6	0.50	56	1.00	39.81
45	1t.2dm-cyC6	1.40	157	1.00	40.74
46	nC8	8.28	933	1.00	42.15
47	e-cyC6	3.97	448	1.00	48.01
48	iC9	0.79	93	1.00	49.23
49	e-benzene	1.89	223	1.00	52.17
50	m-xylene	6.62	782	1.00	54.46
51	p-xylene	1.91	225	1.00	54.72
52	4m-C8	0.92	108	1.00	57.36
53	2m-C8	1.20	142	1.00	57.67
54	3m-C8	1.36	160	1.00	59.60
55	o-xylene	3.39	400	1.00	60.56
56	nC9	7.76	916	1.00	66.62
57	iC10	1.20	141	1.00	73.36
58	nC10	7.90	932	1.00	83.20
59	iC11	1.52	179	1.00	86.24
60	nC11	7.88	930	1.00	94.62
61	nC12	8.51	1004	1.00	103.83
62	i-C13	1.67	197	1.00	105.14
63	phC6 (ISTD)	9.13	1078	1.00	107.88
64	iC14	3.65	430	1.00	110.17
65	nC13	8.02	946	1.00	111.84

Data file : K:\CAP\C5\_20ARK\1\KV30C\MDT144.D  
Sample Name: mdt144 35/11-10  
Sample info:

#	Compound	Amount ug/mg	Area	Resp. ratio	Rt. min.
66	iC15	2.11	249	1.00	117.65
67	nC14	8.06	951	1.00	119.09
68	iC16	2.88	340	1.00	123.49
69	nC15	8.26	975	1.00	125.80
70	nC16	7.57	893	1.00	132.08
71	iC18	2.13	251	1.00	135.21
72	nC17	7.26	856	1.00	138.00
73	pristane	4.11	486	1.00	138.60
74	nC18	6.38	753	1.00	143.61
75	phytane	2.33	275	1.00	144.39
76	nC19	6.45	761	1.00	148.94
77	nC20	5.31	626	1.00	154.02

Internal standards for quantification:

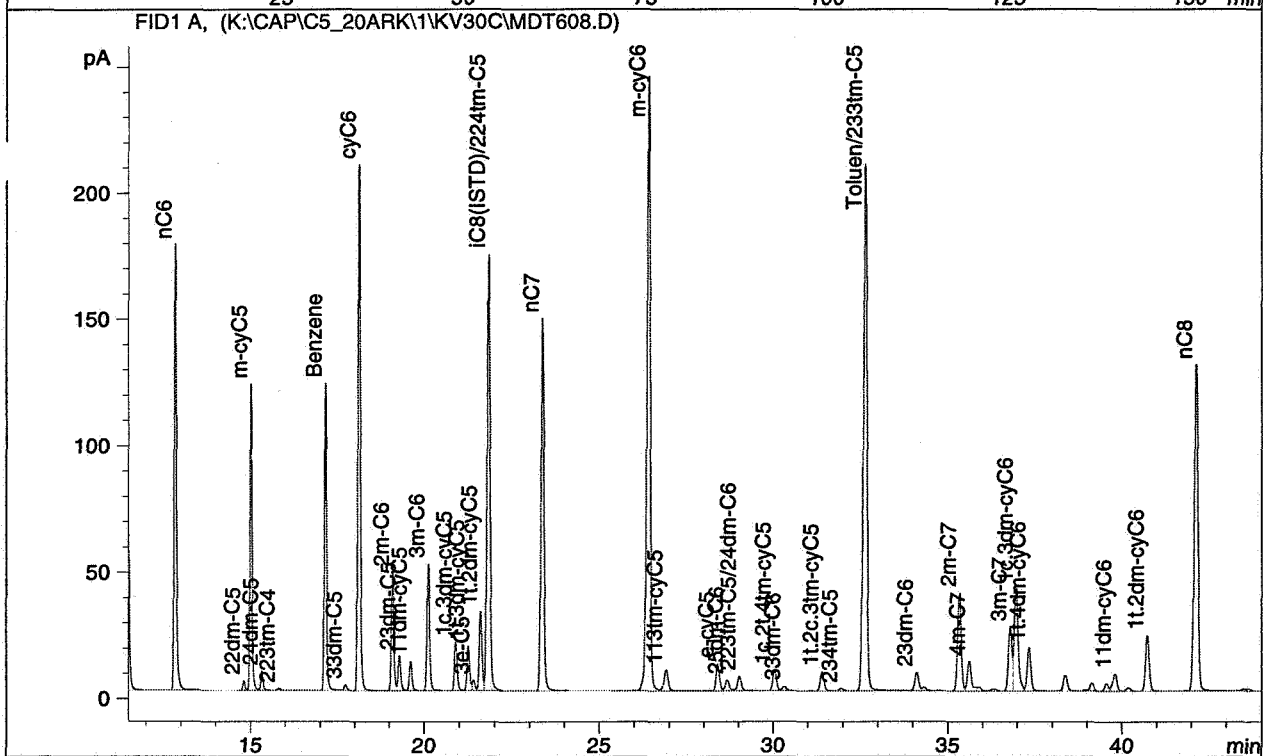
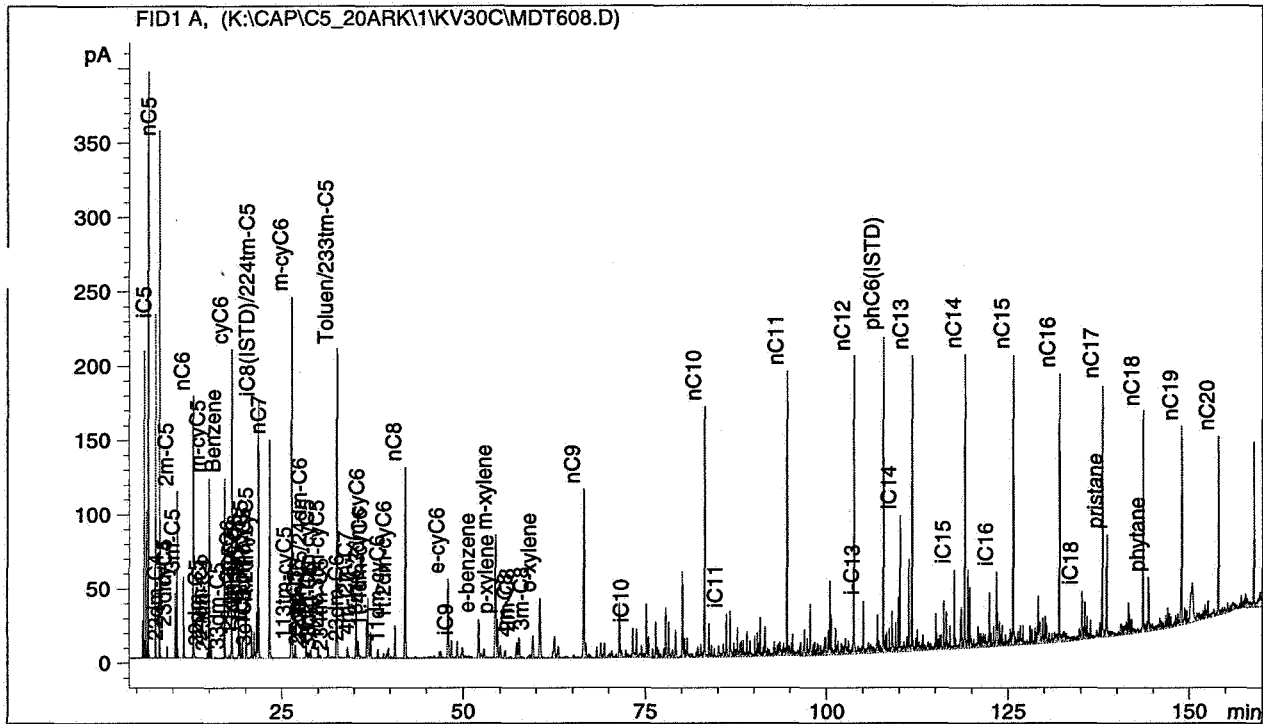
ISTD #	Name	Amount ug
1	iC8(ISTD)/224tm-	3655.00
2	phC6(ISTD)	3655.00

=====  
\*\*\* End of Report \*\*\*

Injection Date : 1997-10-27 23:16:09  
 Signal : Area, ISTD's  
 Acq Operator : linda  
 Seq Line : 4  
 Vial No. : 4  
 Inj. No. : 1  
 Inj. Vol. : -  
 Acq. Method : C520IN\_A.M  
 Analysis Method : K:\CAP\C5\_20ARK\1\KV30C\C520D\_A.M  
 Last Changed : Tue, 28. Oct. 1997, 09:32:44 am  
 (modified after loading)



Method C1-20, GC/FID, peak processing only, 04.03.97



Sample Name: mdt608 35/11-10

Sample info:

Sealed By : Signal  
 Calib. Data Modified : Tue, 28. Oct. 1997,09:32:44 am  
 Multiplier : 1.000000  
 Dilution(1/mg sample) : 0.002426  
 Uncalibrated Peaks : not reported



#	Compound	Amount ug/mg	Area	Resp. ratio	Rt. min.
1	iC5	3.85	431	1.00	7.67
2	nC5	6.27	701	1.00	8.21
3	22dm-C4	0.18	20	1.00	9.26
4	cyC5	1.03	115	1.00	10.37
5	23dm-C4	0.46	51	1.00	10.44
6	2m-C5	3.13	350	1.00	10.63
7	3m-C5	1.95	218	1.00	11.52
8	nC6	6.77	757	1.00	12.85
9	3m-cyC5-ene	0.00	0	0.00	0.00
10	22dm-C5	0.14	16	1.00	14.82
11	m-cyC5	4.40	492	1.00	15.02
12	24dm-C5	0.31	34	1.00	15.34
13	223tm-C4	0.04	4	1.00	15.83
14	Benzene	4.64	538	1.00	17.16
15	33dm-C5	0.10	11	1.00	17.75
16	cyC6	9.11	1019	1.00	18.14
17	2m-C6	2.08	232	1.00	19.11
18	23dm-C5	0.65	73	1.00	19.31
19	11dm-cyC5	0.56	62	1.00	19.63
20	3m-C6	2.35	263	1.00	20.13
21	1c.3dm-cyC5	0.94	105	1.00	20.91
22	1t.3dm-cyC5	0.87	97	1.00	21.27
23	3e-C5	0.20	23	1.00	21.41
24	1t.2dm-cyC5	1.53	171	1.00	21.62
25	iC8 (ISTD) /224tm-C5	8.95	1001	1.00	21.84
26	nC7	7.60	850	1.00	23.38
27	1c.2-dm-cyC5	0.00	0	0.00	0.00
28	m-cyC6	14.55	1626	1.00	26.43
29	113tm-cyC5	0.63	70	1.00	26.93
30	e-cyC5	0.67	75	1.00	28.41
31	25dm-C6	0.31	35	1.00	28.69
32	223tm-C5/24dm-C6	0.39	44	1.00	29.04
33	1c.2t.4tm-cyC5	0.54	60	1.00	30.05
34	33dm-C6	0.12	13	1.00	30.32
35	1t.2c.3tm-cyC5	0.51	58	1.00	31.42
36	234tm-C5	0.07	8	1.00	31.96
37	Toluen/233tm-C5	12.91	1498	1.00	32.65
38	23dm-C6	0.51	57	1.00	34.12
39	2m-C7	2.54	284	1.00	35.35
40	4m-C7	0.87	98	1.00	35.63
41	3m-C7	1.67	186	1.00	36.82
42	1c.3dm-cyC6	2.94	329	1.00	36.99
43	1t.4dm-cyC6	1.14	128	1.00	37.35
44	11dm-cyC6	0.54	60	1.00	39.81
45	1t.2dm-cyC6	1.49	167	1.00	40.74
46	nC8	8.76	979	1.00	42.15
47	e-cyC6	4.25	476	1.00	48.02
48	iC9	0.83	96	1.00	49.23
49	e-benzene	2.06	239	1.00	52.17
50	m-xylene	6.98	810	1.00	54.46
51	p-xylene	1.99	231	1.00	54.72
52	4m-C8	0.97	112	1.00	57.36
53	2m-C8	1.28	148	1.00	57.68
54	3m-C8	1.44	167	1.00	59.60
55	o-xylene	3.59	416	1.00	60.57
56	nC9	8.27	960	1.00	66.62
57	iC10	1.26	146	1.00	73.36
58	nC10	8.39	973	1.00	83.21
59	iC11	1.60	186	1.00	86.24
60	nC11	8.32	966	1.00	94.62
61	nC12	8.92	1035	1.00	103.83
62	i-C13	1.74	202	1.00	105.14
63	phC6 (ISTD)	8.95	1038	1.00	107.87
64	iC14	3.88	450	1.00	110.17
65	nC13	8.36	970	1.00	111.84

Data file : K:\CAP\C5\_20ARK\1\KV30C\MDT608.D

Sample Name: mdt608 35/11-10

Sample info:

#	Compound	Amount ug/mg	Area	Resp. ratio	Rt. min.
66	iC15	2.21	256	1.00	117.65
67	nC14	8.35	969	1.00	119.09
68	iC16	2.99	347	1.00	123.49
69	nC15	8.53	989	1.00	125.80
70	nC16	7.74	898	1.00	132.08
71	iC18	2.18	253	1.00	135.21
72	nC17	7.44	863	1.00	138.00
73	pristane	4.25	493	1.00	138.60
74	nC18	6.44	747	1.00	143.61
75	phytane	2.38	276	1.00	144.39
76	nC19	6.49	754	1.00	148.94
77	nC20	5.53	641	1.00	154.02

Internal standards for quantification:

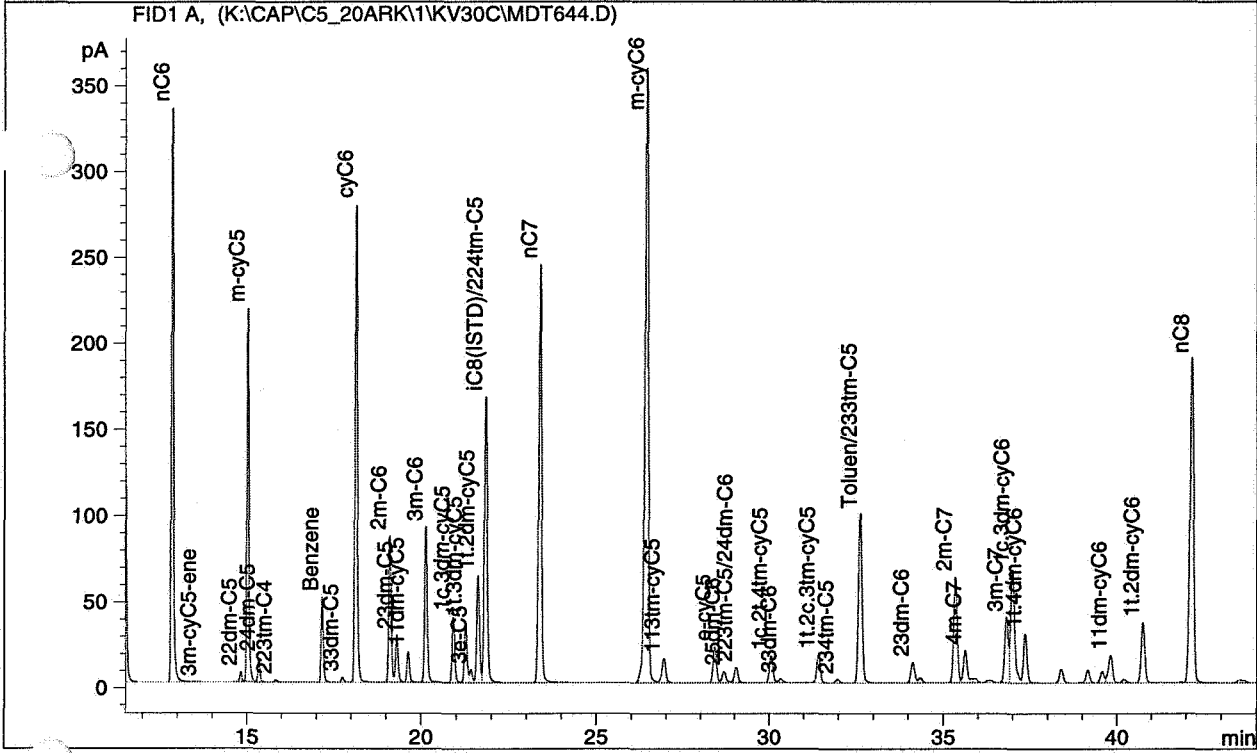
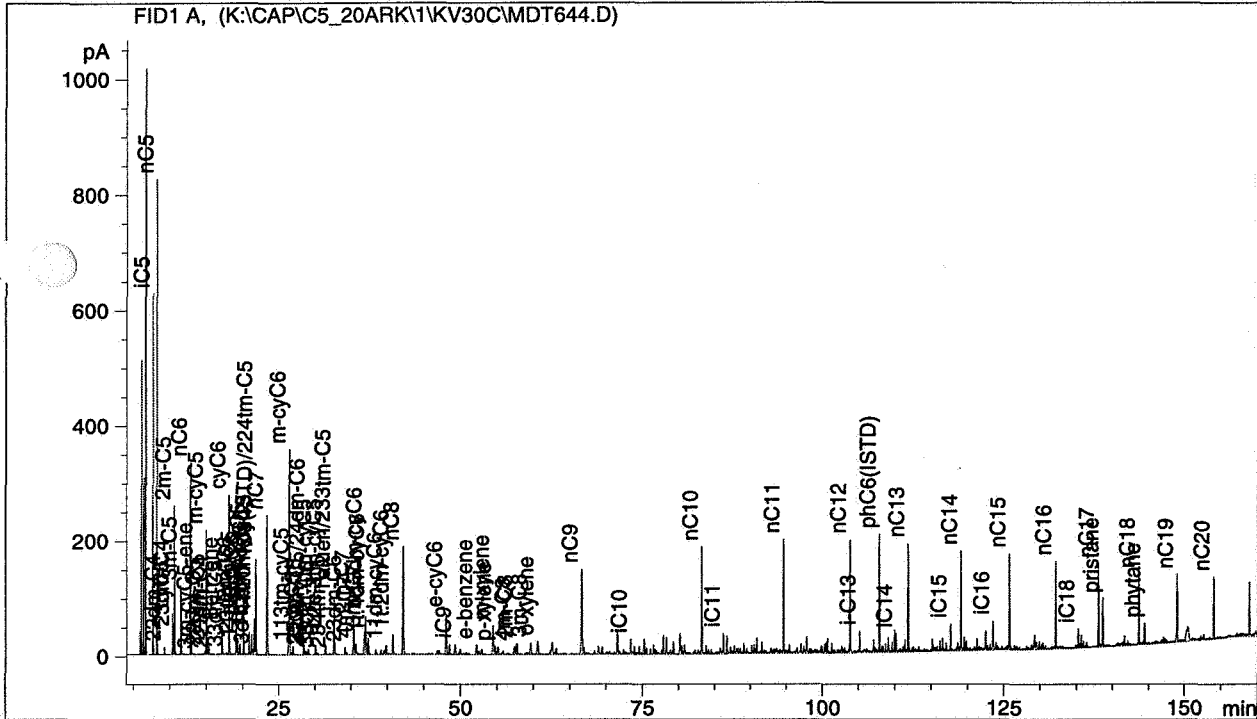
ISTD #	Name	Amount ug
1	iC8(ISTD)/224tm-	3690.00
2	phC6(ISTD)	3690.00

\*\*\* End of Report \*\*\*

Injection Date : 1997-10-28 02:28:05  
Signal : Area, ISTD's  
Acq Operator : linda  
Seq Line : 5  
Vial No. : 5  
Inj. No. : 1  
Inj. Vol. : -  
Acq. Method : C520IN\_A.M  
Analysis Method : K:\CAP\C5\_20ARK\1\KV30C\C520D\_A.M  
Last Changed : Tue, 28. Oct. 1997, 09:35:51 am  
(modified after loading)



Method C1-20, GC/FID, peak processing only, 04.03.97



Sample Name: mdt644 35/11-10

Sample info:

Sorted By : Signal  
 Calib. Data Modified : Tue, 28. Oct. 1997,09:32:44 am  
 Multiplier : 1.000000  
 Dilution(1/mg sample) : 0.002434  
 Uncalibrated Peaks : not reported



#	Compound	Amount ug/mg	Area	Resp. ratio	Rt. min.
1	iC5	10.26	1116	1.00	7.67
2	nC5	14.22	1548	1.00	8.21
3	22dm-C4	0.29	32	1.00	9.26
4	cyC5	1.68	183	1.00	10.37
5	23dm-C4	1.03	112	1.00	10.44
6	2m-C5	7.12	775	1.00	10.63
7	3m-C5	4.22	460	1.00	11.52
8	nC6	12.92	1406	1.00	12.86
9	3m-cyC5-ene	0.00	0	1.00	13.66
10	22dm-C5	0.22	24	1.00	14.82
11	m-cyC5	8.01	872	1.00	15.03
12	24dm-C5	0.57	62	1.00	15.34
13	223tm-C4	0.07	7	1.00	15.83
14	Benzene	1.96	221	1.00	17.16
15	33dm-C5	0.13	14	1.00	17.75
16	cyC6	12.31	1339	1.00	18.14
17	2m-C6	3.74	407	1.00	19.12
18	23dm-C5	1.28	140	1.00	19.31
19	11dm-cyC5	0.86	93	1.00	19.63
20	3m-C6	4.24	461	1.00	20.14
21	1c.3dm-cyC5	1.89	205	1.00	20.91
22	1t.3dm-cyC5	1.73	188	1.00	21.27
23	3e-C5	0.38	42	1.00	21.41
24	1t.2dm-cyC5	3.19	347	1.00	21.62
25	iC8 (ISTD)/224tm-C5	8.85	963	1.00	21.84
26	nC7	12.68	1379	1.00	23.40
27	1c.2-dm-cyC5	0.00	0	0.00	0.00
28	m-cyC6	22.75	2476	1.00	26.45
29	113tm-cyC5	1.02	111	1.00	26.93
30	e-cyC5	1.35	147	1.00	28.41
31	25dm-C6	0.49	53	1.00	28.69
32	223tm-C5/24dm-C6	0.62	68	1.00	29.04
33	1c.2t.4tm-cyC5	1.05	114	1.00	30.05
34	33dm-C6	0.15	17	1.00	30.32
35	1t.2c.3tm-cyC5	1.09	119	1.00	31.42
36	234tm-C5	0.15	16	1.00	31.96
37	Toluen/233tm-C5	6.29	709	1.00	32.62
38	23dm-C6	0.85	92	1.00	34.12
39	2m-C7	4.12	448	1.00	35.35
40	4m-C7	1.25	136	1.00	35.63
41	3m-C7	2.54	277	1.00	36.82
42	1c.3dm-cyC6	4.85	528	1.00	37.00
43	1t.4dm-cyC6	1.89	206	1.00	37.36
44	11dm-cyC6	1.26	137	1.00	39.81
45	1t.2dm-cyC6	2.35	256	1.00	40.74
46	nC8	13.11	1427	1.00	42.17
47	e-cyC6	5.90	642	1.00	48.03
48	iC9	1.40	157	1.00	49.23
49	e-benzene	1.42	160	1.00	52.17
50	m-xylene	4.18	471	1.00	54.43
51	p-xylene	1.17	132	1.00	54.71
52	4m-C8	1.29	146	1.00	57.37
53	2m-C8	1.75	197	1.00	57.68
54	3m-C8	1.98	223	1.00	59.59
55	o-xylene	2.25	254	1.00	60.55
56	nC9	11.12	1253	1.00	66.64
57	iC10	1.68	189	1.00	73.36
58	nC10	10.02	1129	1.00	83.21
59	iC11	2.05	231	1.00	86.24
60	nC11	9.04	1019	1.00	94.62
61	nC12	8.81	992	1.00	103.83
62	i-C13	1.86	210	1.00	105.14
63	phC6 (ISTD)	8.85	997	1.00	107.87
64	iC14	1.42	160	1.00	110.16
65	nC13	7.89	889	1.00	111.84

Data file : K:\CAP\C5\_20ARK\1\KV30C\MDT644.D

Sample Name: mdt644 35/11-10

Sample info:

Compound	Amount ug/mg	Area	Resp. ratio	Rt. min.
66 iC15	2.00	225	1.00	117.64
67 nC14	7.57	853	1.00	119.09
68 iC16	3.44	387	1.00	123.49
69 nC15	7.48	843	1.00	125.79
70 nC16	6.66	750	1.00	132.07
71 iC18	2.20	248	1.00	135.20
72 nC17	6.31	711	1.00	137.99
73 pristane	5.35	603	1.00	138.61
74 nC18	5.53	623	1.00	143.60
75 phytane	2.53	285	1.00	144.38
76 nC19	5.67	638	1.00	148.93
77 nC20	4.74	534	1.00	154.01

Internal standards for quantification:

ISTD #	Name	Amount ug
1	iC8(ISTD)/224tm-	3635.00
2	phC6(ISTD)	3635.00

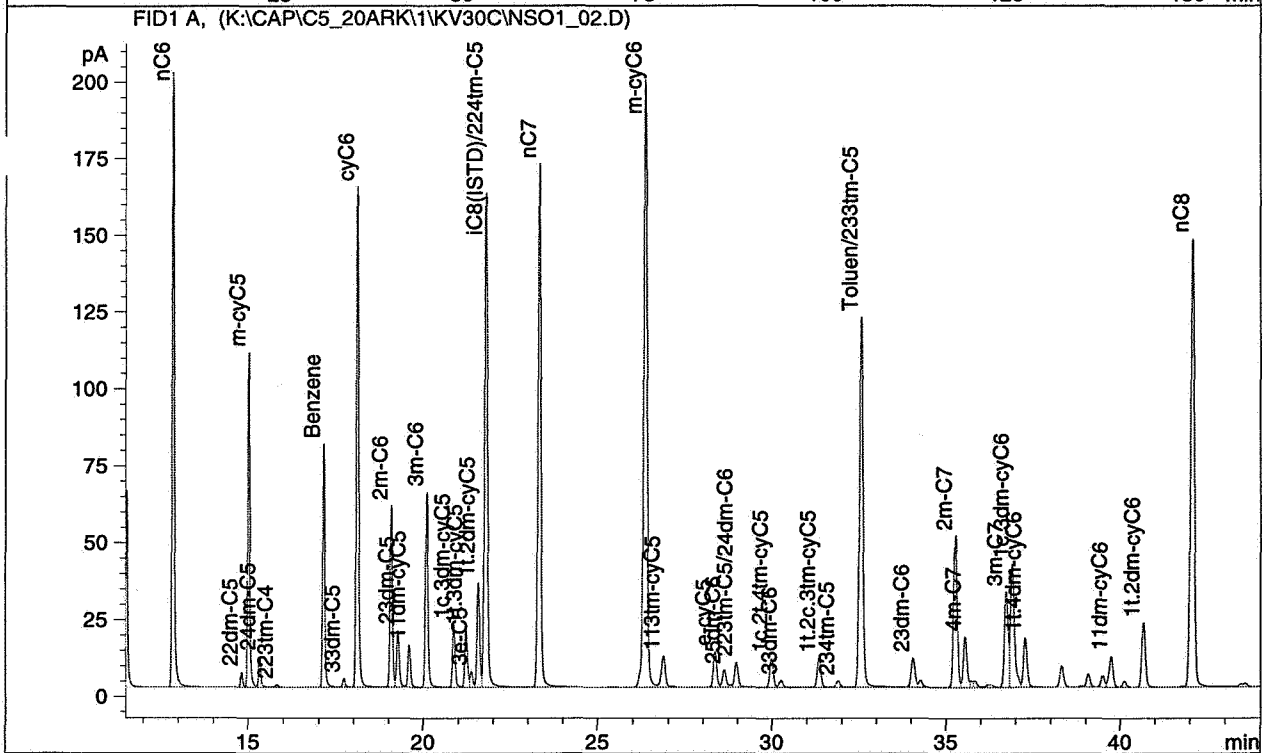
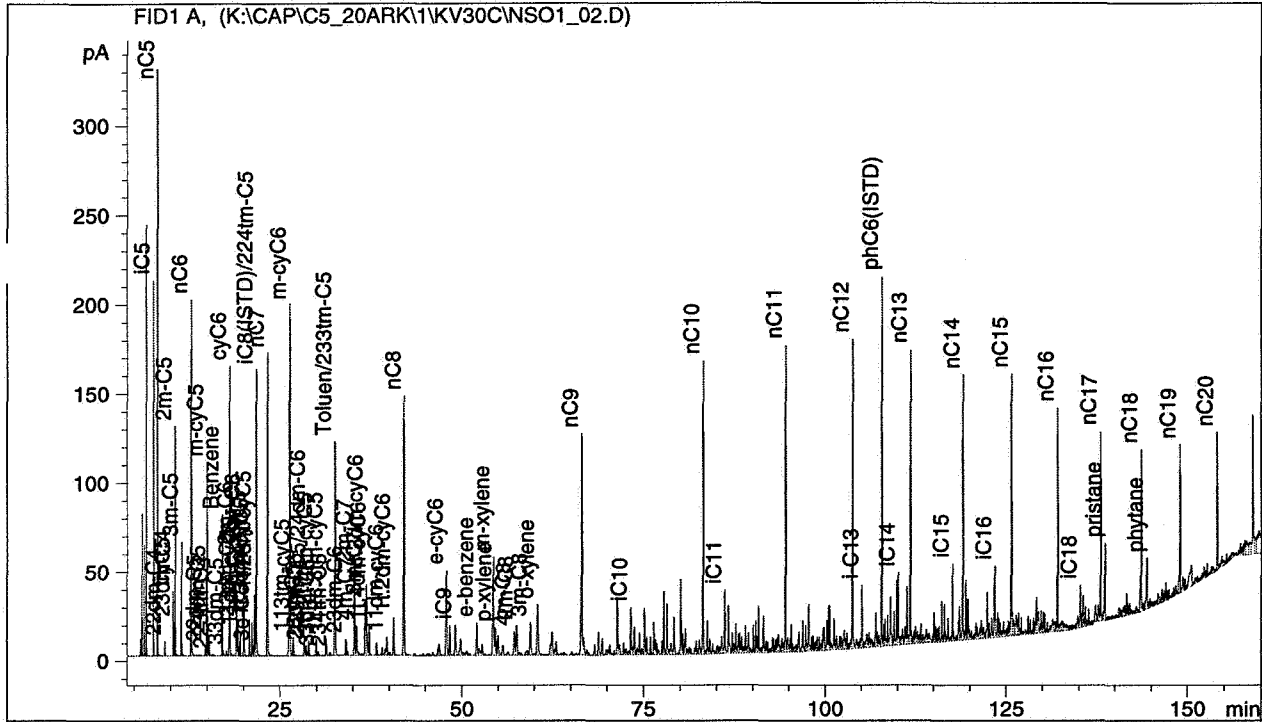
\*\*\* End of Report \*\*\*

Data file : K:\CAP\C5\_20ARK\1\KV30C\NSO1\_02.D  
 Sample Name: ns01\_01  
 Sample info:

Injection Date : 1997-10-27 13:40:22  
 Signal : Area, ISTD's  
 Acq Operator : linda  
 Seq Line : 1  
 Vial No. : 1  
 Inj. No. : 1  
 Inj. Vol. : -  
 Acq. Method : C520IN\_A.M  
 Analysis Method : K:\CAM\GEOKJEMI\HPCHEM\1\METHODS\C5\_20\C520D\_A.M  
 Last Changed : Tue, 28. Oct. 1997, 09:16:35 am  
 (modified after loading)



Method C1-20, GC/FID, peak processing only, 04.03.97



Sample Name: ns01\_01

Sample info:

Solved By : Signal  
 Calc. Data Modified : Wed, 23. Jul. 1997, 11:27:42 am  
 Multiplier : 1.000000  
 Dilution(1/mg sample) : 0.002441  
 Uncalibrated Peaks : not reported



#	Compound	Amount ug/mg	Area	Resp. ratio	Rt. min.
1	iC5	3.47	378	1.00	7.69
2	nC5	5.82	635	1.00	8.23
3	22dm-C4	0.18	20	1.00	9.28
4	cyC5	0.86	94	1.00	10.40
5	23dm-C4	0.50	55	1.00	10.46
6	2m-C5	3.63	396	1.00	10.66
7	3m-C5	2.23	243	1.00	11.54
8	nC6	7.70	840	1.00	12.87
9	3m-cyC5-ene	0.00	0	0.00	0.00
10	22dm-C5	0.18	20	1.00	14.82
11	m-cyC5	3.97	433	1.00	15.02
12	24dm-C5	0.41	45	1.00	15.34
13	223tm-C4	0.04	5	1.00	15.82
14	Benzene	3.03	343	1.00	17.15
15	33dm-C5	0.13	14	1.00	17.73
16	cyC6	6.98	761	1.00	18.12
17	2m-C6	2.66	290	1.00	19.09
18	23dm-C5	0.90	99	1.00	19.29
19	11dm-cyC5	0.67	74	1.00	19.61
20	3m-C6	3.04	331	1.00	20.11
21	1c.3dm-cyC5	1.01	110	1.00	20.88
22	1t.3dm-cyC5	0.93	101	1.00	21.24
23	3e-C5	0.26	28	1.00	21.38
24	1t.2dm-cyC5	1.70	186	1.00	21.59
25	iC8 (ISTD)/224tm-C5	8.85	965	1.00	21.81
26	nC7	9.09	991	1.00	23.35
27	1c.2-dm-cyC5	0.00	0	0.00	0.00
28	m-cyC6	12.50	1363	1.00	26.37
29	113tm-cyC5	0.78	85	1.00	26.88
30	e-cyC5	0.76	83	1.00	28.35
31	25dm-C6	0.39	42	1.00	28.63
32	223tm-C5/24dm-C6	0.55	60	1.00	28.98
33	1c.2t.4tm-cyC5	0.63	69	1.00	29.99
34	33dm-C6	0.16	18	1.00	30.27
35	1t.2c.3tm-cyC5	0.66	72	1.00	31.36
36	234tm-C5	0.15	16	1.00	31.90
37	Toluen/233tm-C5	7.63	864	1.00	32.57
38	23dm-C6	0.69	75	1.00	34.06
39	2m-C7	3.35	366	1.00	35.29
40	4m-C7	1.11	121	1.00	35.56
41	3m-C7	2.14	233	1.00	36.75
42	1c.3dm-cyC6	2.98	324	1.00	36.93
43	1t.4dm-cyC6	1.12	123	1.00	37.28
44	11dm-cyC6	0.76	83	1.00	39.75
45	1t.2dm-cyC6	1.47	160	1.00	40.68
46	nC8	10.09	1100	1.00	42.09
47	e-cyC6	4.09	446	1.00	47.95
48	iC9	1.33	151	1.00	49.17
49	e-benzene	1.46	165	1.00	52.09
50	m-xylene	4.68	531	1.00	54.37
51	p-xylene	1.30	147	1.00	54.64
52	4m-C8	1.25	142	1.00	57.29
53	2m-C8	1.59	181	1.00	57.60
54	3m-C8	1.78	202	1.00	59.52
55	o-xylene	2.74	310	1.00	60.49
56	nC9	8.99	1019	1.00	66.58
57	iC10	1.72	195	1.00	73.32
58	nC10	8.52	966	1.00	83.18
59	iC11	2.03	231	1.00	86.22
60	nC11	7.74	877	1.00	94.61
61	nC12	7.88	893	1.00	103.82
62	i-C13	1.84	208	1.00	105.14
63	phC6 (ISTD)	8.85	1003	1.00	107.87
64	iC14	1.87	212	1.00	110.16
65	nC13	6.95	788	1.00	111.83

Data file : K:\CAP\C5\_20ARK\1\KV30C\NS01\_02.D

Sample Name: ns01\_01

Sample info:

#	Compound	Amount ug/mg	Area	Resp. ratio	Rt. min.
66	iC15	1.87	212	1.00	117.65
67	nC14	6.45	731	1.00	119.09
68	iC16	2.57	292	1.00	123.49
69	nC15	6.70	759	1.00	125.79
70	nC16	5.37	609	1.00	132.07
71	iC18	1.69	192	1.00	135.21
72	nC17	4.71	534	1.00	137.99
73	pristane	2.74	310	1.00	138.60
74	nC18	4.67	530	1.00	143.60
75	phytane	2.09	237	1.00	144.38
76	nC19	4.49	509	1.00	148.93
77	nC20	3.65	414	1.00	154.01

Internal standards for quantification:

ISTD #	Name	Amount ug
1	iC8(ISTD)/224tm-	3625.00
2	phC6(ISTD)	3625.00

=====  
\*\*\* End of Report \*\*\*

## **Appendix 2:**

### **GC/FID, SAT hydrocarbons, reports and chromatograms**

#	Rt.min.	Signal	Compound	Area	Amount
FID					ug/mg
Internal standards (if added):					
1)	13.39	GC1	C12D26	4382410	4.2
6)	25.69	GC1	C16D34	5251246	4.2
11)	35.95	GC1	C20D24	5955101	4.1
19)	44.57	GC1	C24D42	5693710	4.2
28)	55.25	GC1	C30D62	2378469	1.8
2)	10.70	GC1	nC11	7120247	
3)	13.98	GC1	nC12	8699795	
4)	17.27	GC1	nC13	9634705	
5)	20.46	GC1	nC14	10264730	
7)	22.33	GC1	iC16	3562844	2.8
8)	23.51	GC1	nC15	11027671	8.7
9)	26.42	GC1	nC16	10866516	8.6
10)	27.75	GC1	iC18	3282962	2.6
12)	29.19	GC1	nC17	10776408	7.4
13)	29.34	GC1	pristane	5863967	4.0
14)	31.82	GC1	nC18	9209128	6.4
15)	32.04	GC1	phytane	3510219	2.4
16)	34.33	GC1	nC19	8818505	6.1
17)	36.73	GC1	nC20	8111339	5.6
18)	39.03	GC1	nC21	7642987	5.3
20)	41.23	GC1	nC22	7102290	5.2
21)	43.34	GC1	nC23	6637219	4.9
22)	45.38	GC1	nC24	6625517	4.9
23)	47.33	GC1	nC25	5909885	4.4
24)	49.20	GC1	nC26	5176474	3.8
25)	51.02	GC1	nC27	4876377	3.6
26)	52.77	GC1	nC28	4147753	3.1
27)	54.48	GC1	nC29	3922538	2.9
29)	56.11	GC1	nC30	2824227	2.1
30)	57.70	GC1	nC31	2598359	1.9
31)	59.24	GC1	nC32	2011516	1.5
32)	60.73	GC1	nC33	1684584	1.2
33)	62.18	GC1	nC34	1665331	1.2
34)	63.75	GC1	nC35	1319994	1.0

### Saturated hydrocarbons

GC/FID detection HP-6890

Compound data and ratios

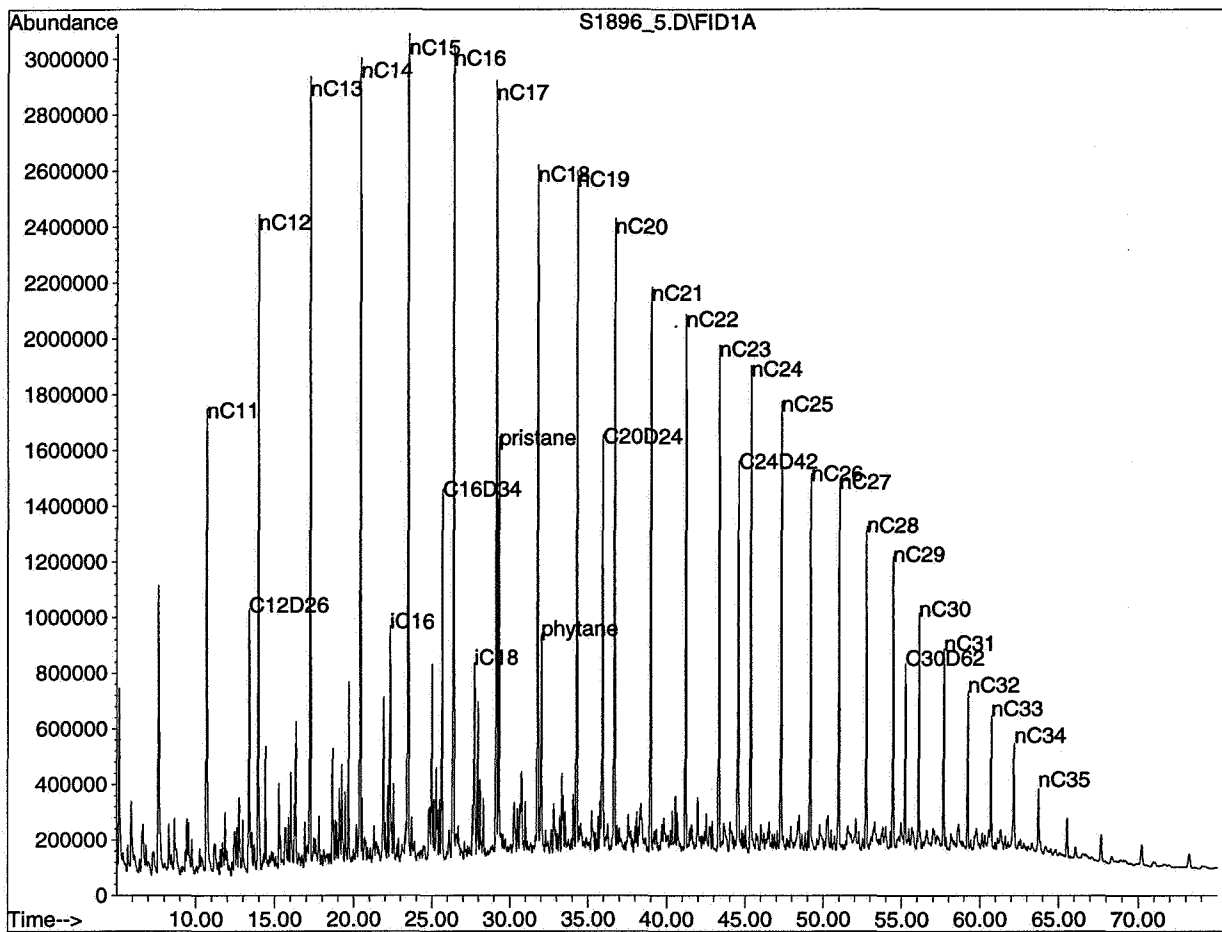


Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: **S1896\_5.D**  
Sample name: **35/11-10 1896.5 oil sat**  
Data File Path: **K:\CAM\GEOKJEM\HPCHEM\W95\DATA\ISA351110**  
Misc. info.:  
  
Vial no.: **3**  
Method: **MSD\_S\_D**  
Operator:  
Date: **Wed Oct 29 22:48:18 1997**  
  
Response curve  $y = ax$   
Response factor equally 1.0

Ratios:	Area	Amount
Pr/nC17	0.54	0.54
Ph/nC18	0.38	0.38
(Pr/nC17)/(Ph/nC18)	1.43	1.43
Pr/Ph	1.67	1.67
nC17/(nC17+nC27)	0.69	0.67
CPI-1	1.07	1.07
CPI-2 (2*nC27/(nC26+nC27))	0.97	0.97

Title: Saturated HC (FID) and Biomarkers (MSD)  
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S1896\_5.D Name: 35/11-10 1896.5 c  
Misc:  
Method: MSD\_S\_D .....Operator:  
Date Reported: Thu Nov 06 13:12:53 1997



#	Rt.min.	Signal	Compound	Area	Amount
FID					ug/mg
Internal standards (if added):					
1)	13.39	GC1	C12D26	4436338	3.7
6)	25.69	GC1	C16D34	5285396	3.7
11)	35.96	GC1	C20D24	6590373	3.6
19)	44.57	GC1	C24D42	6056058	3.7
28)	55.24	GC1	C30D62	2497190	1.5
2)	10.71	GC1	nC11	8243417	
3)	13.99	GC1	nC12	9772802	
4)	17.27	GC1	nC13	10872109	
5)	20.47	GC1	nC14	11862501	
7)	22.34	GC1	iC16	4250464	3.0
8)	23.52	GC1	nC15	12840234	8.9
9)	26.43	GC1	nC16	12813011	8.9
10)	27.76	GC1	iC18	3880159	2.7
12)	29.20	GC1	nC17	12751716	7.0
13)	29.35	GC1	pristane	7365188	4.1
14)	31.83	GC1	nC18	10852527	6.0
15)	32.04	GC1	phytane	4151179	2.3
16)	34.34	GC1	nC19	10316422	5.7
17)	36.75	GC1	nC20	9408951	5.2
18)	39.04	GC1	nC21	8904011	4.9
20)	41.24	GC1	nC22	8334732	5.1
21)	43.36	GC1	nC23	7785510	4.8
22)	45.39	GC1	nC24	7756198	4.8
23)	47.34	GC1	nC25	6909448	4.2
24)	49.22	GC1	nC26	5884111	3.6
25)	51.03	GC1	nC27	5422041	3.3
26)	52.78	GC1	nC28	4820736	3.0
27)	54.48	GC1	nC29	4595040	2.8
29)	56.12	GC1	nC30	3278822	2.0
30)	57.71	GC1	nC31	2986563	1.8
31)	59.24	GC1	nC32	2332374	1.4
32)	60.74	GC1	nC33	1963113	1.2
33)	62.18	GC1	nC34	2209852	1.4
34)	63.76	GC1	nC35	1335489	0.8

**Saturated hydrocarbons**

GC/FID detection HP-6890

Compound data and ratios



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: **S2048\_5.D**  
Sample name: **35/11-10 2048.5 oil sat**  
Data File Path: K:\CAM\GEOKJEM\HPCHEM\W95\DATA\ISA351110\  
Misc. info.:  
  
Vial no.: 4  
Method: MSD\_S\_D  
Operator:  
Date: Thu Oct 30 00:16:44 1997  
  
Response curve y = ax  
Response factor equally 1.0

Ratios:	Area	Amount
Pr/nC17	0.58	0.58
Ph/nC18	0.38	0.38
(Pr/nC17)/(Ph/nC18)	1.51	1.51
Pr/Ph	1.77	1.77
nC17/(nC17+nC27)	0.70	0.68
CPI-1	1.07	1.07
CPI-2 (2*nC27/(nC26+nC27))	0.96	0.96

Title: Saturated HC (FID) and Biomarkers (MSD)

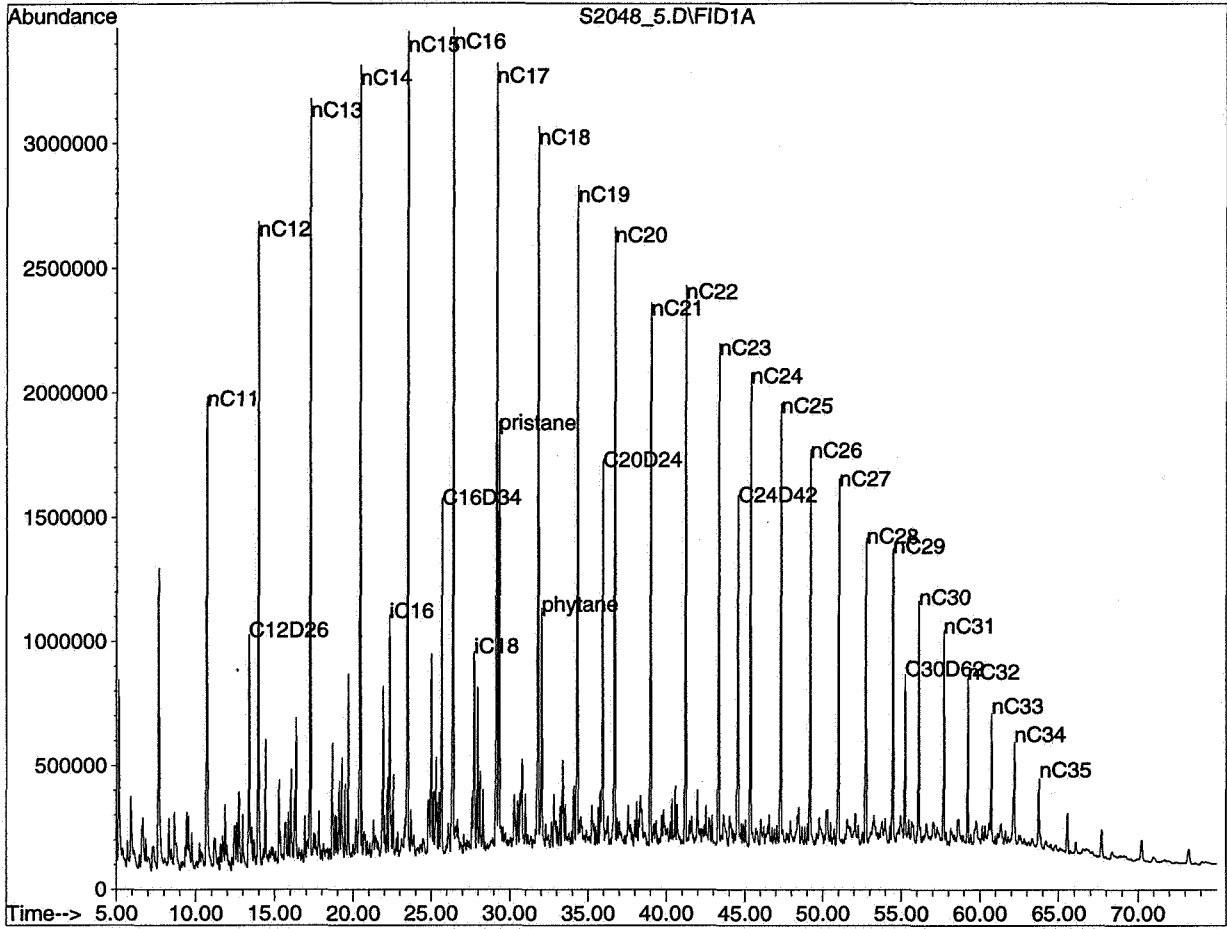
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2048\_5.D Name: 35/11-10 2048.5

Misc:

Method: MSD\_S\_D

.....Operator:

Date Reported: Thu Nov 06 13:21:28 1997



#	Rt.min.	Signal	Compound	Area	Amount
			FID	ug/mg	
Internal standards (if added):					
1)	13.37	GC1	C12D26	1749850	2.9
6)	25.68	GC1	C16D34	3071341	2.9
11)	35.95	GC1	C20D24	4287043	2.8
19)	44.56	GC1	C24D42	3796677	2.9
28)	55.24	GC1	C30D62	1485503	1.1
2)	10.68	GC1	nC11	271548	
3)	13.95	GC1	nC12	1939153	
4)	17.24	GC1	nC13	5110364	
5)	20.45	GC1	nC14	8493308	
7)	22.33	GC1	iC16	3543873	3.3
8)	23.51	GC1	nC15	11504146	10.7
9)	26.43	GC1	nC16	12715766	11.8
10)	27.75	GC1	iC18	3706036	3.5
12)	29.20	GC1	nC17	12862707	8.5
13)	29.34	GC1	pristane	7852561	5.2
14)	31.83	GC1	nC18	11284480	7.4
15)	32.05	GC1	phytane	4337395	2.9
16)	34.35	GC1	nC19	10636655	7.0
17)	36.75	GC1	nC20	9683676	6.4
18)	39.04	GC1	nC21	9136524	6.0
20)	41.25	GC1	nC22	8514173	6.5
21)	43.36	GC1	nC23	8012787	6.1
22)	45.39	GC1	nC24	7889454	6.0
23)	47.34	GC1	nC25	7134401	5.4
24)	49.22	GC1	nC26	6270519	4.8
25)	51.03	GC1	nC27	5646362	4.3
26)	52.78	GC1	nC28	4868262	3.7
27)	54.48	GC1	nC29	4557715	3.5
29)	56.12	GC1	nC30	3662696	2.8
30)	57.70	GC1	nC31	3068217	2.3
31)	59.24	GC1	nC32	2406005	1.8
32)	60.73	GC1	nC33	2044038	1.6
33)	62.19	GC1	nC34	2193688	1.7
34)	63.76	GC1	nC35	1389028	1.1

### Saturated hydrocarbons

GC/FID detection HP-6890

Compound data and ratios



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: **S2274.D**  
Sample name: **35/11-10 2274 coch sat**  
Data File Path: **K:\CAM\GEOKJEM\HPCHEM\W95\DATA\SA351110**  
Misc. info.:  
Vial no.: **7**  
Method: **MSD\_S\_D**  
Operator:  
Date: **Thu Oct 30 04:42:10 1997**  
Response curve  $y = ax$   
Response factor equally 1.0

Ratios:	Area	Amount
Pr/nC17	0.61	0.61
Ph/nC18	0.38	0.38
(Pr/nC17)/(Ph/nC18)	1.59	1.59
Pr/Ph	1.81	1.81
nC17/(nC17+nC27)	0.69	0.66
CPI-1	1.04	1.04
CPI-2 (2*nC27/(nC26+nC27))	0.95	0.95

Title: Saturated HC (FID) and Biomarkers (MSD)

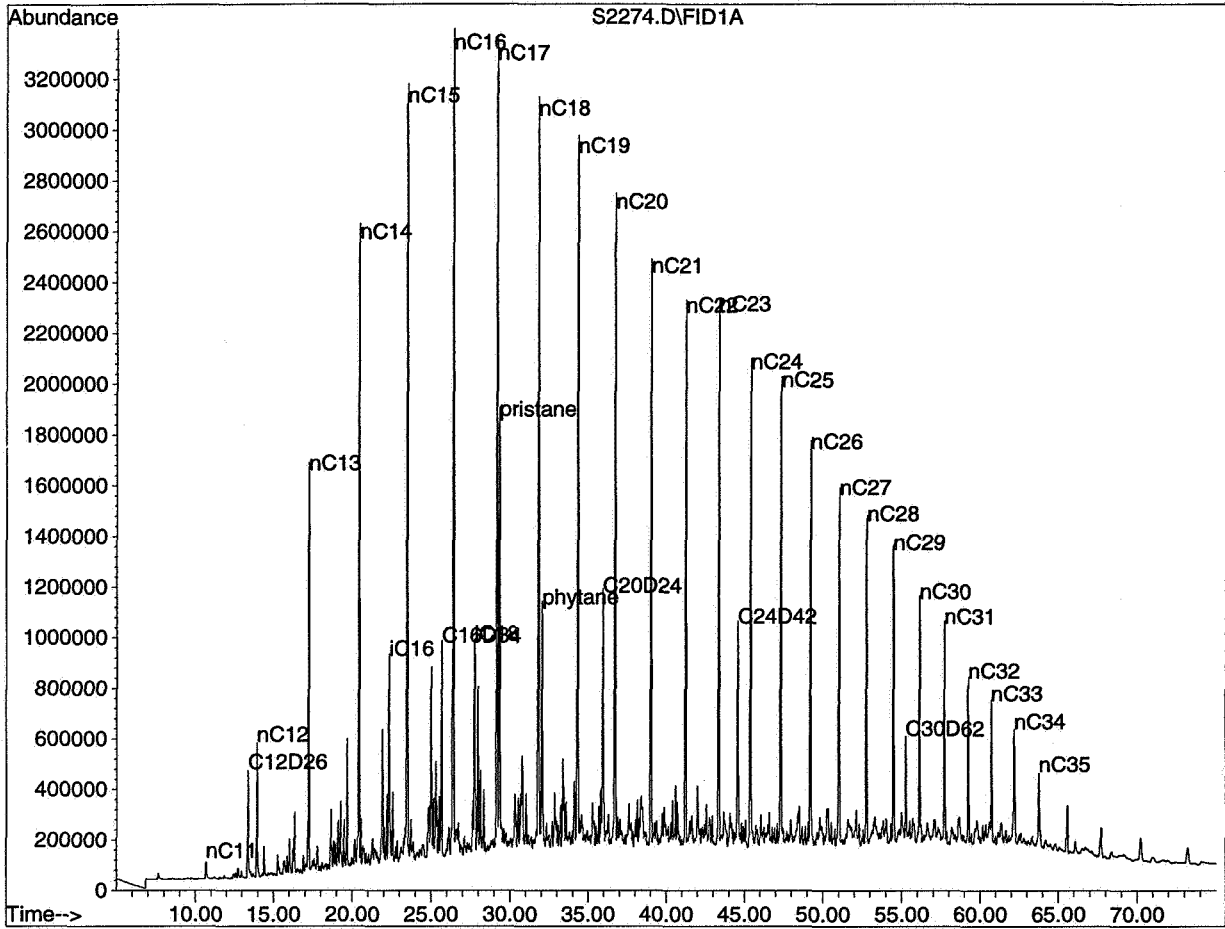
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2274.D Name: 35/11-10 2274 coch

Misc:

Method: MSD\_S\_D

.....Operator:

Date Reported: Thu Nov 06 14:33:14 1997



#	Rt.min.	Signal	Compound	Area	Amount
			FID	ug/mg	
Internal standards (if added):					
1)	13.38	GC1	C12D26	3677627	4.2
6)	25.70	GC1	C16D34	7792953	4.2
11)	35.98	GC1	C20D24	9180293	4.1
19)	44.59	GC1	C24D42	8827547	4.2
28)	55.26	GC1	C30D62	3763126	1.8
2)	10.68	GC1	nC11	1080160	
3)	13.95	GC1	nC12	2736732	
4)	17.25	GC1	nC13	5594021	
5)	20.45	GC1	nC14	9027831	
7)	22.33	GC1	iC16	3612294	1.9
8)	23.52	GC1	nC15	12819442	6.8
9)	26.44	GC1	nC16	14559558	7.8
10)	27.76	GC1	iC18	4502612	2.4
12)	29.21	GC1	nC17	15290177	6.9
13)	29.36	GC1	pristane	8609761	3.9
14)	31.84	GC1	nC18	13341757	6.0
15)	32.05	GC1	phytane	5115916	2.3
16)	34.36	GC1	nC19	12520106	5.6
17)	36.75	GC1	nC20	11399896	5.1
18)	39.05	GC1	nC21	10540314	4.7
20)	41.25	GC1	nC22	9755150	4.6
21)	43.36	GC1	nC23	9155957	4.4
22)	45.40	GC1	nC24	9005414	4.3
23)	47.35	GC1	nC25	8149437	3.9
24)	49.23	GC1	nC26	6724032	3.2
25)	51.04	GC1	nC27	6599244	3.1
26)	52.79	GC1	nC28	5481121	2.6
27)	54.49	GC1	nC29	5346925	2.5
29)	56.12	GC1	nC30	3839645	1.8
30)	57.71	GC1	nC31	3624029	1.7
31)	59.24	GC1	nC32	2786016	1.3
32)	60.74	GC1	nC33	2308303	1.1
33)	62.19	GC1	nC34	2305507	1.1
34)	63.76	GC1	nC35	1422052	0.7

## Saturated hydrocarbons

GC/FID detection HP-6890

Compound data and ratios



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: S2280\_8.D  
Sample name: 35/11-10 2280.8 coch sat  
Data File Path: K:\CAM\GEOKJEM\HPCHEM\MW95\DATA\SA351110\  
Misc. info.:  
  
Vial no.: 8  
Method: MSD\_S\_D  
Operator:  
Date: Thu Oct 30 06:10:39 1997  
  
Response curve y = ax  
Response factor equally 1.0

Ratios:	Area	Amount
Pr/nC17	0.56	0.56
Ph/nC18	0.38	0.38
(Pr/nC17)/(Ph/nC18)	1.47	1.47
Pr/Ph	1.68	1.68
nC17/(nC17+nC27)	0.70	0.69
CPI-1	1.10	1.10
CPI-2 (2*nC27/(nC26+nC27))	0.99	0.99

Title: Saturated HC (FID) and Biomarkers (MSD)

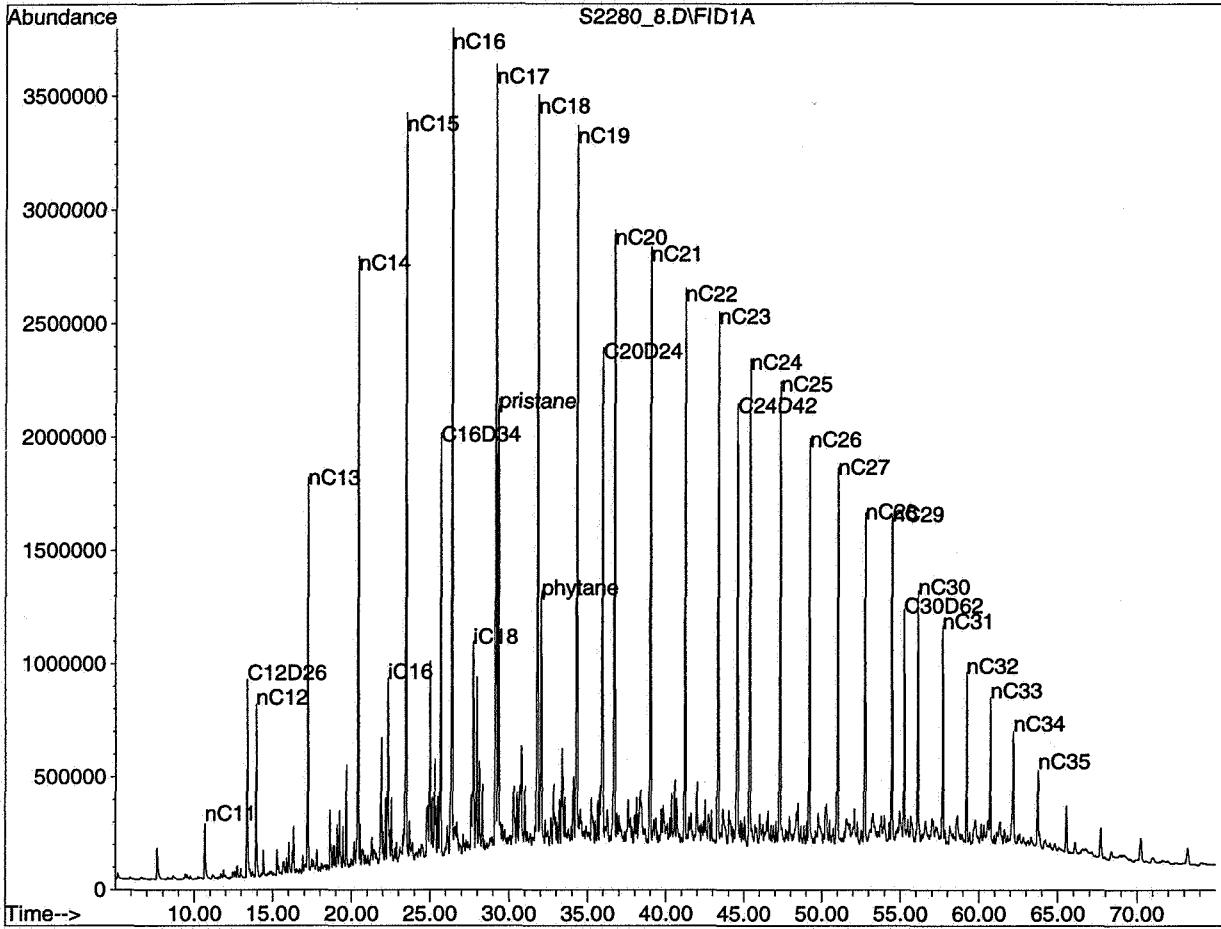
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2280\_8.D Name: 35/11-10 2280.8

Misc:

Method: MSD\_S\_D

.....Operator:

Date Reported: Fri Nov 07 10:16:51 1997



#	Rt.min.	Signal	Compound	Area	Amount
FID				ug/mg	
Internal standards (if added):					
1)	13.37	GC1	C12D26	2125739	2.7
6)	25.69	GC1	C16D34	4224471	2.7
11)	35.97	GC1	C20D24	5481888	2.6
19)	44.58	GC1	C24D42	4894921	2.7
28)	55.27	GC1	C30D62	1860201	1.0
2)	10.69	GC1	nC11	383269	
3)	13.96	GC1	nC12	2774697	
4)	17.26	GC1	nC13	7559433	
5)	20.47	GC1	nC14	13096940	
7)	22.35	GC1	iC16	5217594	3.3
8)	23.54	GC1	nC15	17145069	10.8
9)	26.46	GC1	nC16	18448005	11.6
10)	27.78	GC1	iC18	5651998	3.6
12)	29.23	GC1	nC17	18828364	9.0
13)	29.38	GC1	pristane	10524343	5.0
14)	31.86	GC1	nC18	16840131	8.1
15)	32.08	GC1	phytane	6198629	3.0
16)	34.38	GC1	nC19	15260535	7.3
17)	36.78	GC1	nC20	14059282	6.7
18)	39.07	GC1	nC21	12986858	6.2
20)	41.27	GC1	nC22	12043935	6.6
21)	43.38	GC1	nC23	11243460	6.2
22)	45.42	GC1	nC24	11289340	6.2
23)	47.36	GC1	nC25	9926696	5.5
24)	49.25	GC1	nC26	8617966	4.7
25)	51.06	GC1	nC27	7635202	4.2
26)	52.81	GC1	nC28	6835765	3.8
27)	54.50	GC1	nC29	6567048	3.6
29)	56.14	GC1	nC30	5392550	3.0
30)	57.72	GC1	nC31	4254805	2.3
31)	59.26	GC1	nC32	3303753	1.8
32)	60.75	GC1	nC33	2797866	1.5
33)	62.21	GC1	nC34	2927055	1.6
34)	63.78	GC1	nC35	1849674	1.0

## Saturated hydrocarbons

GC/FID detection HP-6890

### Compound data and ratios



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: S2298\_4.D  
Sample name: 35/11-10 2298.4 coch sat  
Data File Path: K:\CAM\GEOKJEM\HPCHEM\W95\DATA\ISA351110\  
Misc. info.:  
  
Vial no.: 9  
Method: MSD\_S\_D  
Operator:  
Date: Thu Oct 30 07:39:09 1997  
  
Response curve  $y = ax$   
Response factor equally 1.0

Ratios:	Area	Amount
Pr/nC17	0.56	0.56
Ph/nC18	0.37	0.37
(Pr/nC17)/(Ph/nC18)	1.52	1.52
Pr/Ph	1.70	1.70
nC17/(nC17+nC27)	0.71	0.68
CPI-1	1.03	1.03
CPI-2 (2*nC27/(nC26+nC27))	0.94	0.94

Title: Saturated HC (FID) and Biomarkers (MSD)

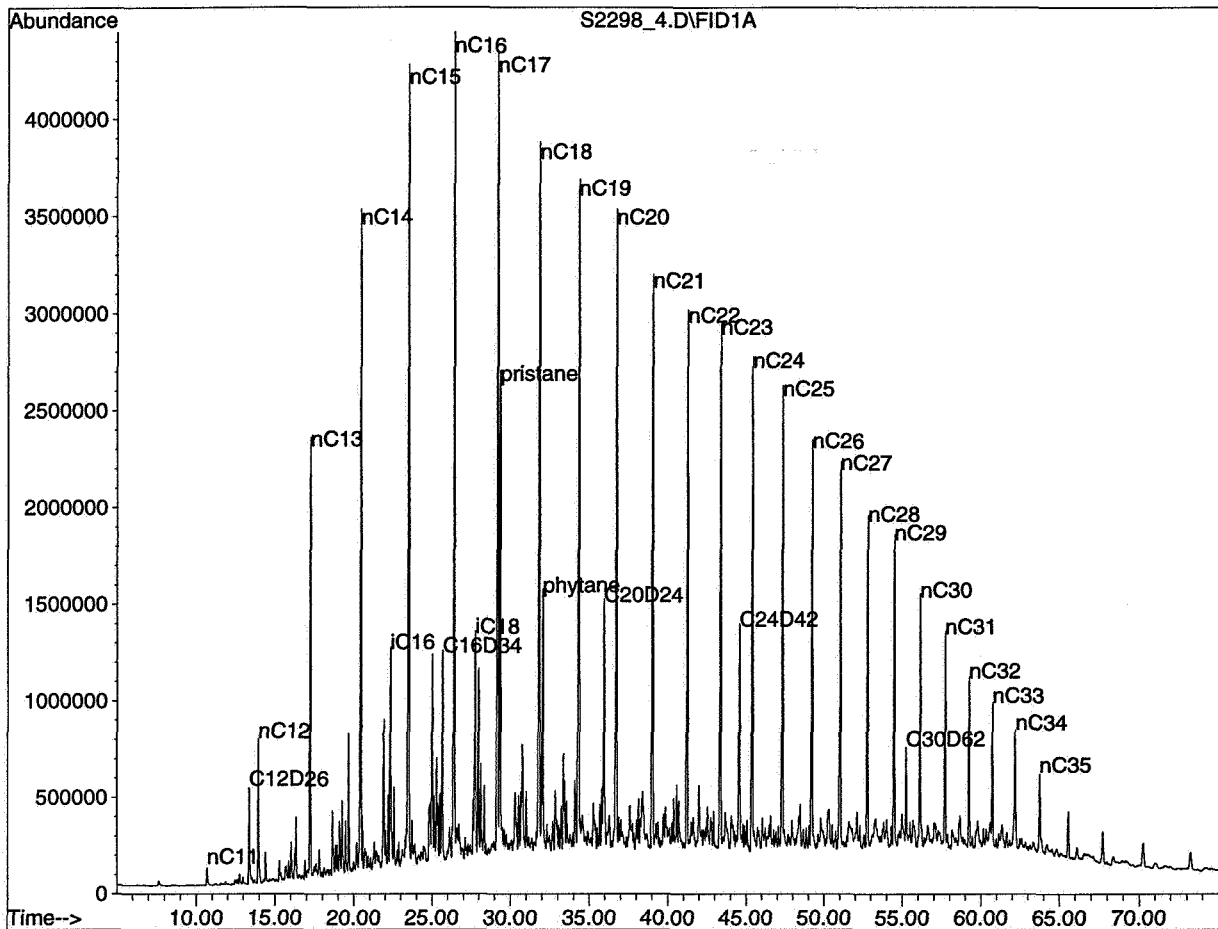
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2298\_4.D Name: 35/11-10 2298.4

Misc:

Method: MSD\_S\_D

.....Operator:

Date Reported: Fri Nov 07 10:36:30 1997



#	Rt.min.	Signal	Compound	Area	Amount
FID				ug/mg	
Internal standards (if added):					
1)	13.39	GC1	C12D26	4844630	3.5
6)	25.69	GC1	C16D34	5324601	3.5
11)	35.96	GC1	C20D24	6095170	3.5
19)	44.57	GC1	C24D42	5789967	3.6
28)	55.25	GC1	C30D62	2390098	1.5
2)	10.71	GC1	nC11	9522518	
3)	14.00	GC1	nC12	11242583	
4)	17.28	GC1	nC13	12125534	
5)	20.47	GC1	nC14	12547449	
7)	22.34	GC1	iC16	4299176	2.8
8)	23.52	GC1	nC15	13168013	8.7
9)	26.43	GC1	nC16	12930334	8.5
10)	27.76	GC1	iC18	3668372	2.4
12)	29.20	GC1	nC17	12669801	7.2
13)	29.34	GC1	pristane	6906886	3.9
14)	31.83	GC1	nC18	10880544	6.2
15)	32.05	GC1	phytane	4111057	2.3
16)	34.35	GC1	nC19	10187178	5.8
17)	36.75	GC1	nC20	9326789	5.3
18)	39.04	GC1	nC21	8664915	4.9
20)	41.24	GC1	nC22	8065356	5.0
21)	43.35	GC1	nC23	7630914	4.7
22)	45.39	GC1	nC24	7473243	4.6
23)	47.34	GC1	nC25	6823696	4.2
24)	49.22	GC1	nC26	5647014	3.5
25)	51.03	GC1	nC27	5286331	3.3
26)	52.78	GC1	nC28	4542449	2.8
27)	54.48	GC1	nC29	4328406	2.7
29)	56.12	GC1	nC30	3283731	2.0
30)	57.70	GC1	nC31	2838244	1.7
31)	59.23	GC1	nC32	2232875	1.4
32)	60.73	GC1	nC33	1869091	1.1
33)	62.19	GC1	nC34	2078642	1.3
34)	63.75	GC1	nC35	1199417	0.7

## Saturated hydrocarbons

GC/FID detection HP-6890

Compound data and ratios



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: S2304\_8.D  
 Sample name: 35/11-10 2304.8 oil sat  
 Data File Path: K:\CAM\GEOKJEM\HPCHEM\MW95\DATA\SAS351110  
 Misc. info.:  
 Vial no.: 5  
 Method: MSD\_S\_D  
 Operator:  
 Date: Thu Oct 30 01:45:13 1997

Response curve  $y = ax$   
 Response factor equally 1.0

Ratios:	Area	Amount
Pr/nC17	0.55	0.55
Ph/nC18	0.38	0.38
(Pr/nC17)/(Ph/nC18)	1.44	1.44
Pr/Ph	1.68	1.68
nC17/(nC17+nC27)	0.71	0.69
CPI-1	1.07	1.07
CPI-2 (2*nC27/(nC26+nC27))	0.97	0.97

Title: Saturated HC (FID) and Biomarkers (MSD)

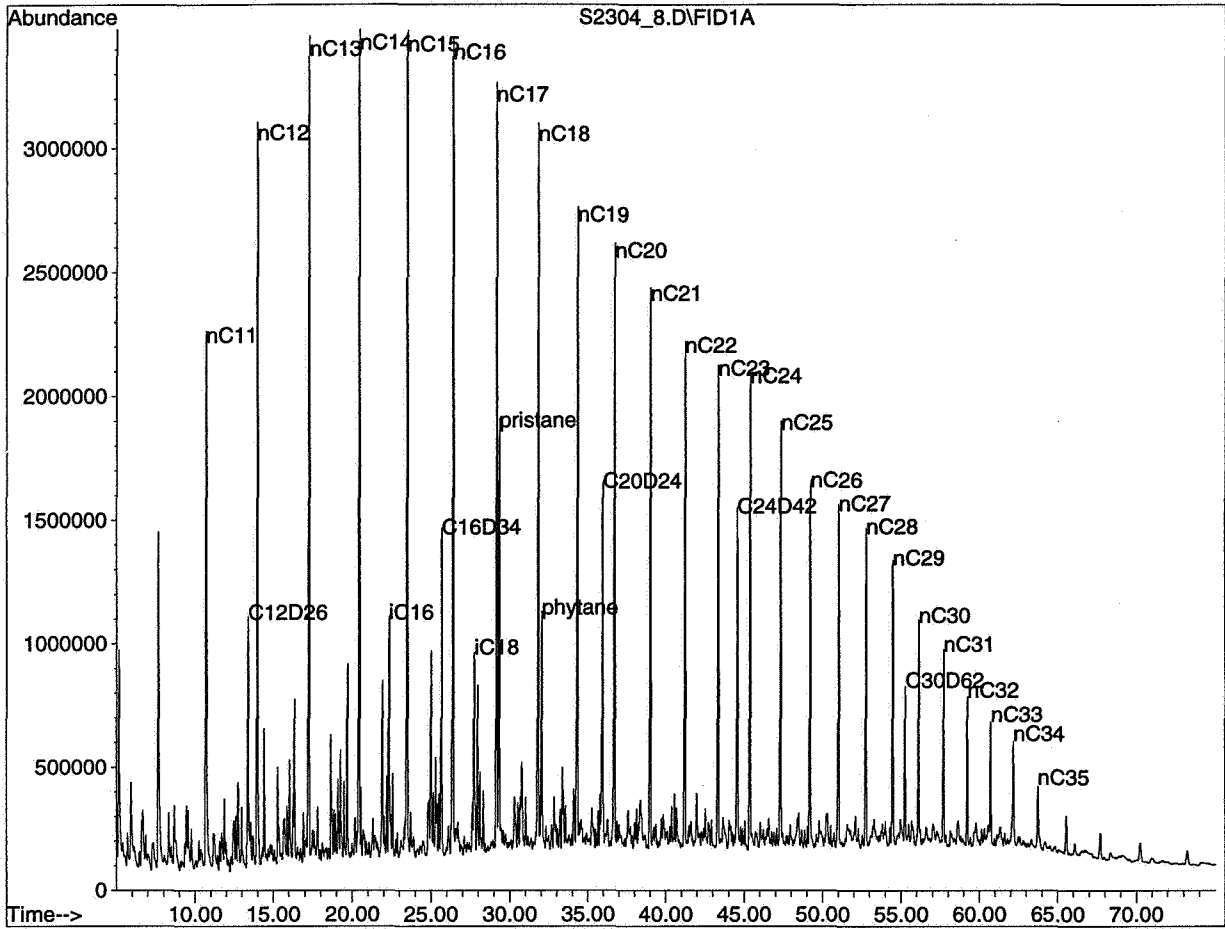
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2304\_8.D Name: 35/11-10 2304.8

Misc:

Method: MSD\_S\_D

.....Operator:

Date Reported: Thu Nov 06 14:03:00 1997



#	Rt.min.	Signal	Compound	Area	Amount
FID				ug/mg	
Internal standards (if added):					
1)	13.39	GC1	C12D26	5258737	3.7
6)	25.70	GC1	C16D34	5927845	3.7
11)	35.96	GC1	C20D24	6746922	3.6
19)	44.57	GC1	C24D42	6503478	3.7
28)	55.25	GC1	C30D62	2755418	1.6
2)	10.72	GC1	nC11	11161404	
3)	14.00	GC1	nC12	12084599	
4)	17.28	GC1	nC13	12365301	
5)	20.47	GC1	nC14	12241372	
7)	22.34	GC1	iC16	4897103	3.0
8)	23.52	GC1	nC15	12526882	7.8
9)	26.43	GC1	nC16	12072815	7.5
10)	27.76	GC1	iC18	4155814	2.6
12)	29.20	GC1	nC17	11893163	6.4
13)	29.36	GC1	pristane	9805998	5.3
14)	31.83	GC1	nC18	10160584	5.5
15)	32.05	GC1	phytane	4711493	2.5
16)	34.34	GC1	nC19	9552682	5.2
17)	36.74	GC1	nC20	8804962	4.8
18)	39.03	GC1	nC21	8247519	4.4
20)	41.24	GC1	nC22	7689135	4.4
21)	43.35	GC1	nC23	7521810	4.3
22)	45.38	GC1	nC24	7243852	4.1
23)	47.33	GC1	nC25	6551281	3.7
24)	49.21	GC1	nC26	5595655	3.2
25)	51.03	GC1	nC27	5139754	2.9
26)	52.78	GC1	nC28	4394033	2.5
27)	54.48	GC1	nC29	4343338	2.5
29)	56.11	GC1	nC30	3107535	1.8
30)	57.70	GC1	nC31	2898855	1.7
31)	59.24	GC1	nC32	2235812	1.3
32)	60.73	GC1	nC33	1871094	1.1
33)	62.18	GC1	nC34	2015688	1.2
34)	63.75	GC1	nC35	1179752	0.7

### Saturated hydrocarbons

GC/FID detection HP-6890

Compound data and ratios



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: S2679\_5.D  
 Sample name: 35/11-10 2679.5 oil sat  
 Data File Path: K:\CAM\GEOKJEM\HPCHEM\W95\DATA\SA351110\  
 Misc. info.:  
 Vial no.: 6  
 Method: MSD\_S\_D  
 Operator:  
 Date: Thu Oct 30 03:13:42 1997

Response curve y = ax  
 Response factor equally 1.0

Ratios:	Area	Amount
Pr/nC17	0.82	0.82
Ph/nC18	0.46	0.46
(Pr/nC17)/(Ph/nC18)	1.78	1.78
Pr/Ph	2.08	2.08
nC17/(nC17+nC27)	0.70	0.69
CPI-1	1.08	1.08
CPI-2 (2*nC27/(nC26+nC27))	0.96	0.96

Title: Saturated HC (FID) and Biomarkers (MSD)

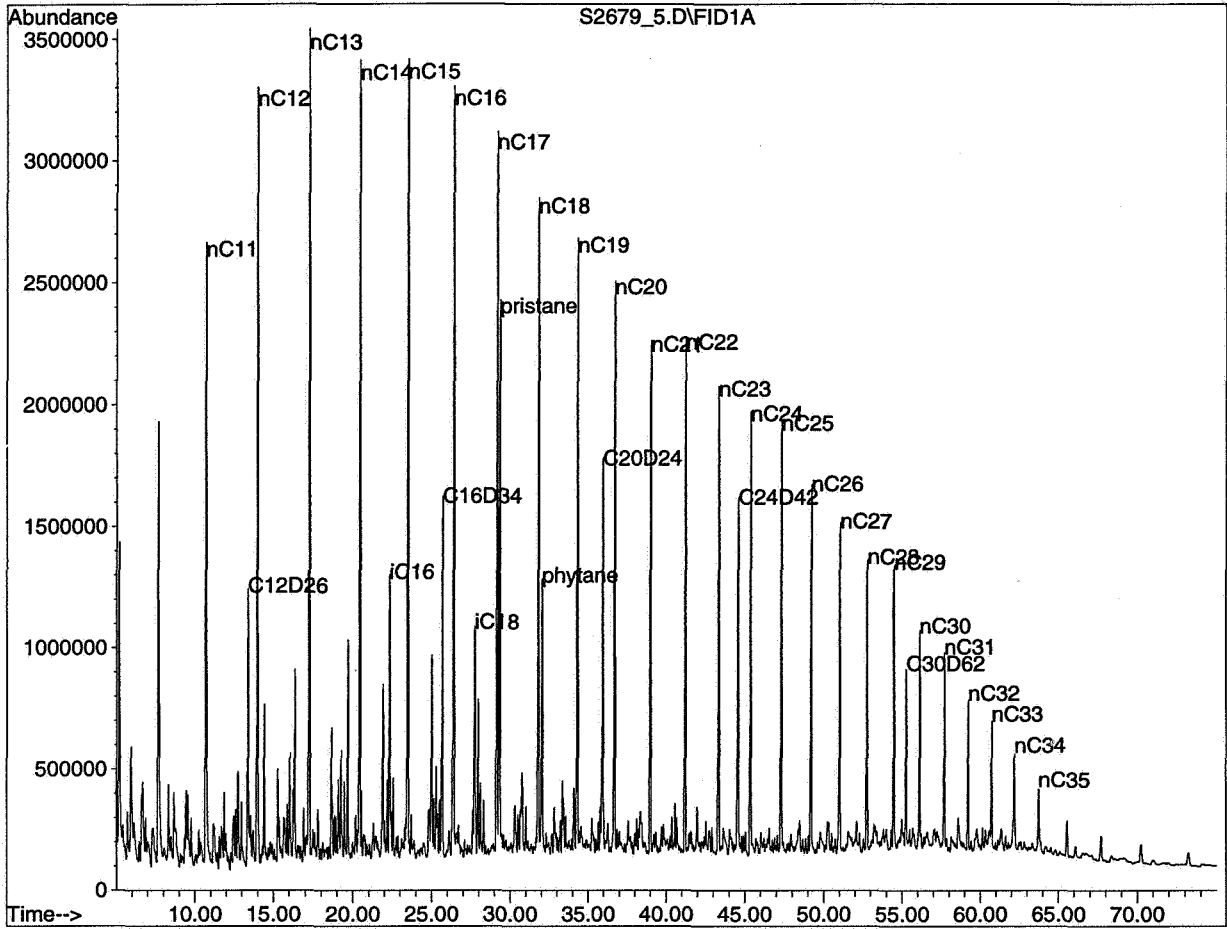
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2679\_5.D Name: 35/11-10 2679.5

Misc:

Method: MSD\_S\_D

.....Operator:

Date Reported: Thu Nov 06 13:27:04 1997



#	Rt.min.	Signal	Compound	Area	Amount
FID					ug/mg
Internal standards (if added):					
1)	13.38	GC1	C12D26	3633453	4.0
6)	25.69	GC1	C16D34	4557416	4.0
11)	35.95	GC1	C20D24	5055080	4.0
19)	44.56	GC1	C24D42	4912167	4.0
28)	55.23	GC1	C30D62	2102542	1.7
2)	10.70	GC1	nC11	6165167	
3)	13.97	GC1	nC12	6636711	
4)	17.25	GC1	nC13	6660884	
5)	20.44	GC1	nC14	6825831	
7)	22.33	GC1	iC16	2473822	2.2
8)	23.49	GC1	nC15	6918939	6.1
9)	26.40	GC1	nC16	6469972	5.7
10)	27.75	GC1	iC18	2144308	1.9
12)	29.16	GC1	nC17	6033525	4.8
13)	29.31	GC1	pristane	3440158	2.7
14)	31.79	GC1	nC18	5004405	4.0
15)	32.03	GC1	phytane	2471329	2.0
16)	34.31	GC1	nC19	4558847	3.6
17)	36.71	GC1	nC20	4098868	3.2
18)	39.00	GC1	nC21	3639575	2.9
20)	41.21	GC1	nC22	3322857	2.7
21)	43.31	GC1	nC23	3058226	2.5
22)	45.35	GC1	nC24	2879637	2.3
23)	47.30	GC1	nC25	2517711	2.1
24)	49.18	GC1	nC26	2109099	1.7
25)	51.00	GC1	nC27	1730369	1.4
26)	52.75	GC1	nC28	1508874	1.2
27)	54.45	GC1	nC29	1380453	1.1
29)	56.09	GC1	nC30	1118303	0.9
30)	57.68	GC1	nC31	955828	0.8
31)	59.22	GC1	nC32	855591	0.7
32)	60.71	GC1	nC33	692144	0.6
33)	62.17	GC1	nC34	741493	0.6
34)	63.73	GC1	nC35	433032	0.4

## Saturated hydrocarbons

GC/FID detection HP-6890

Compound data and ratios



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: NSO1\_S02.D  
 Sample name: nso1 ref. sample SAT  
 Data File Path: K:\CAM\GEOKJEM\HPCHEM\W95\DATA\SA351110\  
 Misc. info.:  
  
 Vial no.: 1  
 Method: MSD\_S\_D  
 Operator:  
 Date: Wed Oct 29 21:19:47 1997  
  
 Response curve  $y = ax$   
 Response factor equally 1.0

Ratios:	Area	Amount
Pr/nC17	0.57	0.57
Ph/nC18	0.49	0.49
(Pr/nC17)/(Ph/nC18)	1.15	1.15
Pr/Ph	1.39	1.39
nC17/(nC17+nC27)	0.78	0.77
CPI-1	1.02	1.02
CPI-2 (2*nC27/(nC26+nC27))	0.90	0.90

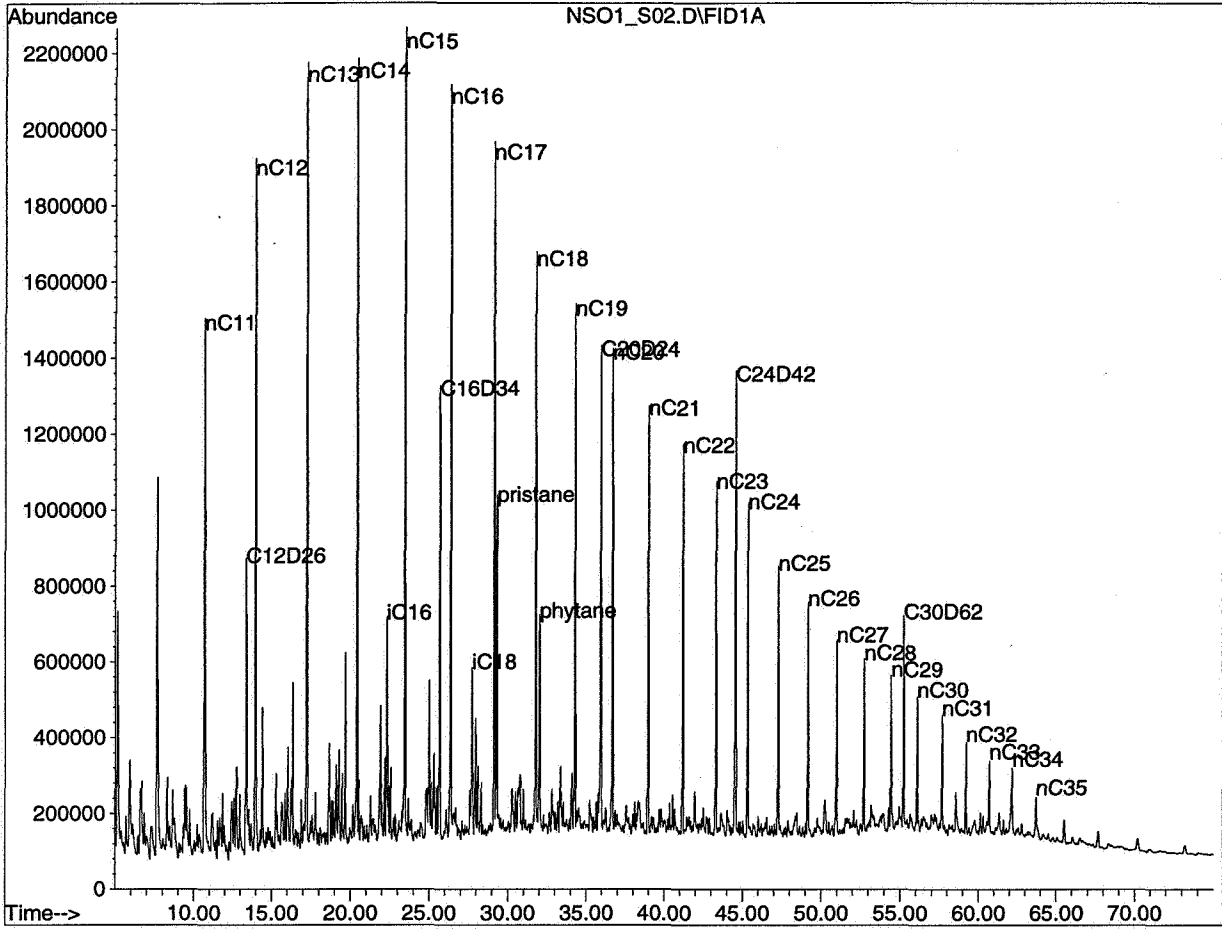
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\NSO1\_S02.D Name: nso1 ref. sample

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 17:03:16 1997



#	Rt.min.	Signal	Compound	Area	Amount
FID					ug/mg
Internal standards (if added):					
1)	13.39	GC1	C12D26	5443919	4.0
6)	25.70	GC1	C16D34	6249644	4.0
11)	35.96	GC1	C20D24	6163947	4.0
19)	44.57	GC1	C24D42	6676962	4.0
28)	55.25	GC1	C30D62	2909077	1.7
2)	10.71	GC1	nC11	9584933	
3)	13.99	GC1	nC12	9813506	
4)	17.27	GC1	nC13	9387919	
5)	20.46	GC1	nC14	9277167	
7)	22.34	GC1	iC16	3405416	2.2
8)	23.51	GC1	nC15	9510683	6.1
9)	26.41	GC1	nC16	8777757	5.6
10)	27.75	GC1	iC18	2973869	1.9
12)	29.18	GC1	nC17	8325978	5.4
13)	29.33	GC1	pristane	4725988	3.1
14)	31.81	GC1	nC18	6930552	4.5
15)	32.04	GC1	phytane	3355043	2.2
16)	34.33	GC1	nC19	6242022	4.1
17)	36.72	GC1	nC20	5590893	3.6
18)	39.02	GC1	nC21	5037447	3.3
20)	41.22	GC1	nC22	4575475	2.7
21)	43.33	GC1	nC23	4064565	2.4
22)	45.36	GC1	nC24	4054070	2.4
23)	47.31	GC1	nC25	3459996	2.1
24)	49.19	GC1	nC26	2836409	1.7
25)	51.01	GC1	nC27	2393526	1.4
26)	52.76	GC1	nC28	2037620	1.2
27)	54.46	GC1	nC29	1977256	1.2
29)	56.10	GC1	nC30	1530826	0.9
30)	57.69	GC1	nC31	1355760	0.8
31)	59.23	GC1	nC32	1159448	0.7
32)	60.72	GC1	nC33	968095	0.6
33)	62.17	GC1	nC34	1157755	0.7
34)	63.75	GC1	nC35	1006116	0.6

### Saturated hydrocarbons

GC/FID detection HP-6890

Compound data and ratios



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: NSO1\_10S.D  
 Sample name: nso1 ref.sample sat  
 Data File Path: K:\CAM\GEOKJEM\HPCHEM\W95\DATA\SA351110V  
 Misc. info.:  
 Vial no.: 1  
 Method: MSD\_S\_D  
 Operator:  
 Date: Thu Oct 30 09:07:36 1997  
 Response curve y = ax  
 Response factor equally 1.0

Ratios:	Area	Amount
Pr/nC17	0.57	0.57
Ph/nC18	0.48	0.48
(Pr/nC17)/(Ph/nC18)	1.17	1.17
Pr/Ph	1.41	1.41
nC17/(nC17+nC27)	0.78	0.79
CPI-1	1.05	1.05
CPI-2 (2*nC27/(nC26+nC27))	0.92	0.92

Title: Saturated HC (FID) and Biomarkers (MSD)

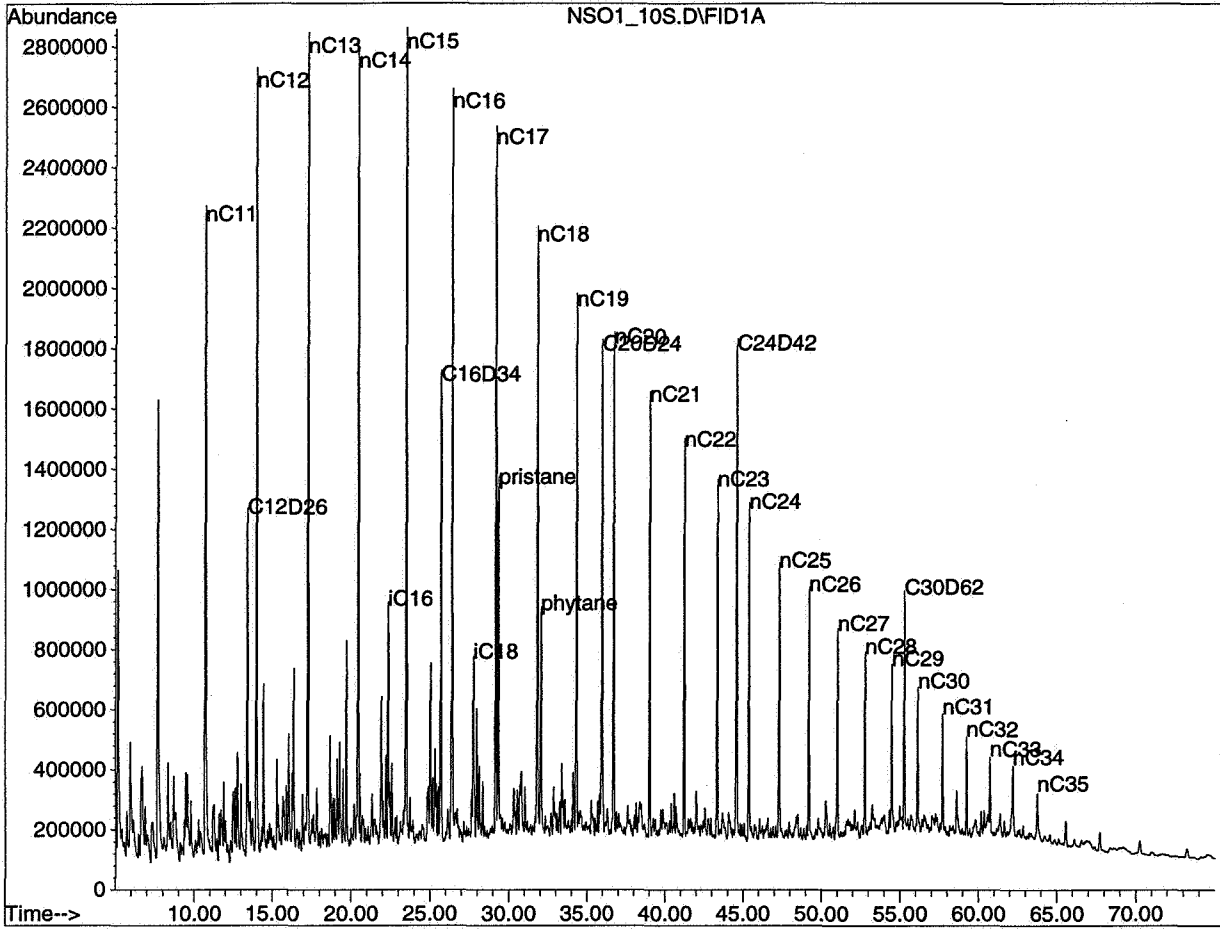
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\NSO1\_10S.D Name: ns01 ref.sample

Misc:

Method: MSD\_S\_D

.....Operator:

Date Reported: Tue Nov 04 17:07:05 1997



## **Appendix 3:**

### **GC/MS, SAT biomarkers reports and fragmentograms**

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
Internal standard (if added):						
1)	46.10	217.2		24baa	2143	30
<b>Diterpanes:</b>						
2)	33.75	191.2	s1	19/3	726	8
3)	35.74	191.2	s1	20/3	393	4
4)	37.78	191.2	s1	21/3	464	5
5)	41.76	191.2	s1	23/3	896	9
6)	42.88	191.2	s1	24/3	487	5
7)	45.15	191.2	s1	25/3	252	3
8)	46.68	191.2	s1	24/4	649	7
9)	46.79	191.2	s1	26/3R	221	2
10)	46.93	191.2	s1	26/3S	218	2
11)	50.45	191.2	s1	28/3R	250	3
12)	50.70	191.2	s1	28/3S	230	2
13)	51.49	191.2	s1	29/3R	425	5
14)	51.79	191.2	s1	29/3S	324	3
<b>Triterpanes:</b>						
15)	52.64	191.2	s1	27Ts	2314	25
16)	52.88	177.2	s1	25nor28ab	776	8
17)	53.31	191.2	s1	27Tm	987	10
18)	53.69	177.2	s1	25nor29ab	227	2
19)	53.76	191.2	s1	27b	318	3
20)	54.86	191.2	s1	28ab	1187	13
21)	55.09	177.2	s1	25nor30ab	146	2
22)	55.58	191.2	s1	29ab	2939	31
23)	55.68	191.2	s1	29Ts	2128	23
24)	55.93	191.2	s1	30D	2192	23
25)	56.27	191.2	s1	29ba	370	4
26)	56.95	191.2	s2	30ab	8774	60
27)	57.29	191.2	s1	30D13	571	6
28)	57.57	191.2	s2	30ba	817	6
29)	58.54	191.2	s1	31abS	3401	36
30)	58.73	191.2	s1	31abR	2506	27
31)	59.07	191.2	s1	30G	445	5
32)	59.27	191.2	s1	31ba	407	4
33)	59.77	191.2	s1	32abS	2377	25
34)	60.04	191.2	s1	32abR	1727	18
35)	61.21	191.2	s1	33abS	1897	20
36)	61.57	191.2	s1	33abR	1219	13
37)	62.72	191.2	s1	34abS	1157	12
38)	63.21	191.2	s1	34abR	708	7
39)	64.43	191.2	s1	35abS	784	8
40)	65.14	191.2	s1	35abR	498	5

## Saturated biomarkers

GC/MS detection HP-6890/5973

### Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: S1896\_5.D  
 Sample name: 35/11-10 1896.5 oil sat  
 Data File Path: K:\CAM\GEOK\JEM\HPCHEM\W95\DATA\ISA351110\  
 Misc. info.:  
 Vial no.: 3  
 Method: MSD\_S\_D  
 Operator:  
 Date: Wed Oct 29 22:48:18 1997  
 Response curve y = ax  
 Response factor groups: s1...s3, responses as defined in method

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
<b>Steranes:</b>						
41)	38.28	217.2	s3	21aa	943	14
42)	39.95	217.2	s3	21bb	986	15
43)	40.06	217.2	s3	22aa	898	14
44)	42.29	217.2	s3	22bb	535	8
45)	48.64	217.2	s3	27dbS	2653	41
46)	49.26	217.2	s3	27dbR	1491	23
47)	51.62	218.2	s3	27bbR	2032	31
48)	51.76	218.2	s3	27bbS	1258	19
49)	52.16	217.2	s3	27aaR	661	10
50)	53.36	218.2	s3	28bbR	1048	16
51)	53.51	218.2	s3	28bbS	1323	20
52)	54.49	217.2	s3	29aaS	685	10
53)	54.79	218.2	s3	29bbR	1721	26
54)	54.89	218.2	s3	29bbS	1673	26
55)	55.49	217.2	s3	29aaR	698	11
56)	55.96	218.2	s3	30bbR	523	8
57)	56.02	218.2	s3	30bbS	407	6

## Saturated biomarkers

GC/MS detection HP-6890/5973

Ratios, from heights and amounts



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: S1896\_5.D  
Sample name: 35/11-10 1896.5 oil sat  
Data File Path: K:\CAM\GEOKJEM\HPCHEM\W95\DATA\SA351110A  
Misc. info.:

Vial no.: 3  
Method: MSD\_S\_D  
Operator:  
Date: Wed Oct 29 22:48:18 1997

### Terpane ratios, heights and amounts

		Height	Amount
$100 \cdot ((\text{sum}20-25)/3 + 26/3(R+S)) / ((\text{sum}20-25)/3 + 26/3(R+S) + 27(Ts+Tm) + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%Tri	8	9
$100 \cdot 20/3 / ((\text{sum}20-25)/3 + 26/3(R+S))$	%20/3	13	13
$100 \cdot 23/3 / (23/3 + 24/3 + 25/3)$	%23/3	55	55
$100 \cdot 24/4 / (24/4 + 24/3 + 25/3)$	%24/4	47	47
$100 \cdot Ts / (Ts + Tm)$	%27Ts	70	70
$100 \cdot 28ab / (28ab + 30ab)$	%28ab	12	17
$100 \cdot 29Ts / (29Ts + 29ab)$	%29Ts	42	42
$100 \cdot 25nor30ab / (25nor30ab + 30ab)$	%25nor30ab	2	3
$100 \cdot 29ab / (29ab + 30ab)$	%29ab	25	34
$100 \cdot 30ba / (30ba + 30ab)$	%30ba	9	9
$100 \cdot 30D / (30D + 30ab)$	%30D	20	28
$100 \cdot 30G / (30G + 30ab)$	%30G	5	7
$100 \cdot 32abS / (32ab(S+R))$	%32abS	58	58
$100 \cdot 35ab(S+R) / (34-35ab(S+R))$	%35ab	41	41
$100 \cdot (27Ts + 27Tm) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%27HOP	10	11
$100 \cdot (28ab) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%28HOP	4	4
$100 \cdot (29ab+ba) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%29HOP	10	11
$100 \cdot (30ab+ba) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%30HOP	28	20
$100 \cdot 31ab(S+R) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%31HOP	18	20
$100 \cdot 32ab(S+R) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%32HOP	12	14
$100 \cdot 33ab(S+R) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%33HOP	9	10
$100 \cdot 34ab(S+R) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%34HOP	6	6
$100 \cdot 35ab(S+R) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%35HOP	4	4

### Sterane ratios

$100 \cdot (21+22)bb / ((21+22)bb + (27+28+29+30)bb(R+S))$	%Preg	13	13
$100 \cdot 29aaS / 29aa(R+S)$	%29aaS	50	50
$100 \cdot 29bb(R+S) / (29bb(R+S) + 29aa(S+R))$	%29bb	71	71
$100 \cdot 27db(S+R) / (27db(S+R) + 27bb(R+S))$	%27dia	56	56
$100 \cdot 27bb(R+S) / (27+28+29+30)bb(R+S)$	%27STER	33	33
$100 \cdot 28bb(R+S) / (27+28+29+30)bb(R+S)$	%28STER	24	24
$100 \cdot 29bb(R+S) / (27+28+29+30)bb(R+S)$	%29STER	34	34
$100 \cdot 30bb(R+S) / (27+28+29+30)bb(R+S)$	%30STER	9	9

Title: Saturated HC (FID) and Biomarkers (MSD)

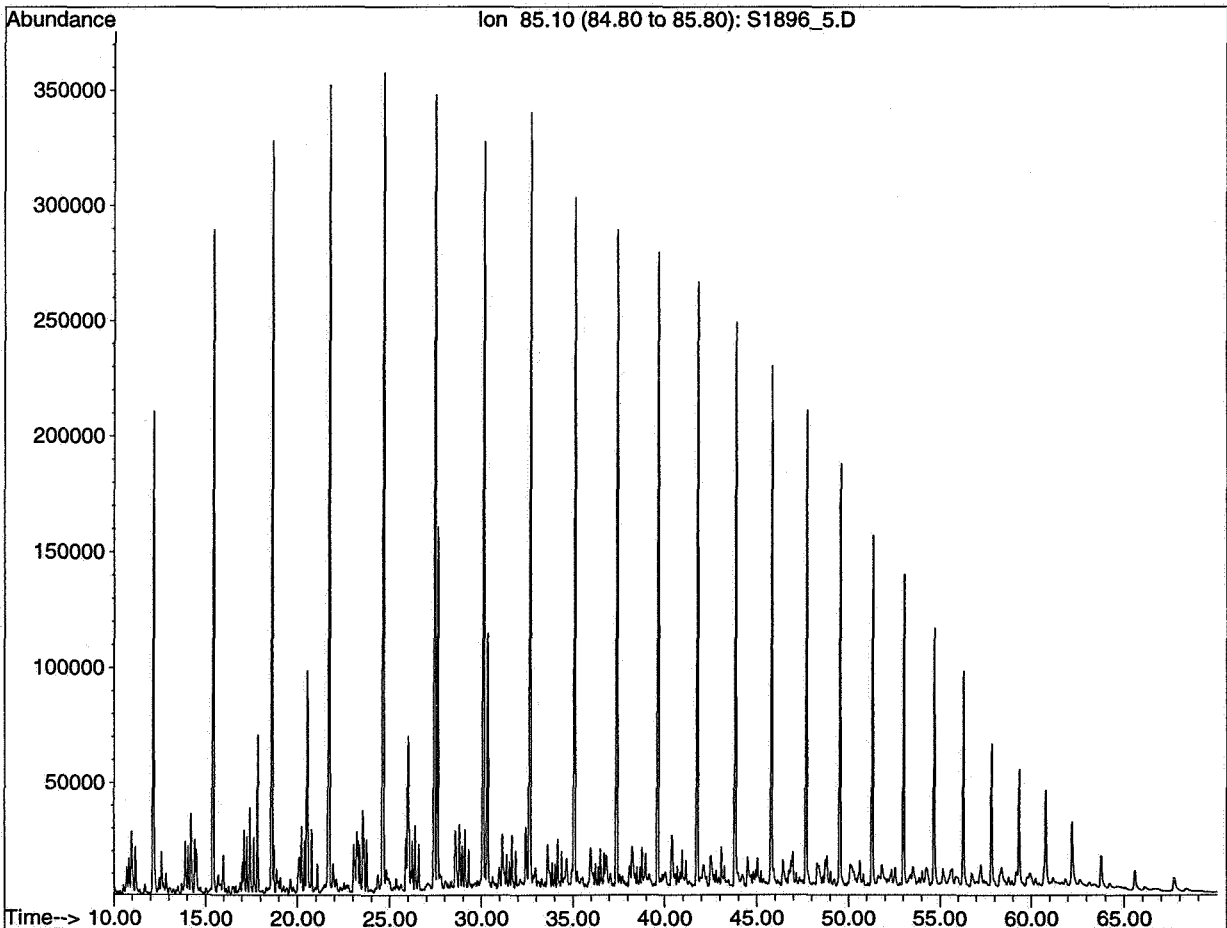
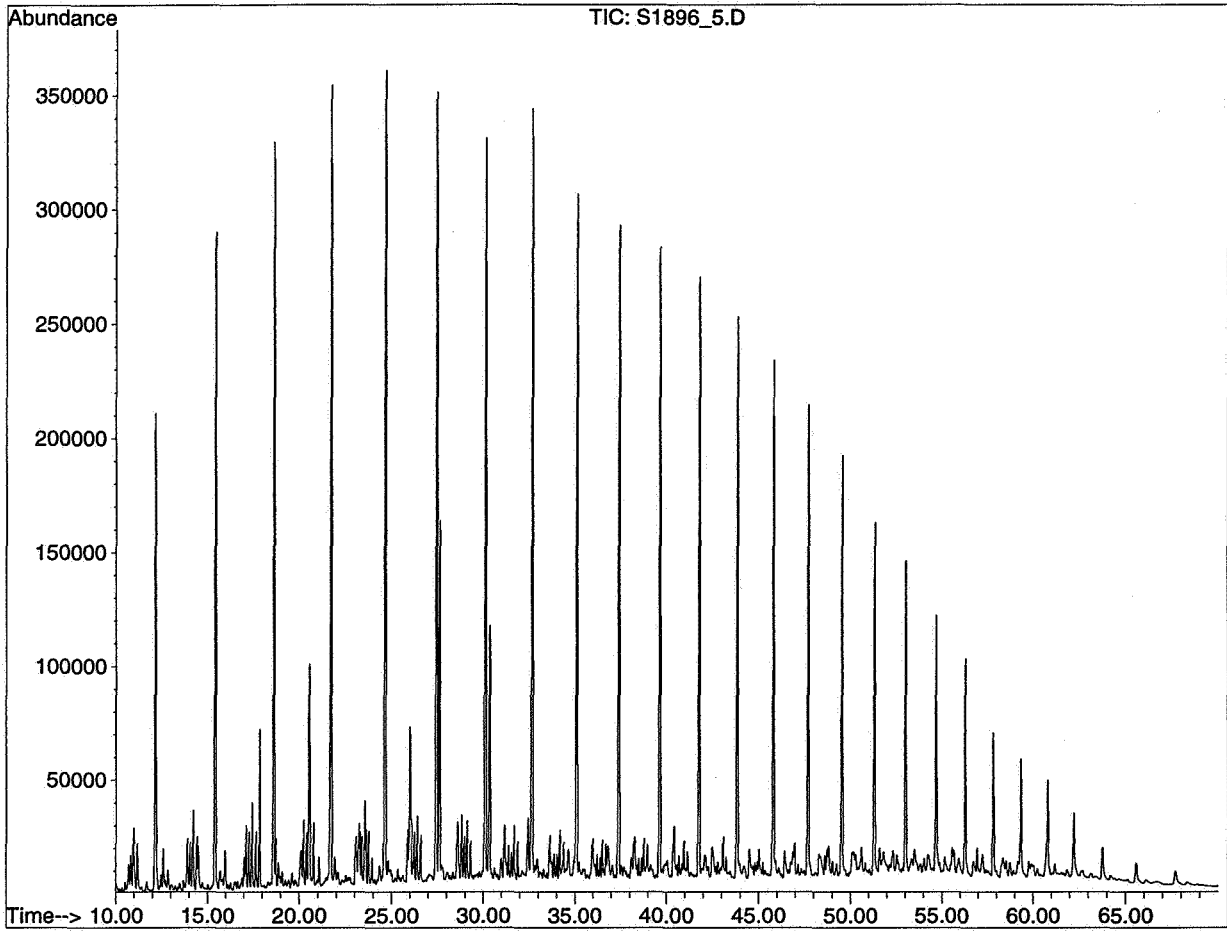
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S1896\_5.D Name: 35/11-10 1896.5

Misc:

Method: MSD\_S\_D

.....Operator:

Date Reported: Tue Nov 04 10:39:28 1997



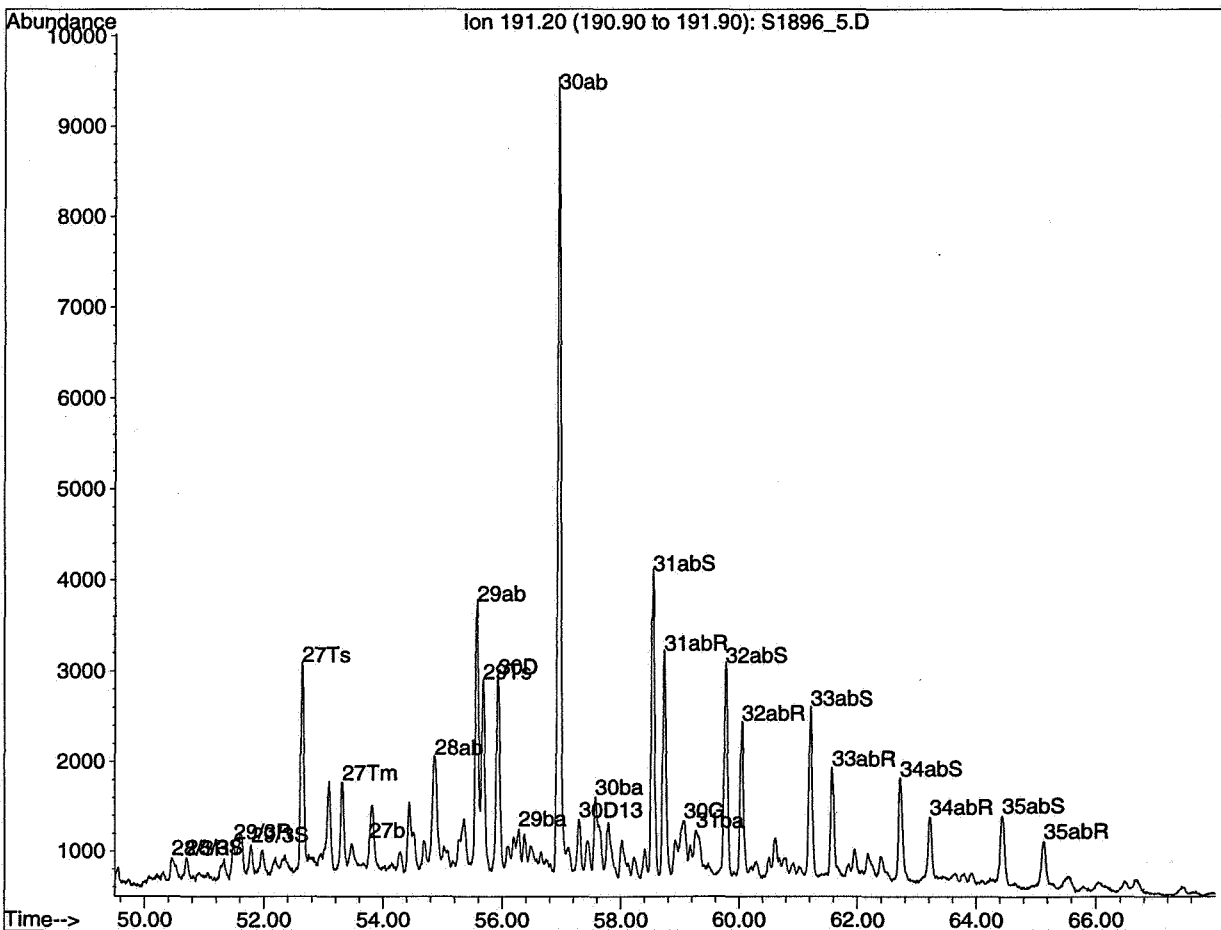
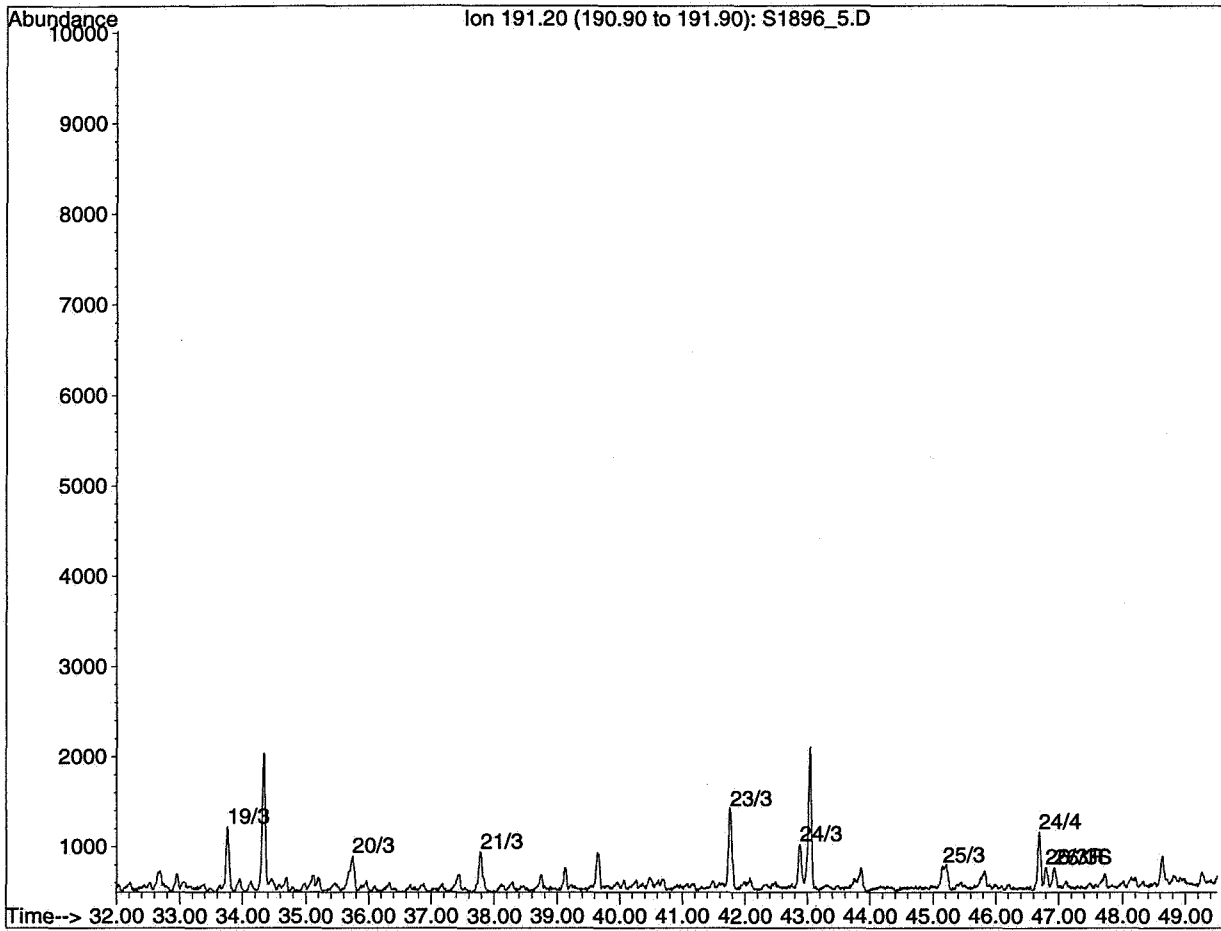
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Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:39:32 1997



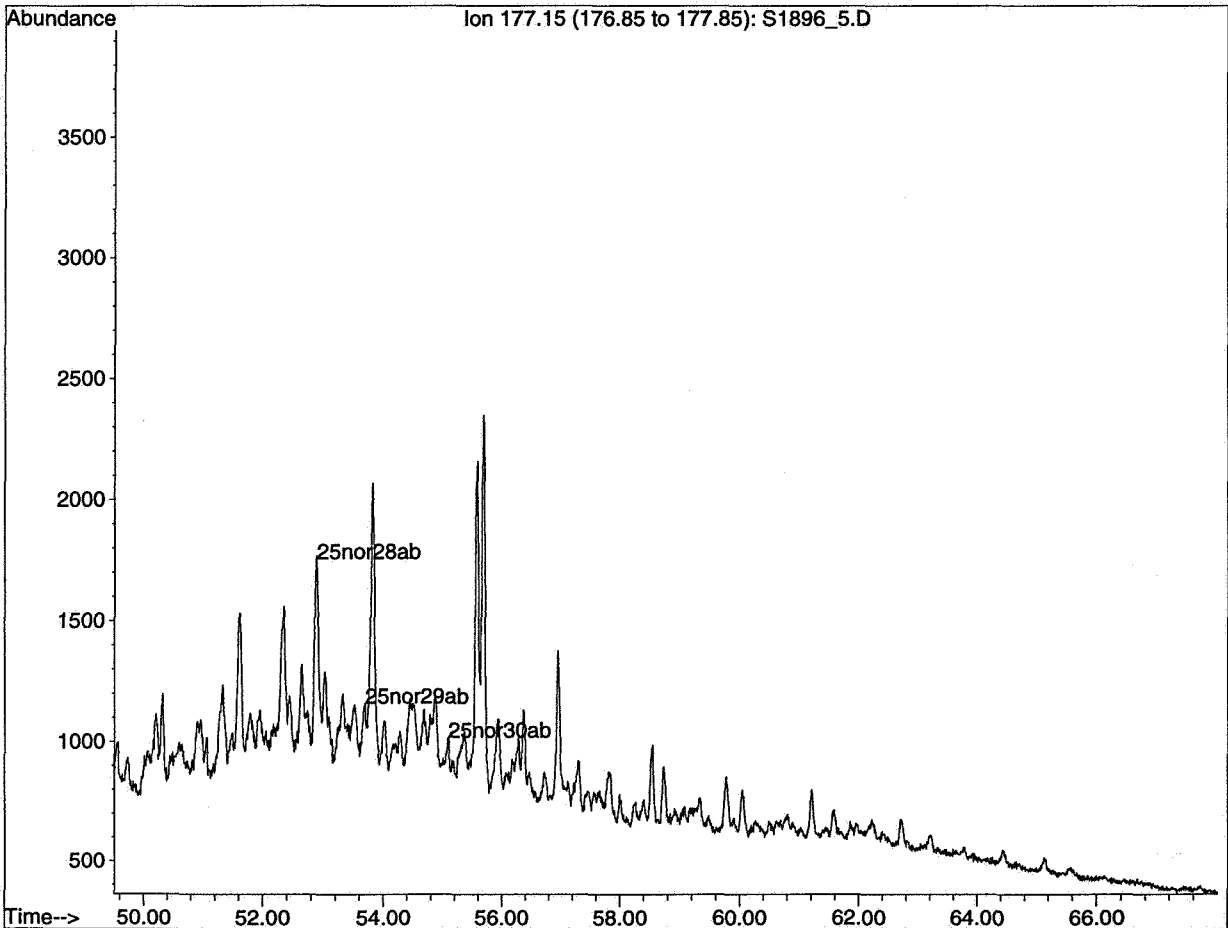
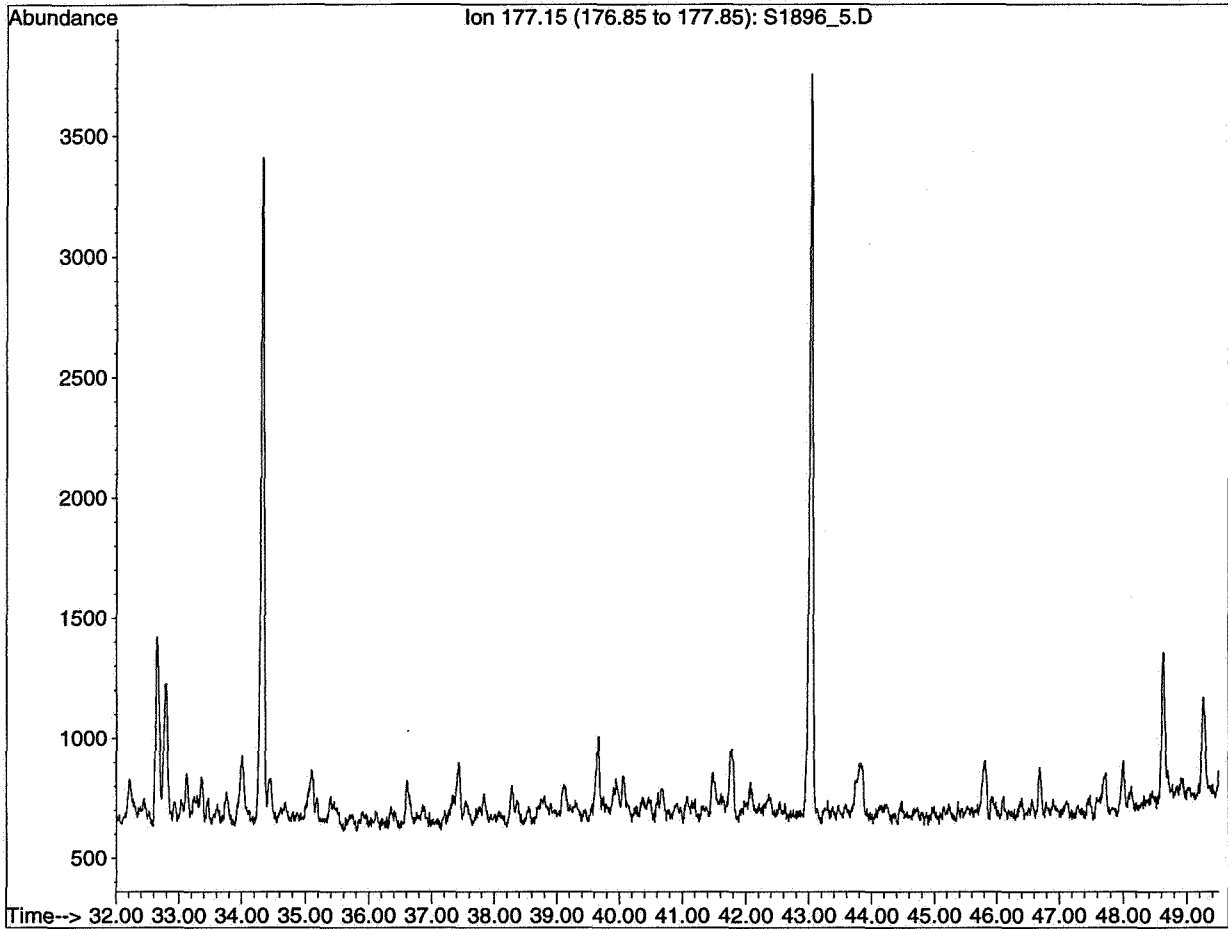
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S1896\_5.D Name: 35/11-10 1896.5

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:39:46 1997



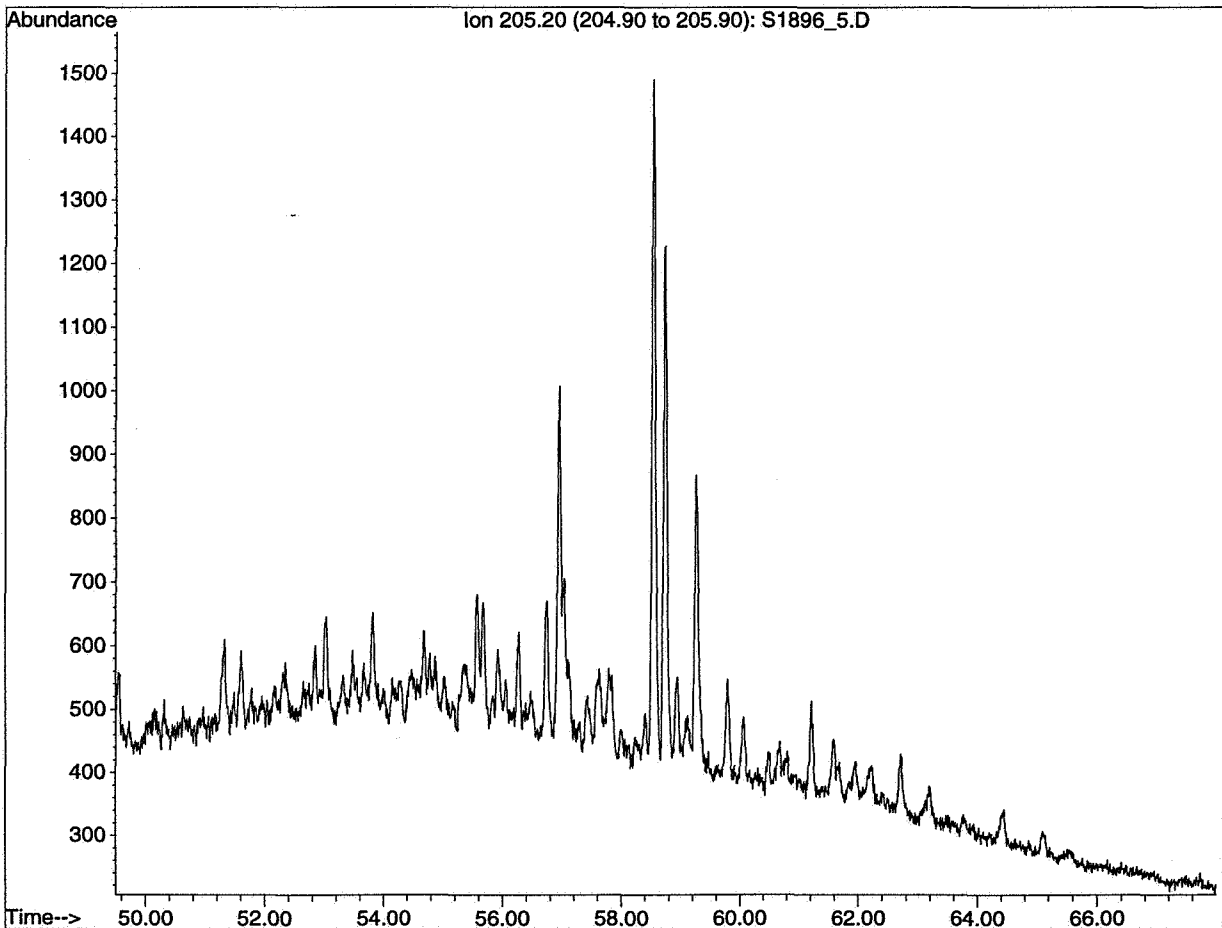
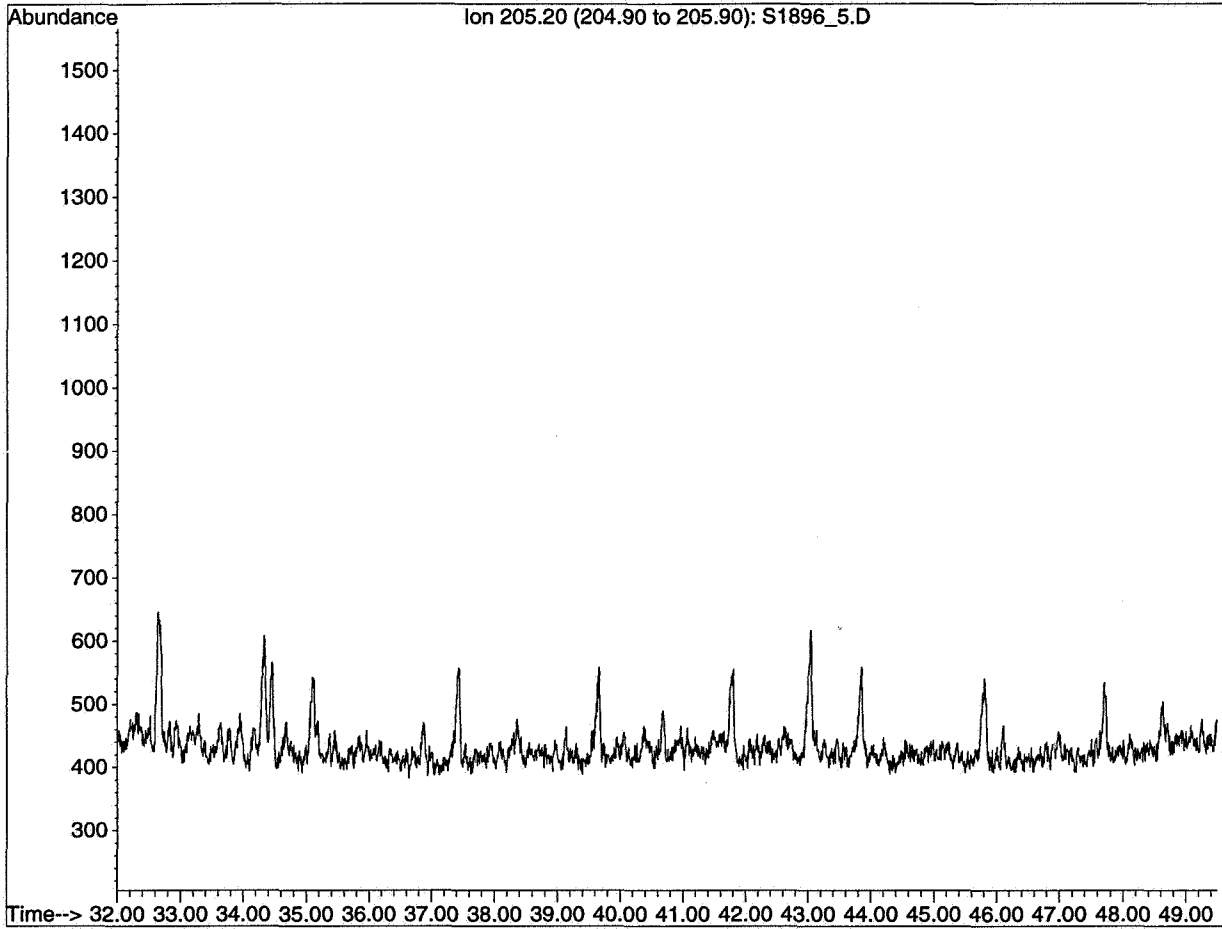
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S1896\_5.D Name: 35/11-10 1896.5

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:39:53 1997



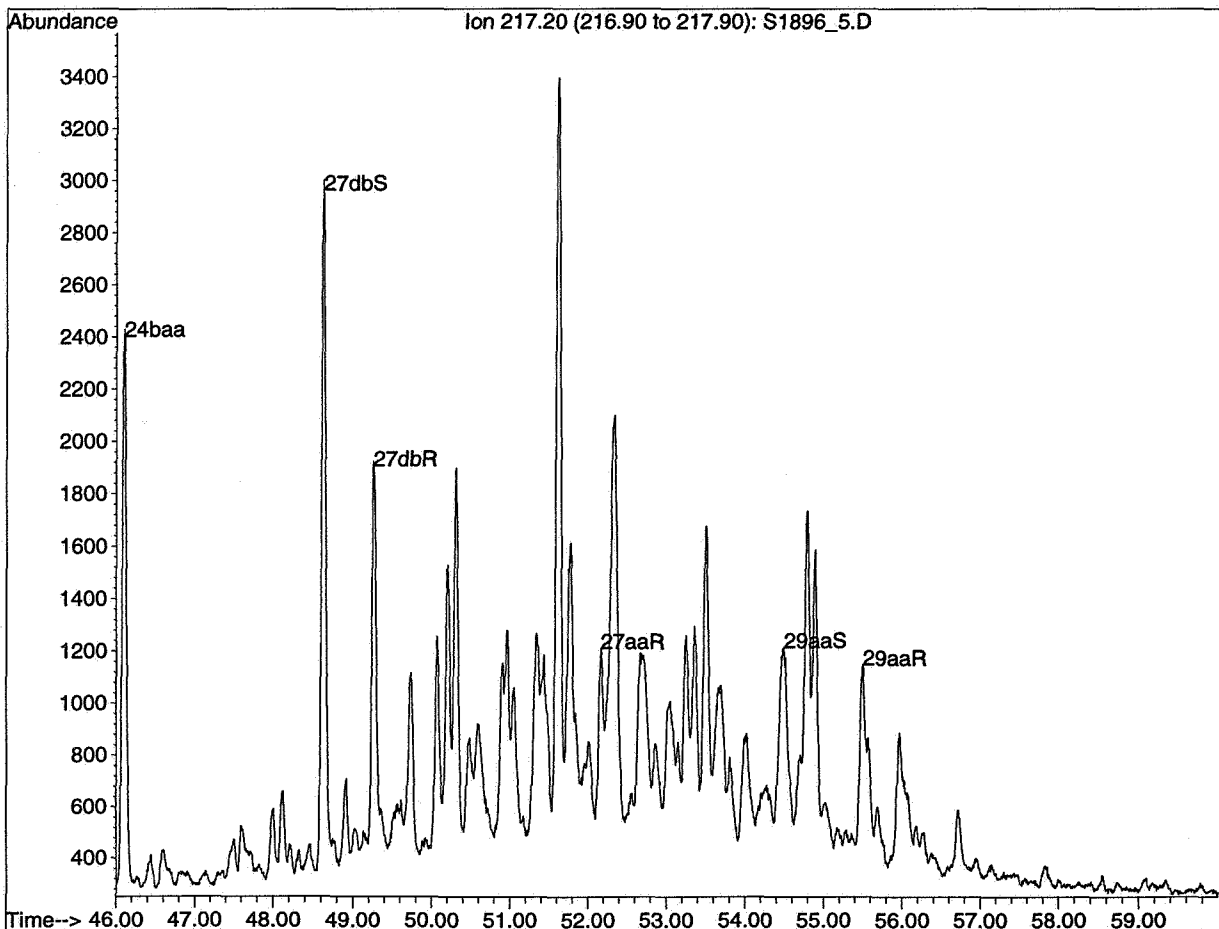
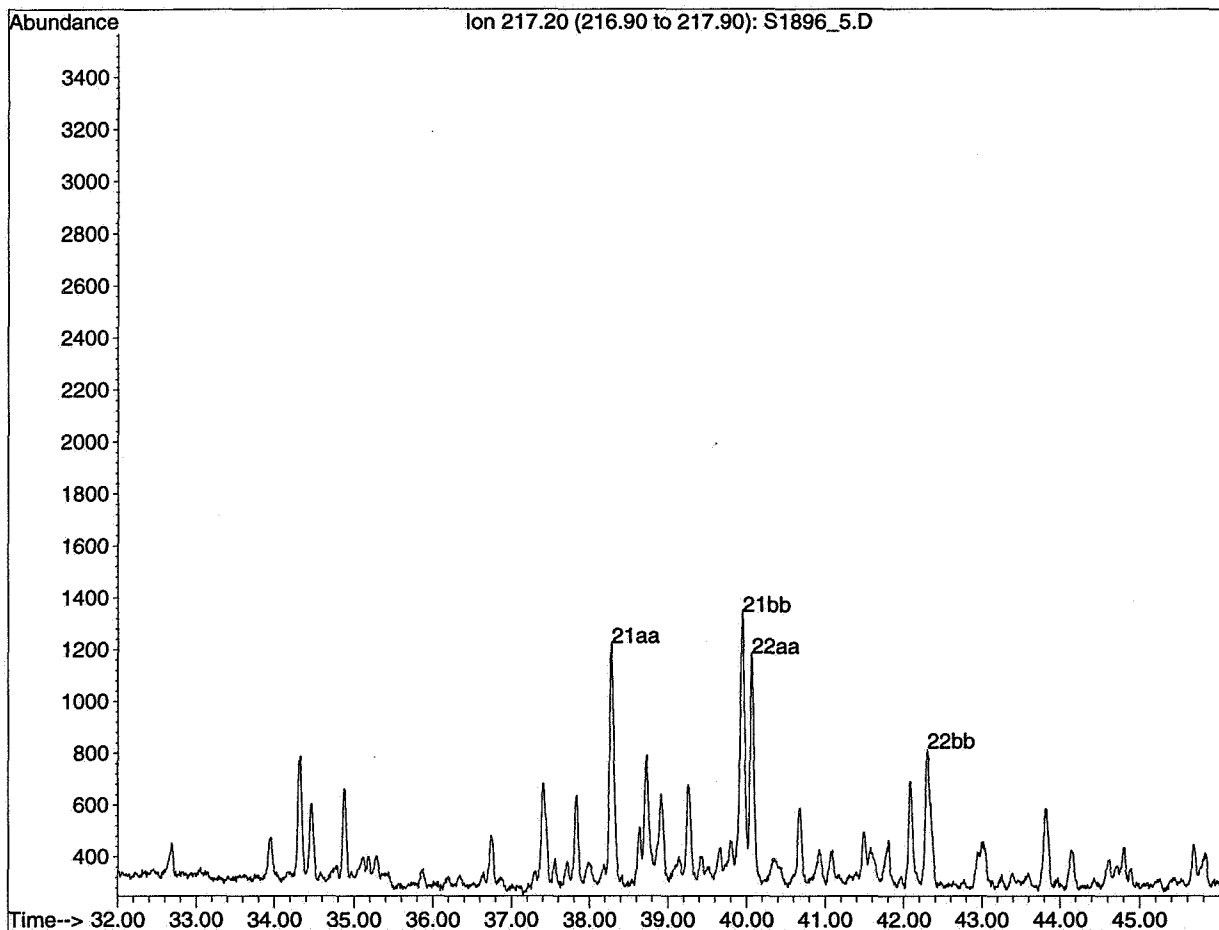
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S1896\_5.D Name: 35/11-10 1896.5

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:39:59 1997



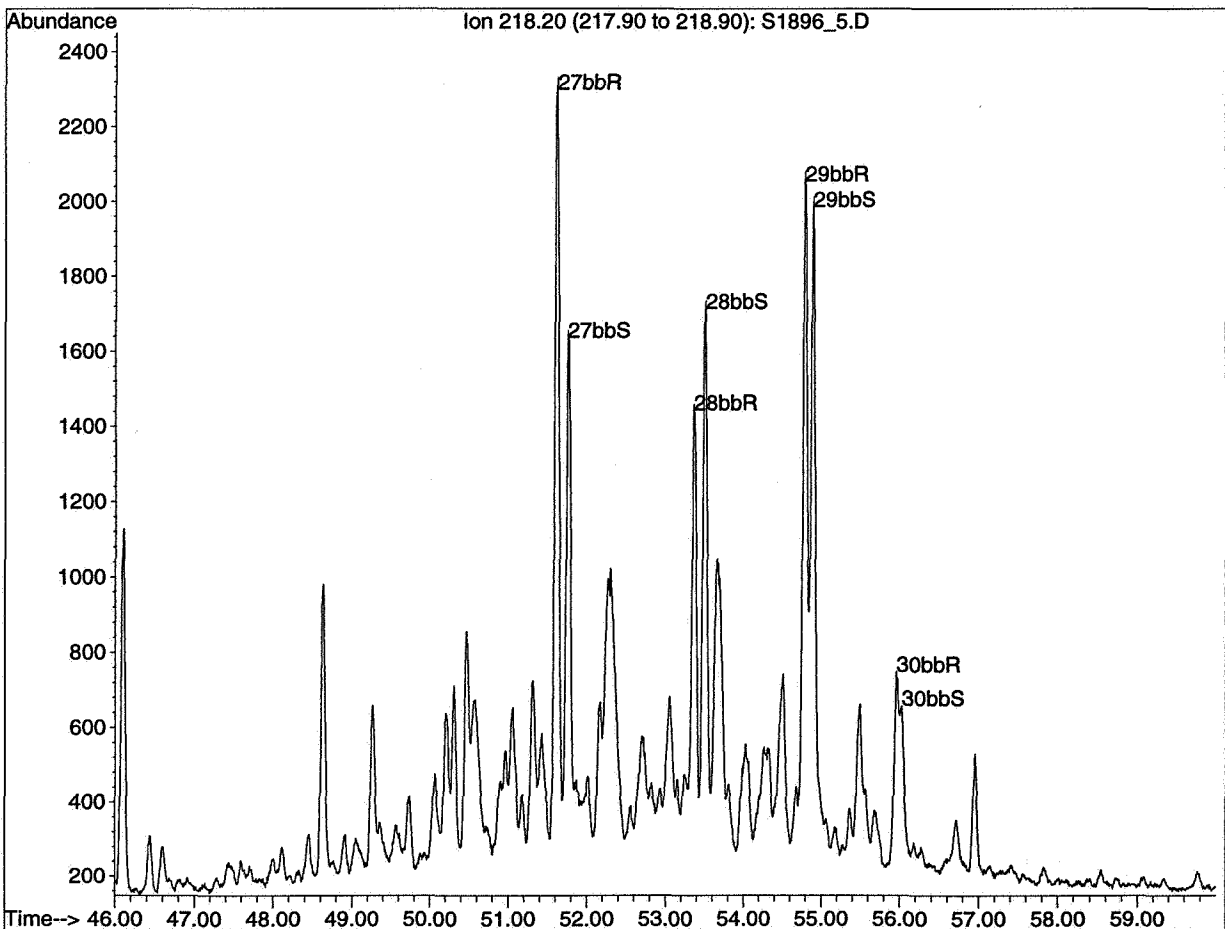
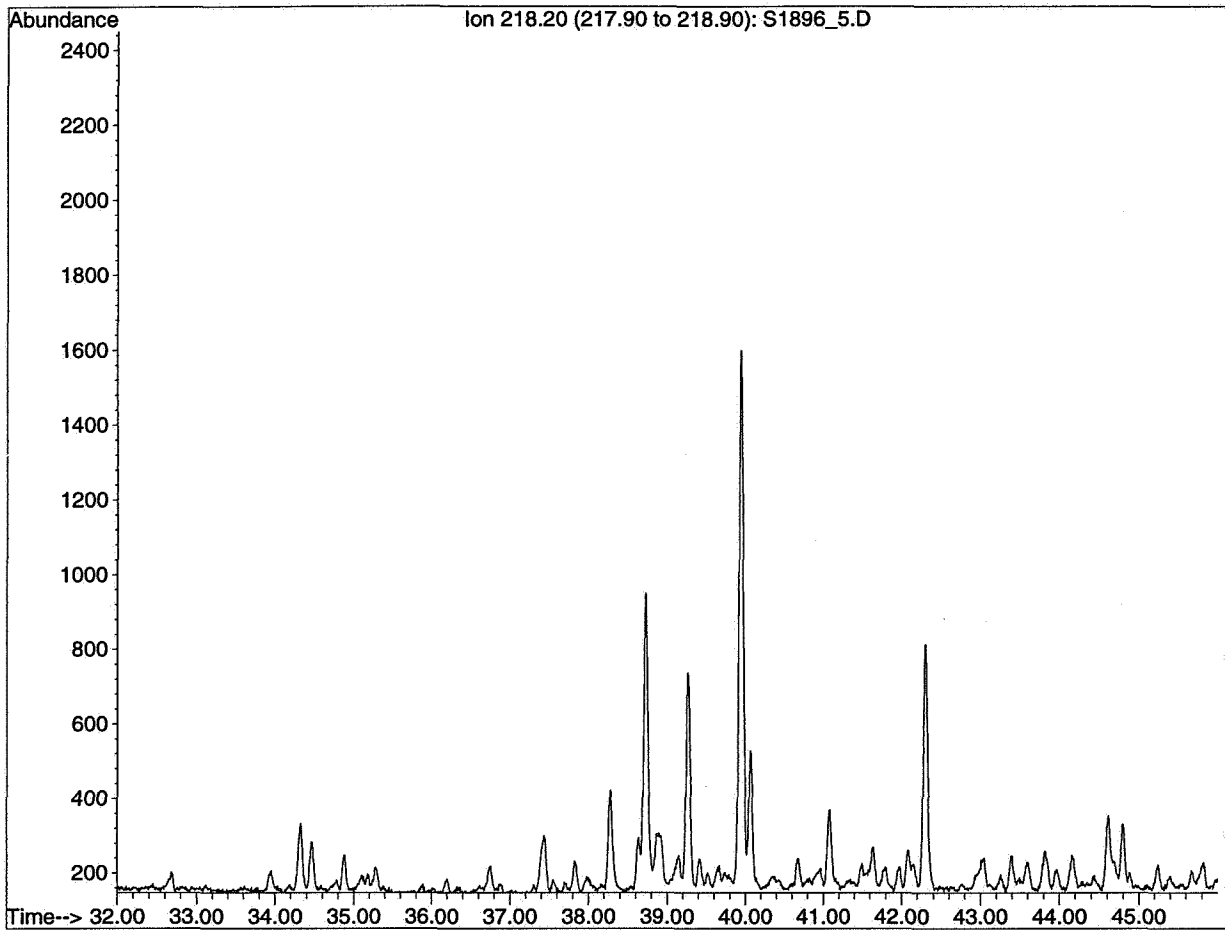
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S1896\_5.D Name: 35/11-10 1896.5

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:40:07 1997



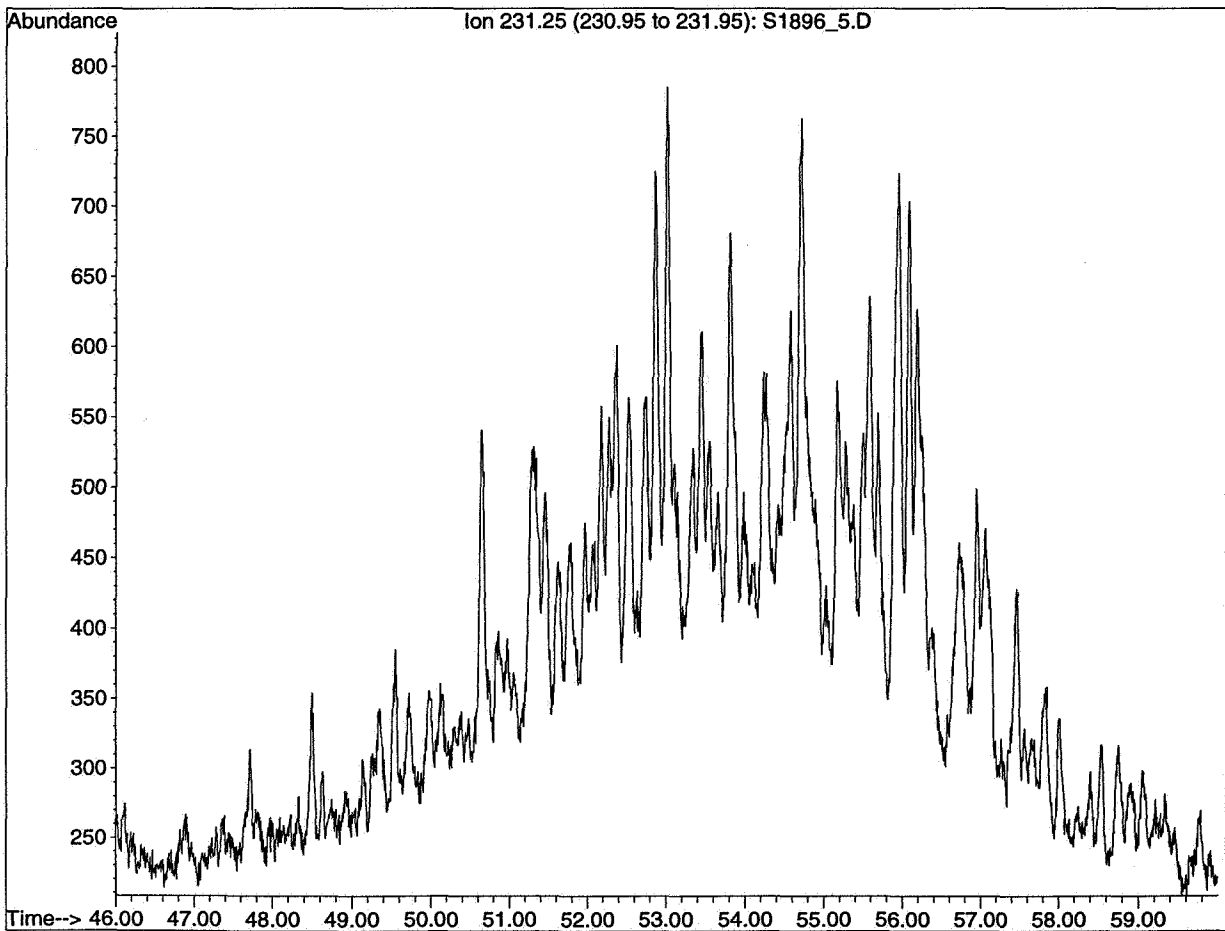
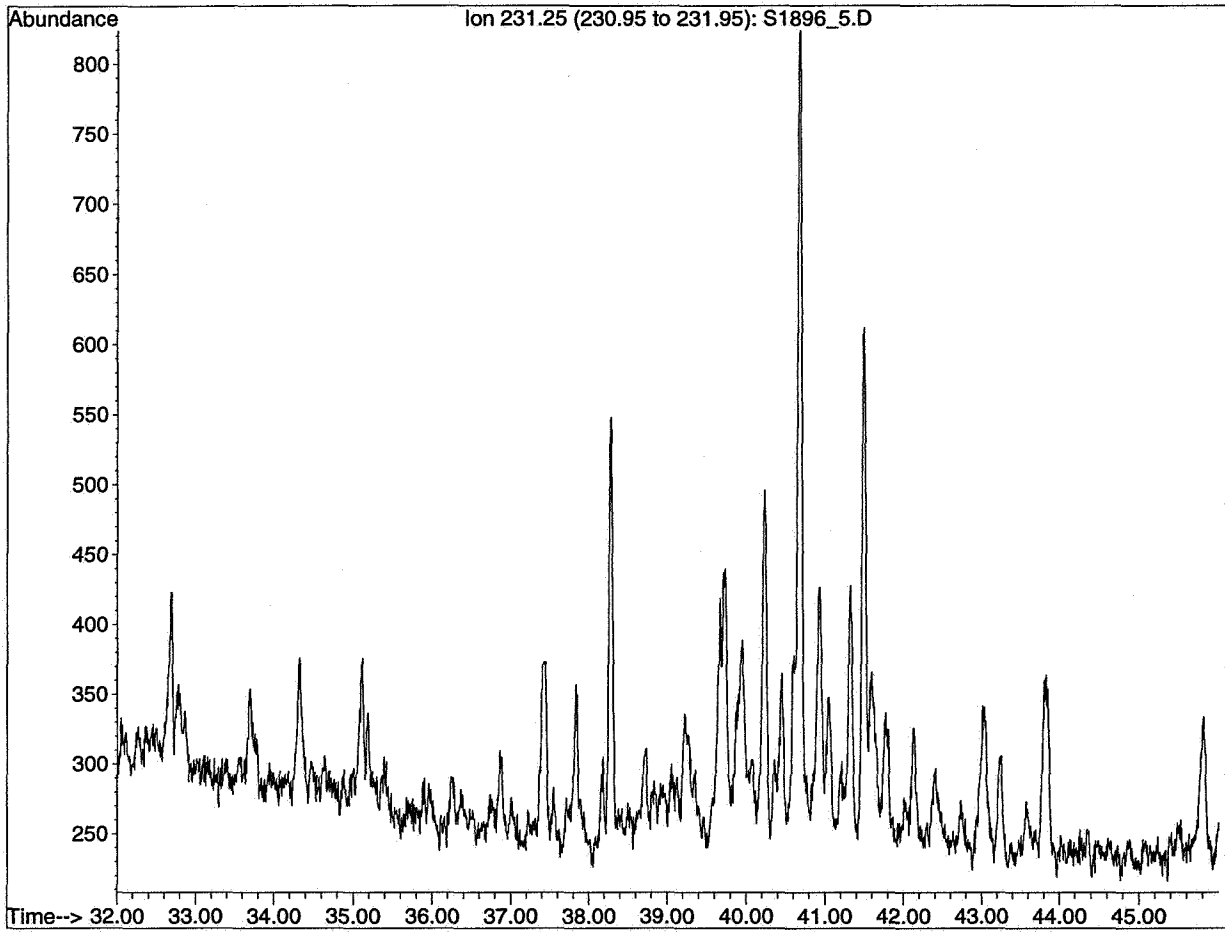
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S1896\_5.D Name: 35/11-10 1896.5

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:40:14 1997



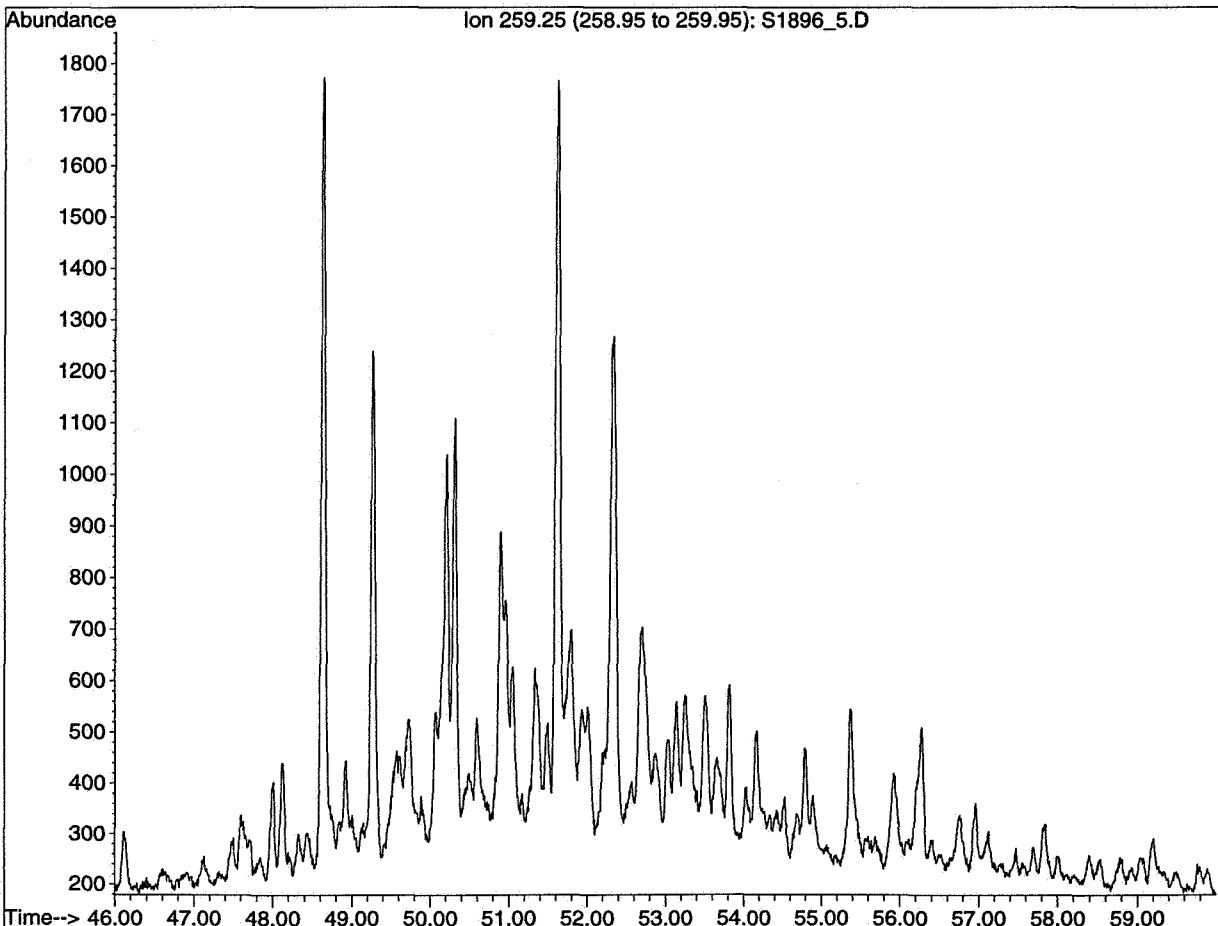
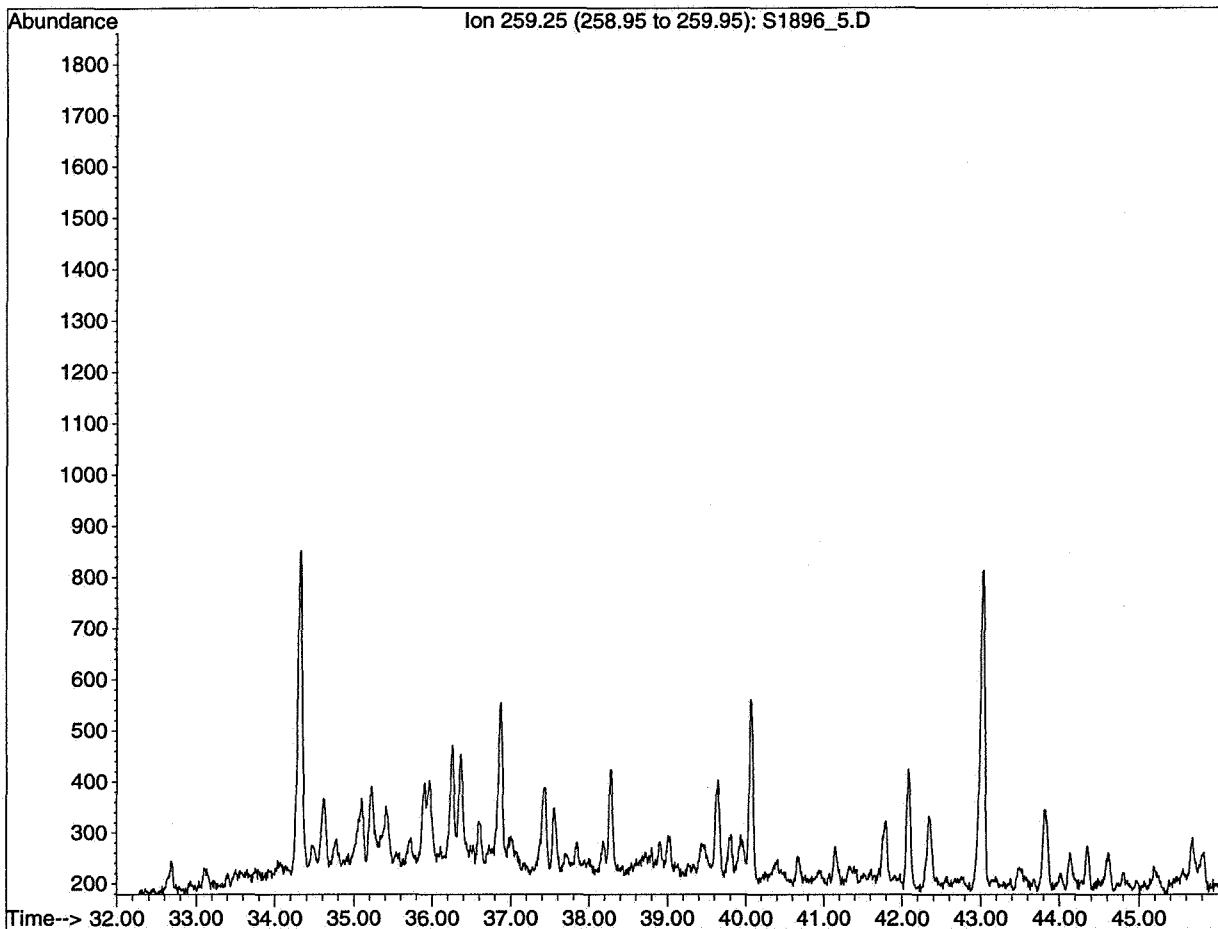
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S1896\_5.D Name: 35/11-10 1896.5 c

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:40:19 1997



### Saturated biomarkers

GC/MS detection HP-6890/5973

#### Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: S2048\_5.D  
Sample name: 35/11-10 2048.5 oil sat  
Data File Path: K:\CAM\GEOKJEM\HPCHEM\W95\DATA\SA351110A  
Misc. info.:

Vial no.: 4  
Method: MSD\_S\_D  
Operator:  
Date: Thu Oct 30 00:16:44 1997

Response curve  $y = ax$   
Response factor groups: s1...s3, responses as defined in method

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	

Internal standard (if added):

1)	46.11	217.2	s1	24baa	2277	26
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**Diterpanes:**

2)	33.77	191.2	s1	19/3	780	7
3)	35.75	191.2	s1	20/3	424	4
4)	37.79	191.2	s1	21/3	532	5
5)	41.77	191.2	s1	23/3	994	9
6)	42.88	191.2	s1	24/3	596	5
7)	45.15	191.2	s1	25/3	301	3
8)	46.70	191.2	s1	24/4	659	6
9)	46.79	191.2	s1	26/3R	227	2
10)	46.93	191.2	s1	26/3S	292	3
11)	50.46	191.2	s1	28/3R	294	3
12)	50.70	191.2	s1	28/3S	311	3
13)	51.49	191.2	s1	29/3R	444	4
14)	51.78	191.2	s1	29/3S	360	3

**Triterpanes:**

15)	52.64	191.2	s1	27Ts	2795	25
16)	52.88	177.2	s1	25nor28ab	985	9
17)	53.31	191.2	s1	27Tm	1118	10
18)	53.68	177.2	s1	25nor29ab	269	2
19)	53.77	191.2	s1	27b	408	4
20)	54.87	191.2	s1	28ab	1455	13
21)	55.08	177.2	s1	25nor30ab	166	1
22)	55.58	191.2	s1	29ab	3494	31
23)	55.69	191.2	s1	29Ts	2486	22
24)	55.94	191.2	s1	30D	2622	23
25)	56.28	191.2	s1	29ba	348	3
26)	56.95	191.2	s2	30ab	9949	56
27)	57.30	191.2	s1	30D13	660	6
28)	57.58	191.2	s2	30ba	998	6
29)	58.55	191.2	s1	31abS	3695	33
30)	58.74	191.2	s1	31abR	2930	26
31)	59.06	191.2	s1	30G	524	5
32)	59.29	191.2	s1	31ba	487	4
33)	59.77	191.2	s1	32abS	2901	26
34)	60.04	191.2	s1	32abR	2128	19
35)	61.22	191.2	s1	33abS	2134	19
36)	61.58	191.2	s1	33abR	1449	13
37)	62.73	191.2	s1	34abS	1396	12
38)	63.22	191.2	s1	34abR	811	7
39)	64.44	191.2	s1	35abS	941	8
40)	65.15	191.2	s1	35abR	571	5

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	

**Steranes:**

41)	38.29	217.2	s3	21aa	1057	13
42)	39.95	217.2	s3	21bb	1136	14
43)	40.08	217.2	s3	22aa	999	13
44)	42.30	217.2	s3	22bb	617	8
45)	48.63	217.2	s3	27dbS	3065	39
46)	49.27	217.2	s3	27dbR	1743	22
47)	51.62	218.2	s3	27bbR	2346	30
48)	51.77	218.2	s3	27bbS	1471	19
49)	52.16	217.2	s3	27aaR	726	9
50)	53.36	218.2	s3	28bbR	1154	15
51)	53.51	218.2	s3	28bbS	1499	19
52)	54.51	217.2	s3	29aaS	795	10
53)	54.79	218.2	s3	29bbR	2113	27
54)	54.89	218.2	s3	29bbS	1823	23
55)	55.49	217.2	s3	29aaR	829	11
56)	55.98	218.2	s3	30bbR	570	7
57)	56.02	218.2	s3	30bbS	527	7

**Saturated biomarkers**

GC/MS detection HP-6890/5973

Ratios, from heights and amounts



Norsk Hydro E&P Research Centre, Bergen, Norway  
 Petroleum Geochemistry Laboratories

Data file name: S2048\_5.D  
 Sample name: 35/11-10 2048.5 oil sat  
 Data File Path: K:\CAM\GEOKJEM\HPCHEM\W95\DATA\ISA351110\  
 Misc. info.:

Vial no.: 4  
 Method: MSD\_S\_D  
 Operator:  
 Date: Thu Oct 30 00:16:44 1997

**Terpane ratios, heights and amounts**

	Height	Amount
$100 \cdot ((\text{sum}20-25)/3+26/3(\text{R+S})) / ((\text{sum}20-25)/3+26/3(\text{R+S})+27(\text{Ts+Tm})+28\text{ab}+\text{sum}29-30(\text{ab+ba})+\text{sum}31-35\text{ab}(\text{R+S}))$	%Tri	8 9
$100 \cdot 20/3 / ((\text{sum}20-25)/3+26/3(\text{R+S}))$	%20/3	13 13
$100 \cdot 23/3 / (23/3+24/3+25/3)$	%23/3	53 53
$100 \cdot 24/4 / (24/4+24/3+25/3)$	%24/4	42 42
$100 \cdot \text{Ts} / (\text{Ts+Tm})$	%27Ts	71 71
$100 \cdot 28\text{ab} / (28\text{ab}+30\text{ab})$	%28ab	13 19
$100 \cdot 29\text{Ts} / (29\text{Ts}+29\text{ab})$	%29Ts	42 42
$100 \cdot 25\text{nor}30\text{ab} / (25\text{nor}30\text{ab}+30\text{ab})$	%25nor30ab	2 3
$100 \cdot 29\text{ab} / (29\text{ab}+30\text{ab})$	%29ab	26 35
$100 \cdot 30\text{ba} / (30\text{ba}+30\text{ab})$	%30ba	9 9
$100 \cdot 30\text{D} / (30\text{D}+30\text{ab})$	%30D	21 29
$100 \cdot 30\text{G} / (30\text{G}+30\text{ab})$	%30G	5 8
$100 \cdot 32\text{abS} / (32\text{ab}(\text{S+R}))$	%32abS	58 58
$100 \cdot 35\text{ab}(\text{S+R}) / (34-35\text{ab}(\text{S+R}))$	%35ab	41 41
$100 \cdot (27\text{Ts}+27\text{Tm}) / (27\text{Ts}+27\text{Tn}+28\text{ab}+\text{sum}29-30(\text{ab+ba})+\text{sum}31-35\text{ab}(\text{R+S}))$	%27HOP	10 11
$100 \cdot (28\text{ab}) / (27\text{Ts}+27\text{Tn}+28\text{ab}+\text{sum}29-30(\text{ab+ba})+\text{sum}31-35\text{ab}(\text{R+S}))$	%28HOP	4 4
$100 \cdot (29\text{ab+ba}) / (27\text{Ts}+27\text{Tn}+28\text{ab}+\text{sum}29-30(\text{ab+ba})+\text{sum}31-35\text{ab}(\text{R+S}))$	%29HOP	10 11
$100 \cdot (30\text{ab+ba}) / (27\text{Ts}+27\text{Tn}+28\text{ab}+\text{sum}29-30(\text{ab+ba})+\text{sum}31-35\text{ab}(\text{R+S}))$	%30HOP	28 20
$100 \cdot 31\text{ab}(\text{S+R}) / (27\text{Ts}+27\text{Tn}+28\text{ab}+\text{sum}29-30(\text{ab+ba})+\text{sum}31-35\text{ab}(\text{R+S}))$	%31HOP	17 19
$100 \cdot 32\text{ab}(\text{S+R}) / (27\text{Ts}+27\text{Tn}+28\text{ab}+\text{sum}29-30(\text{ab+ba})+\text{sum}31-35\text{ab}(\text{R+S}))$	%32HOP	13 14
$100 \cdot 33\text{ab}(\text{S+R}) / (27\text{Ts}+27\text{Tn}+28\text{ab}+\text{sum}29-30(\text{ab+ba})+\text{sum}31-35\text{ab}(\text{R+S}))$	%33HOP	9 10
$100 \cdot 34\text{ab}(\text{S+R}) / (27\text{Ts}+27\text{Tn}+28\text{ab}+\text{sum}29-30(\text{ab+ba})+\text{sum}31-35\text{ab}(\text{R+S}))$	%34HOP	6 6
$100 \cdot 35\text{ab}(\text{S+R}) / (27\text{Ts}+27\text{Tn}+28\text{ab}+\text{sum}29-30(\text{ab+ba})+\text{sum}31-35\text{ab}(\text{R+S}))$	%35HOP	4 4

**Sterane ratios**

$100 \cdot (21+22)\text{bb} / ((21+22)\text{bb}+(27+28+29+30)\text{bb}(\text{R+S}))$	%Preg	13 13
$100 \cdot 29\text{aaS} / 29\text{aa}(\text{R+S})$	%29aaS	49 49
$100 \cdot 29\text{bb}(\text{R+S}) / (29\text{bb}(\text{R+S})+29\text{aa}(\text{S+R}))$	%29bb	71 71
$100 \cdot 27\text{db}(\text{S+R}) / ((27\text{db}(\text{S+R})+27\text{bb}(\text{R+S})))$	%27dia	56 56
$100 \cdot 27\text{bb}(\text{R+S}) / (27+28+29+30)\text{bb}(\text{R+S})$	%27STER	33 33
$100 \cdot 28\text{bb}(\text{R+S}) / (27+28+29+30)\text{bb}(\text{R+S})$	%28STER	23 23
$100 \cdot 29\text{bb}(\text{R+S}) / (27+28+29+30)\text{bb}(\text{R+S})$	%29STER	34 34
$100 \cdot 30\text{bb}(\text{R+S}) / (27+28+29+30)\text{bb}(\text{R+S})$	%30STER	10 10

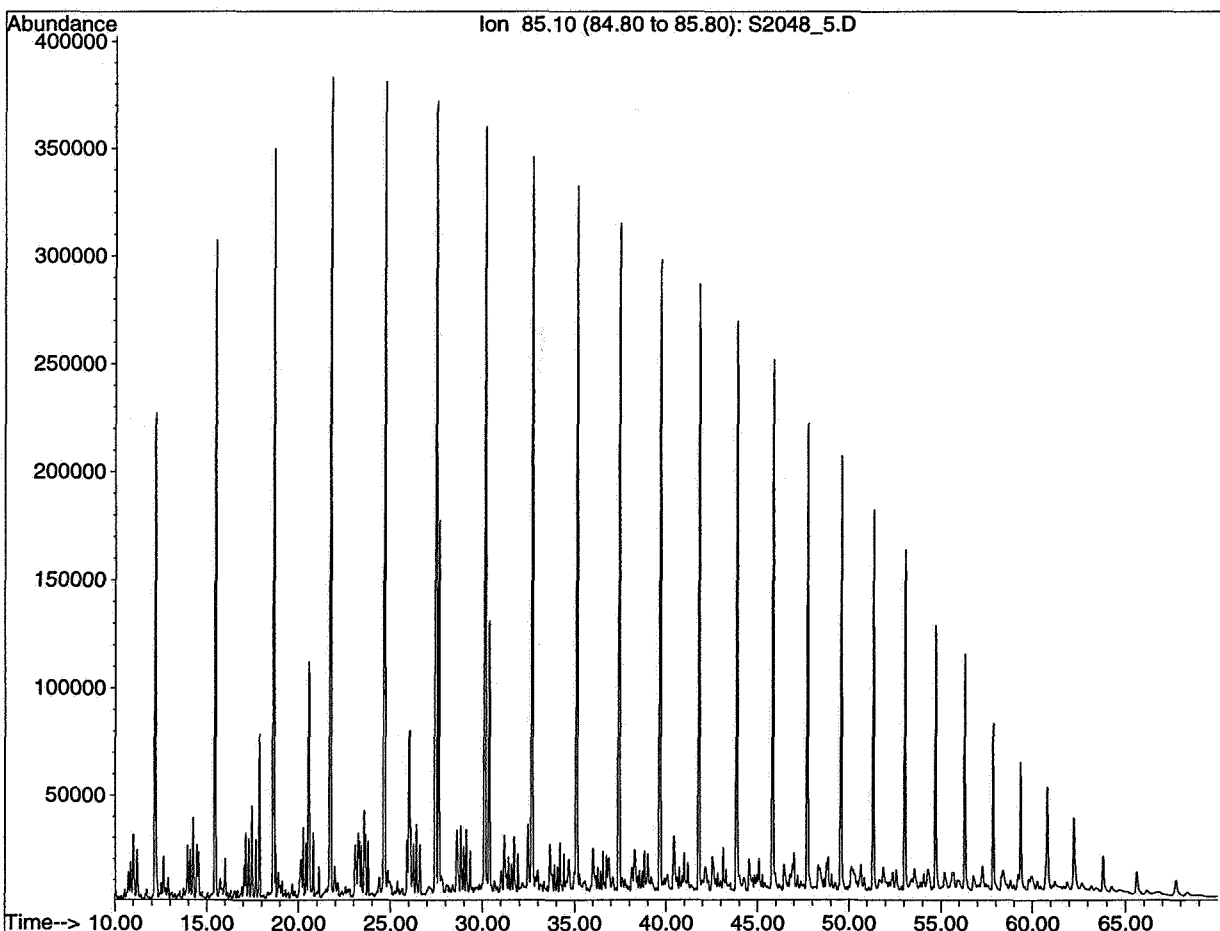
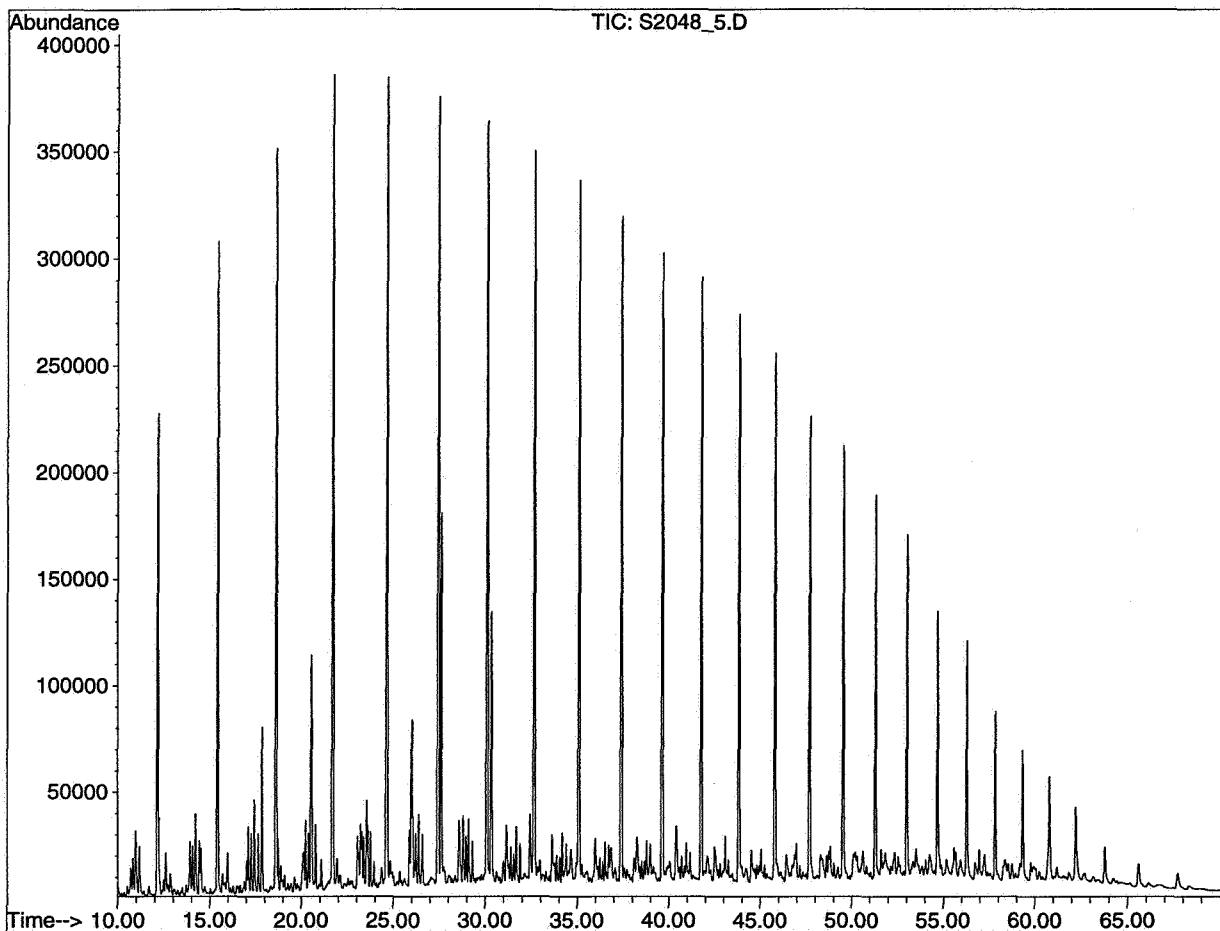
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2048\_5.D Name: 35/11-10 2048.5

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:45:27 1997



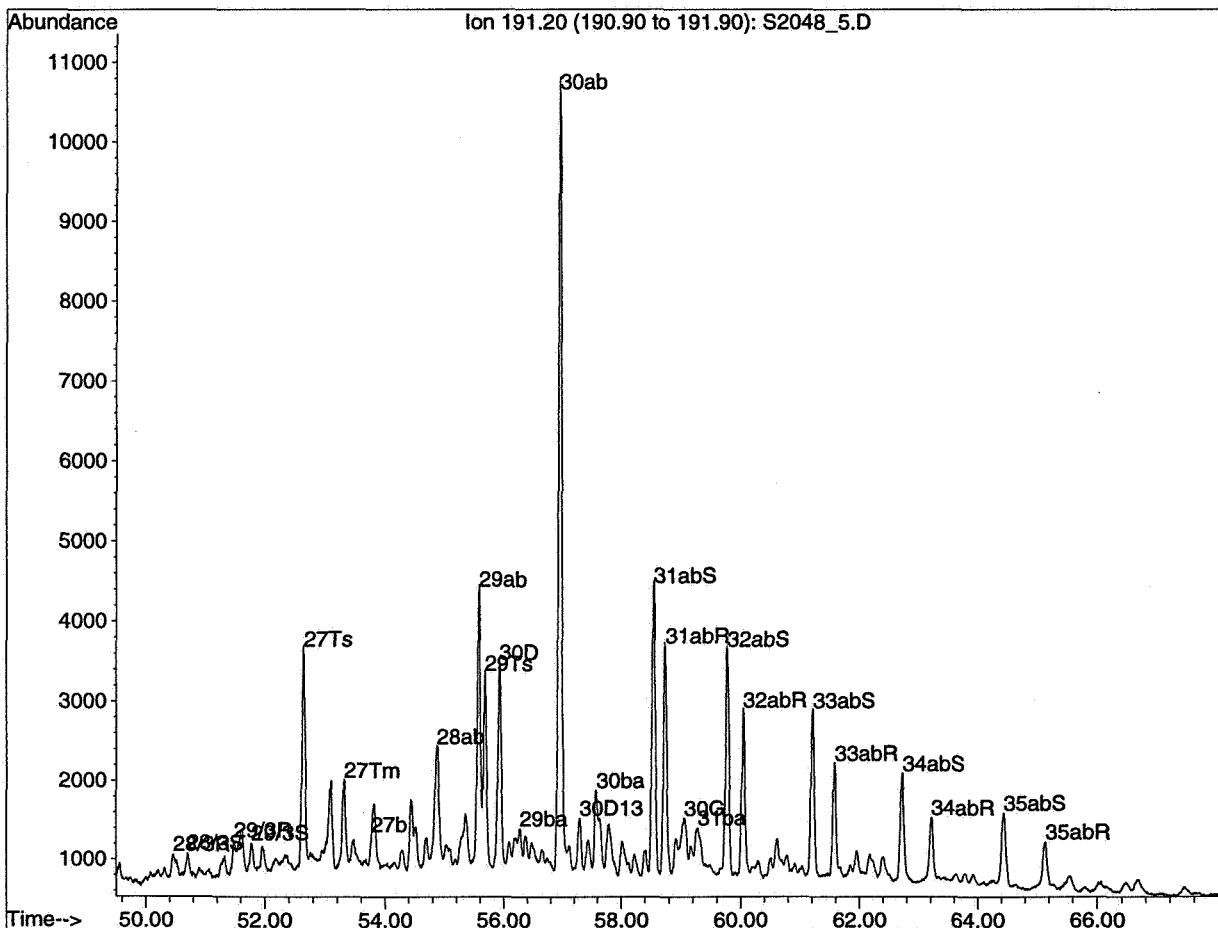
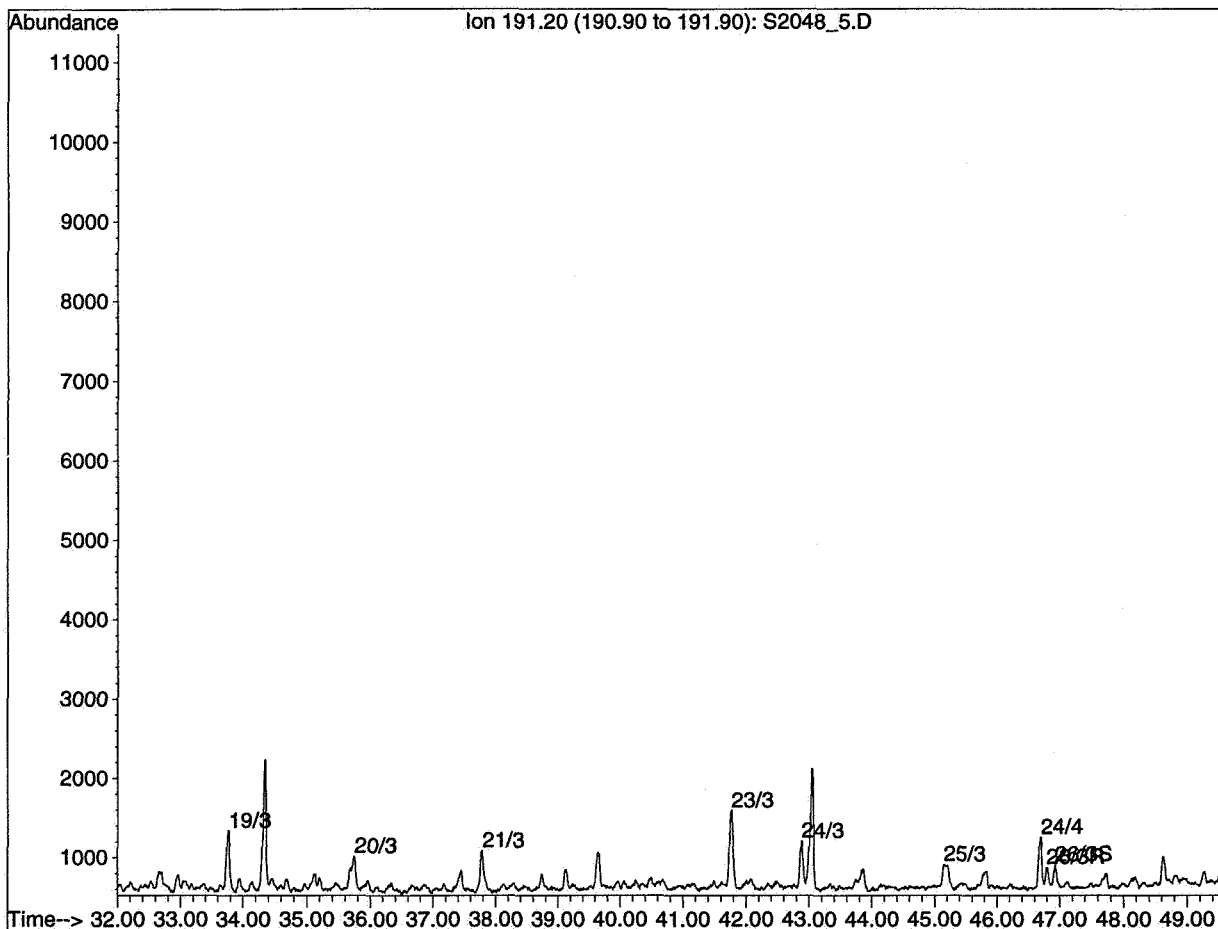
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2048\_5.D Name: 35/11-10 2048.5

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:45:31 1997



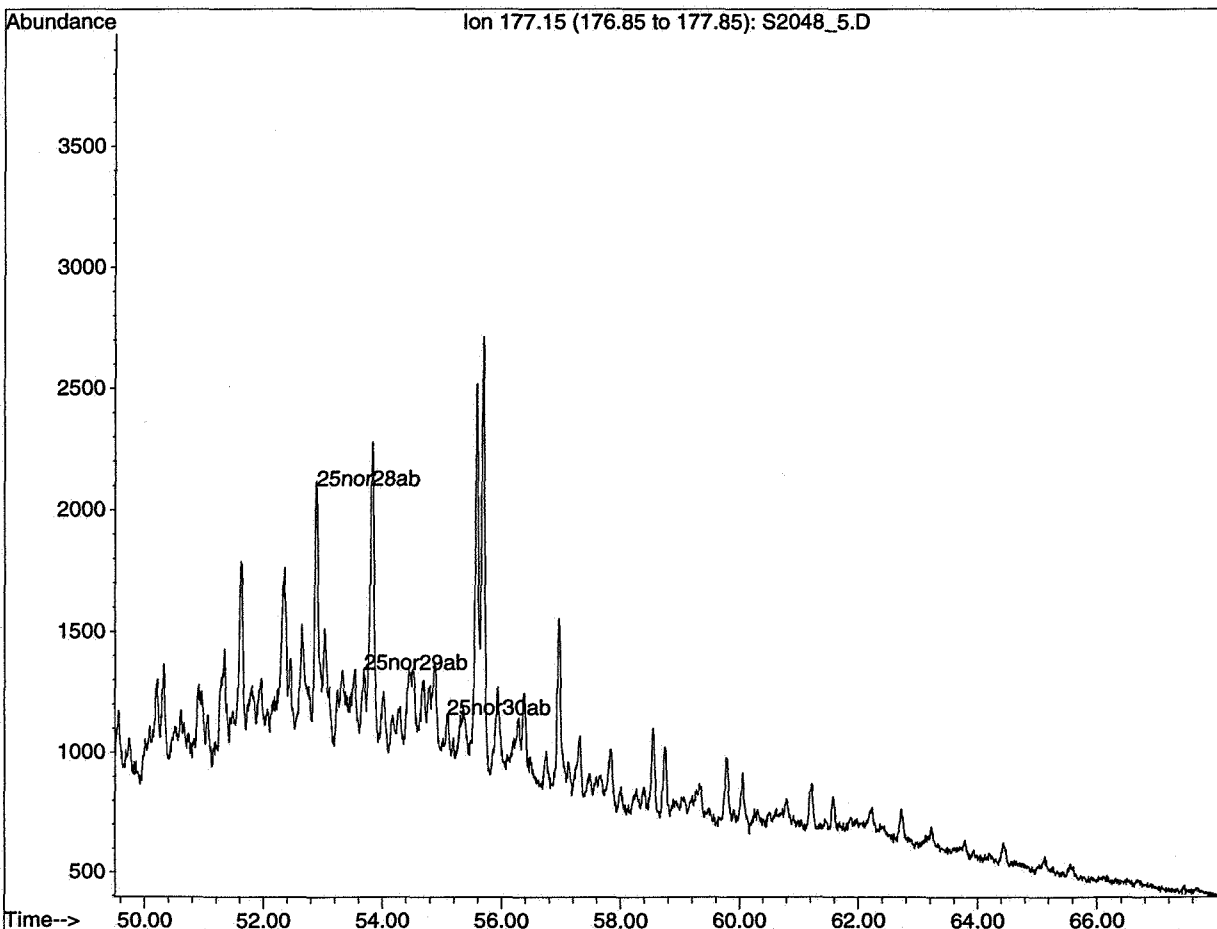
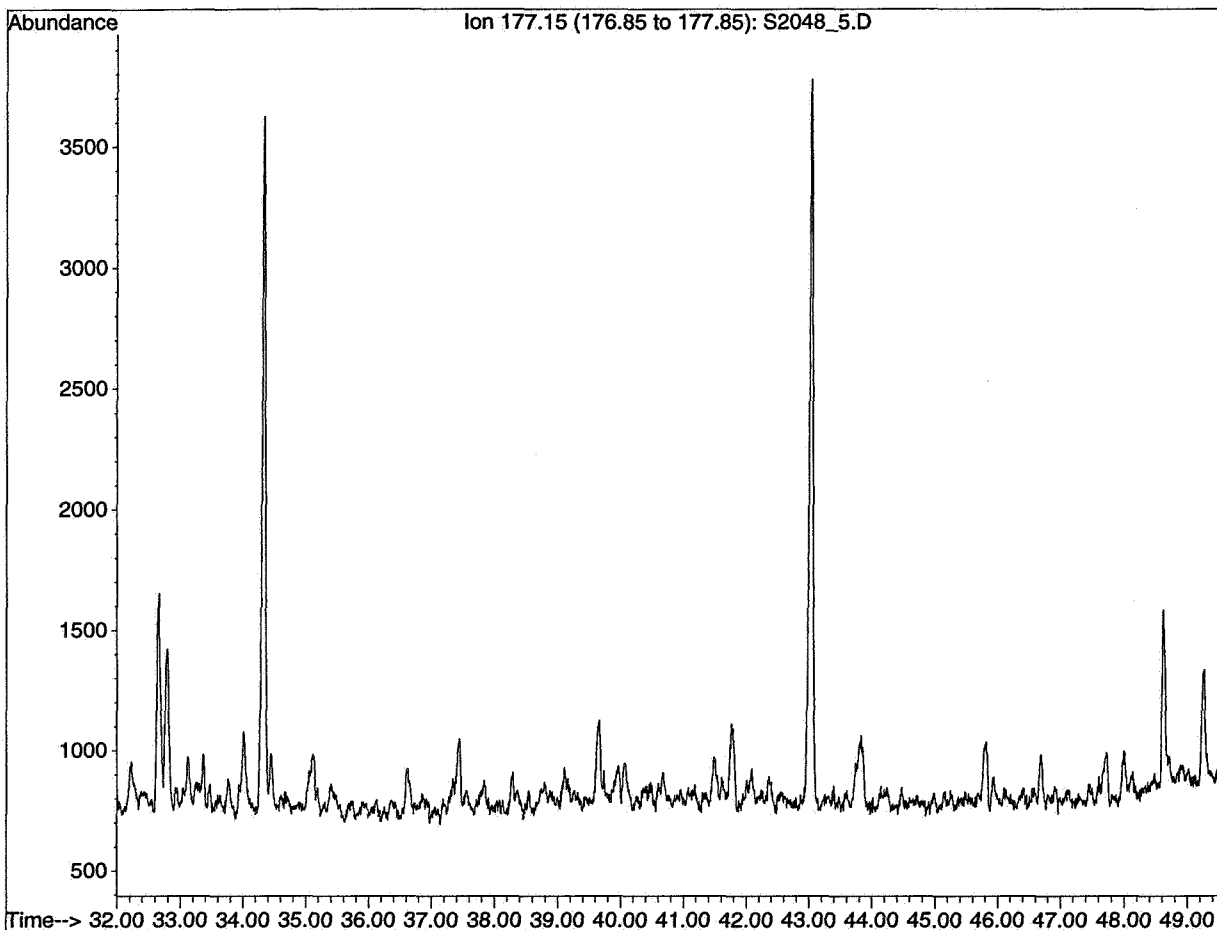
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2048\_5.D Name: 35/11-10 2048.5 c

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:45:47 1997



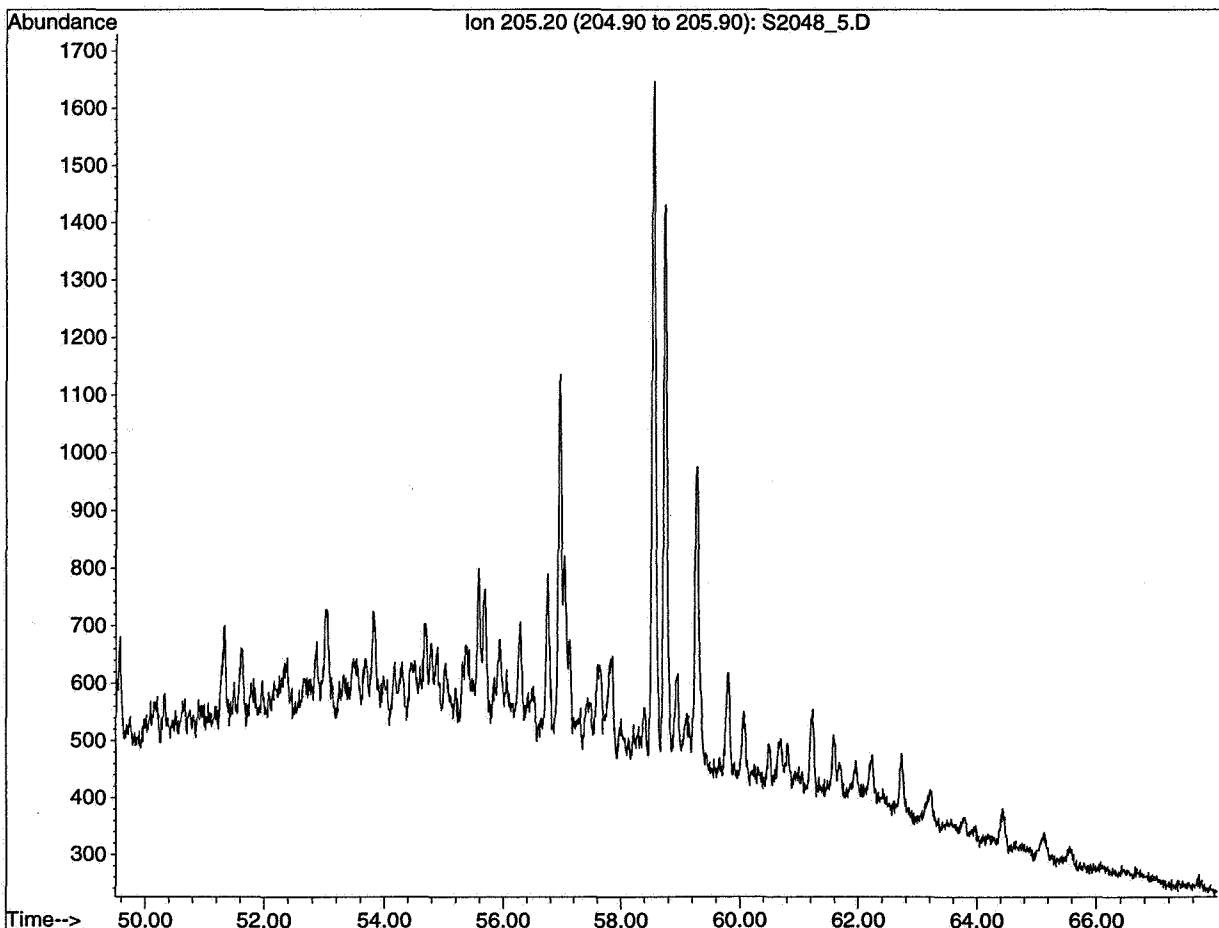
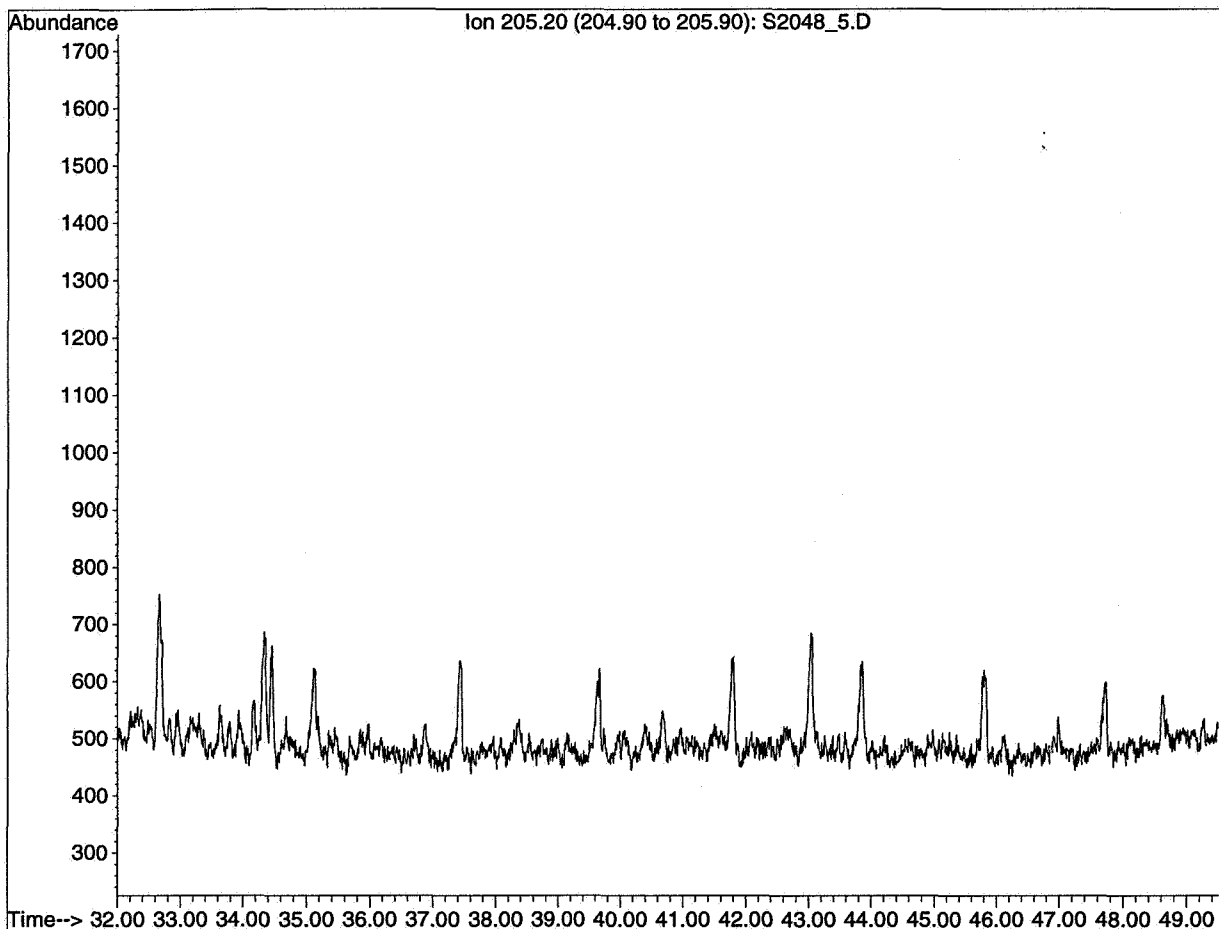
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2048\_5.D Name: 35/11-10 2048.5

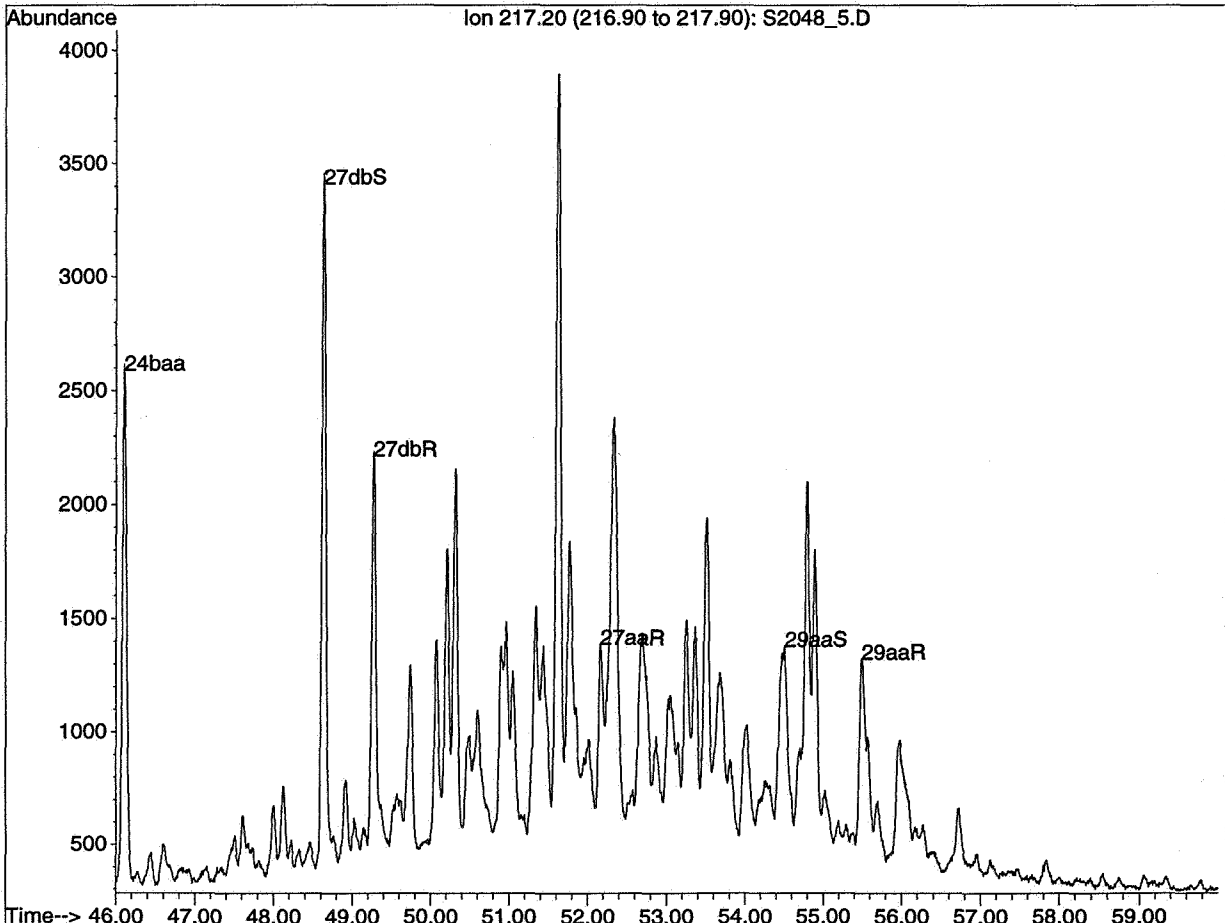
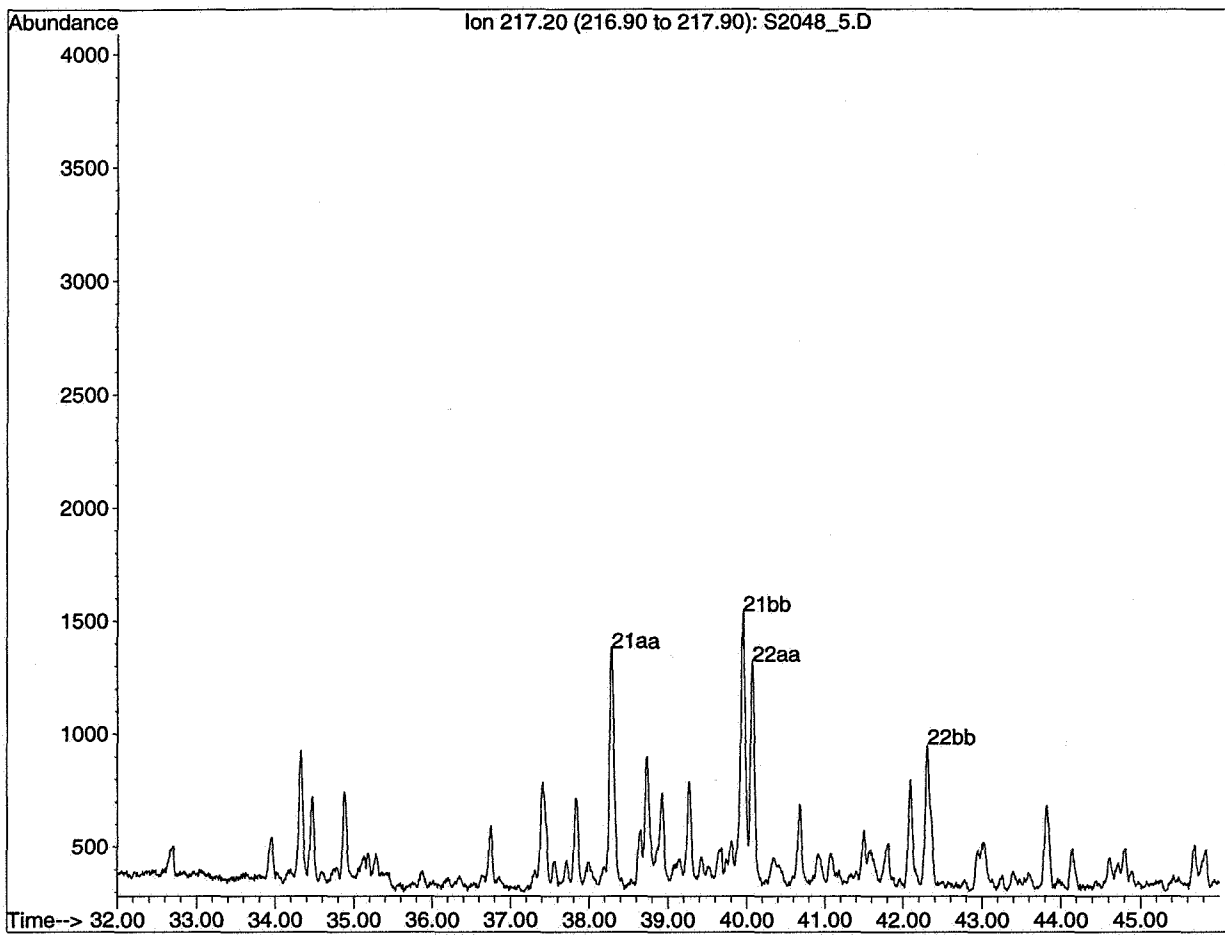
Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:45:54 1997



Title: Saturated HC (FID) and Biomarkers (MSD)  
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2048\_5.D Name: 35/11-10 2048.5 c  
Misc:  
Method: MSD\_S\_D .....Operator:  
Date Reported: Tue Nov 04 10:46:00 1997



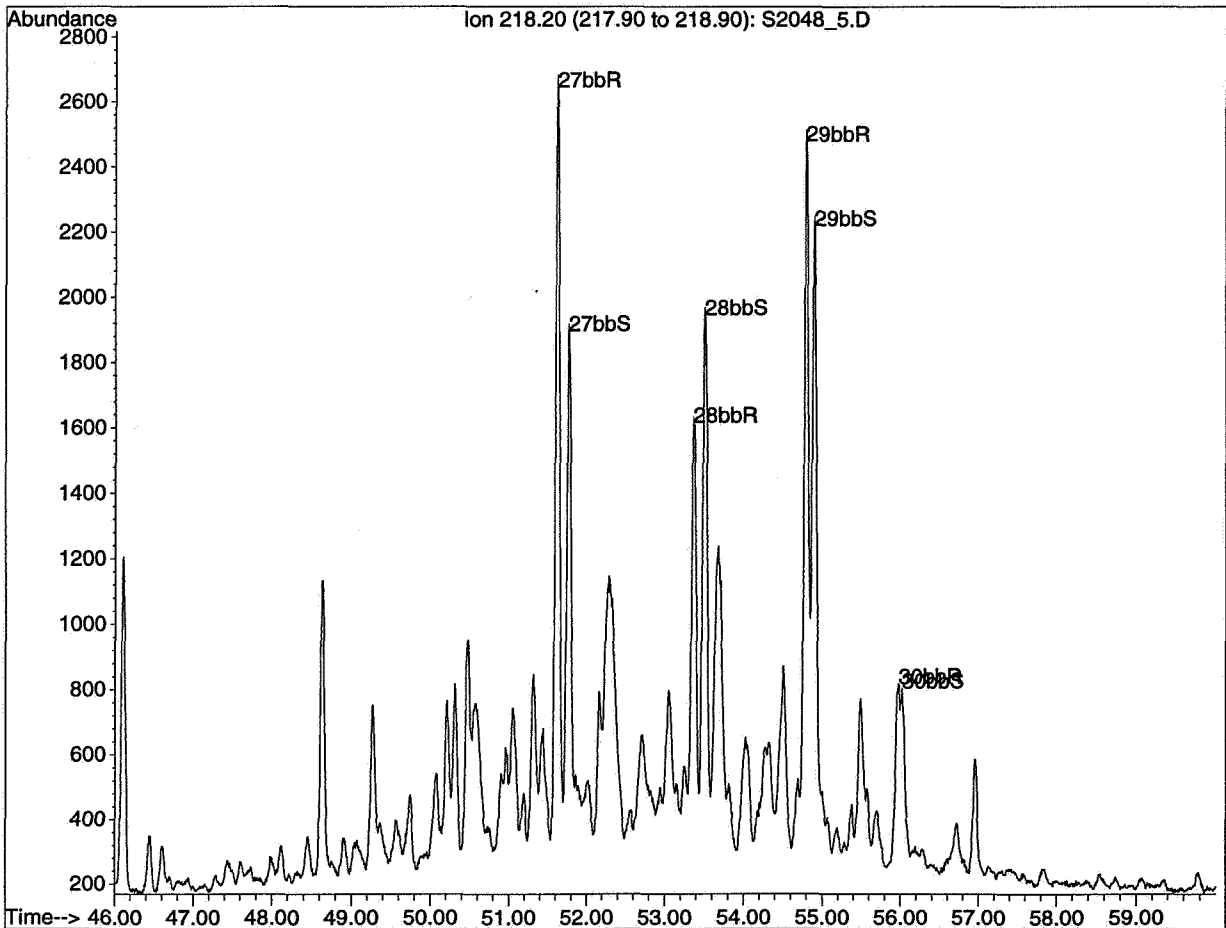
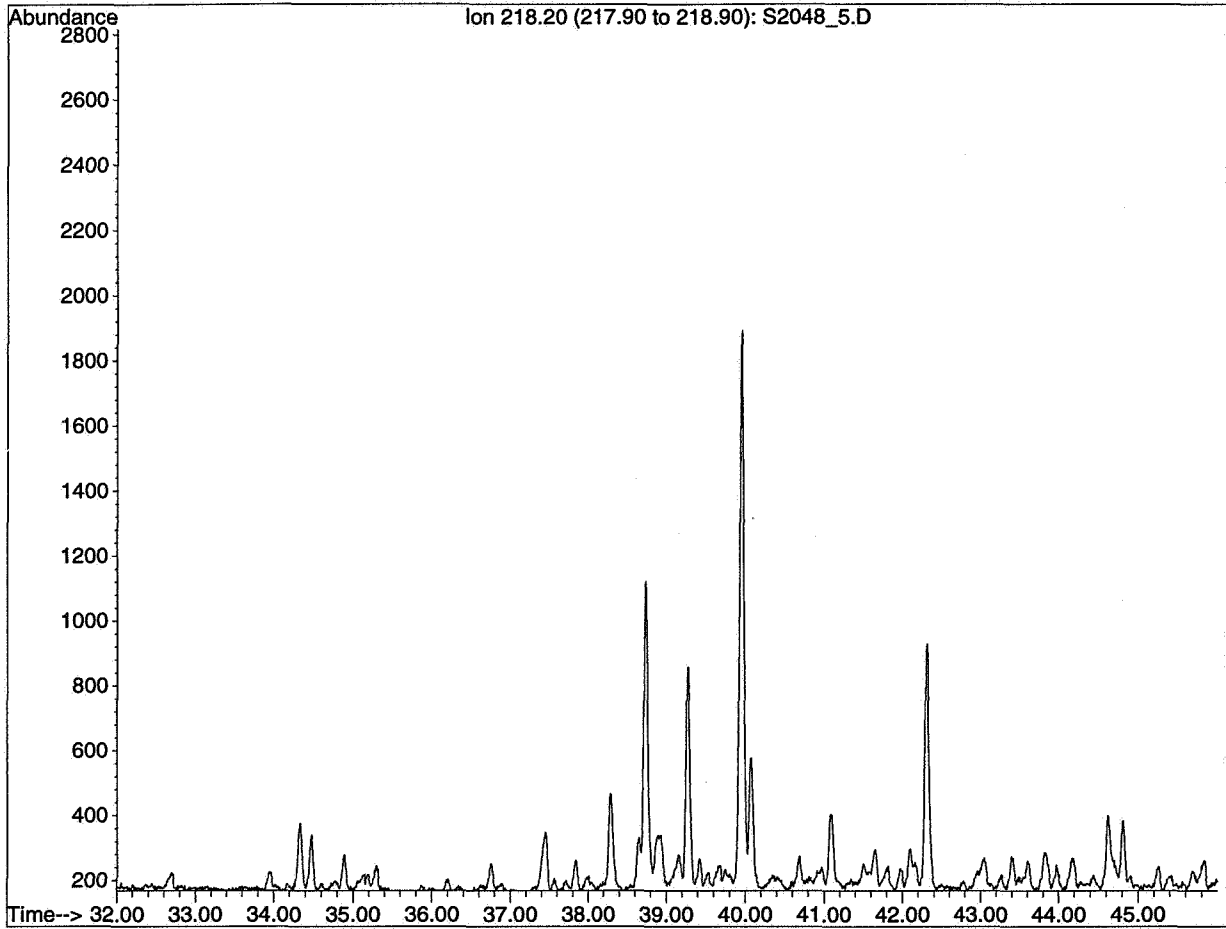
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2048\_5.D Name: 35/11-10 2048.5

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:46:09 1997



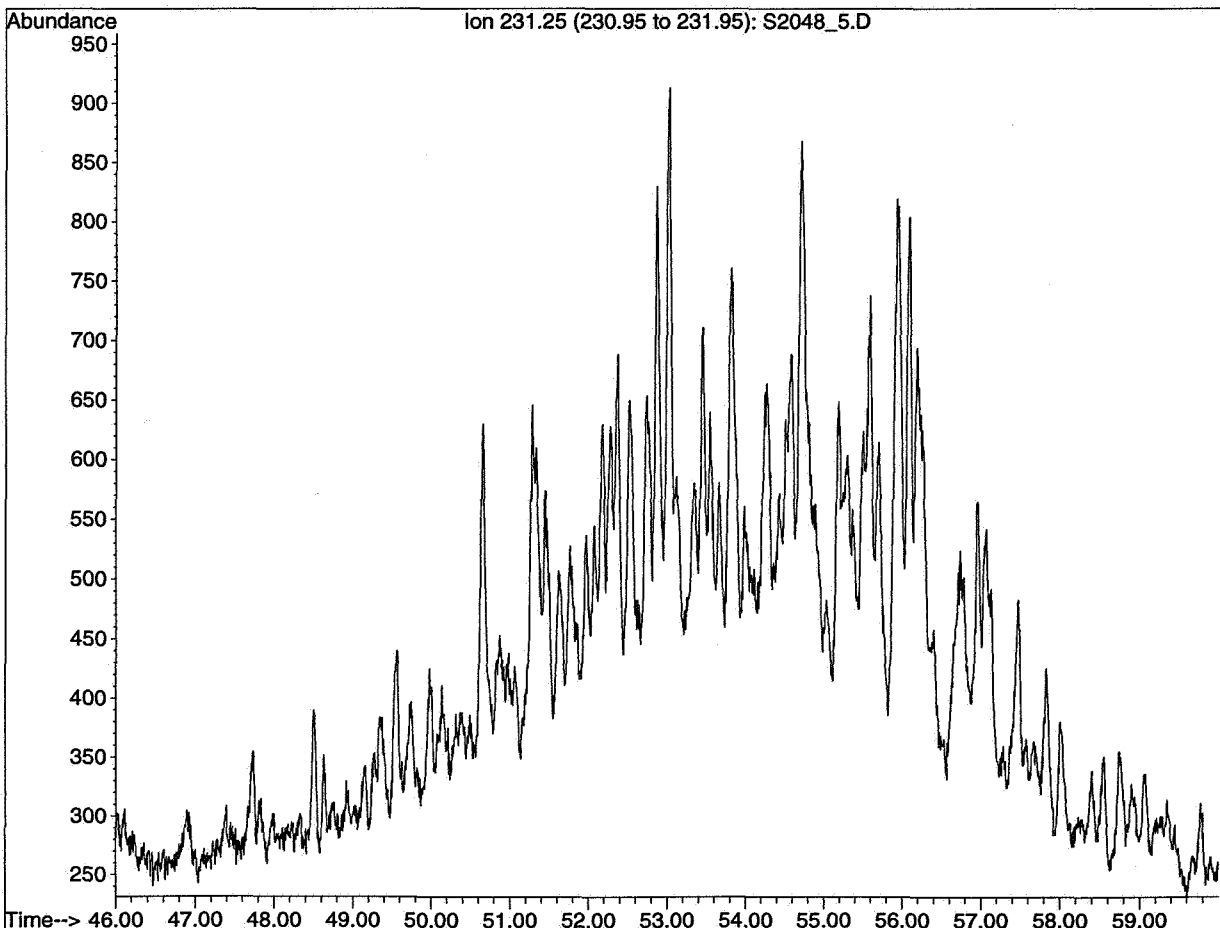
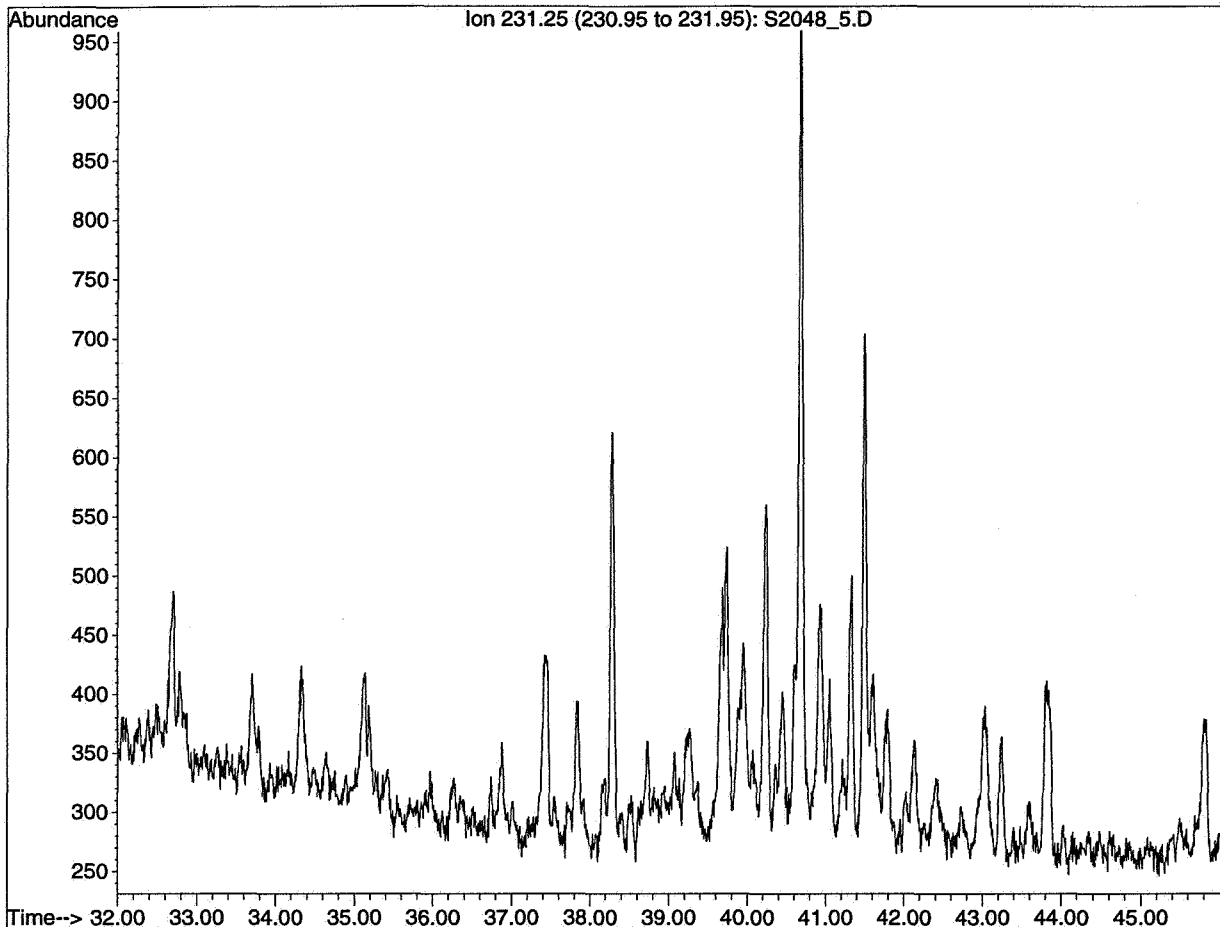
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2048\_5.D Name: 35/11-10 2048.5

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:46:17 1997



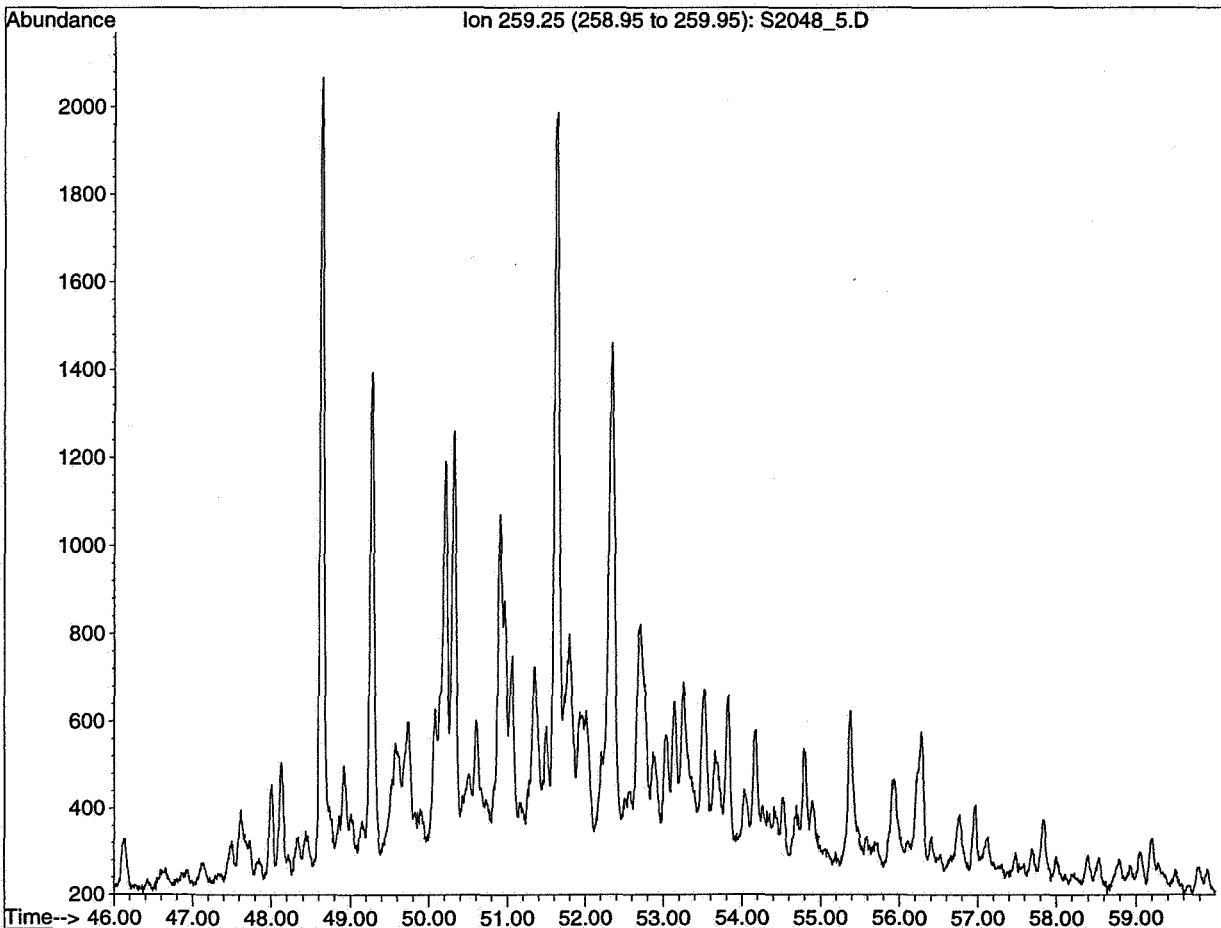
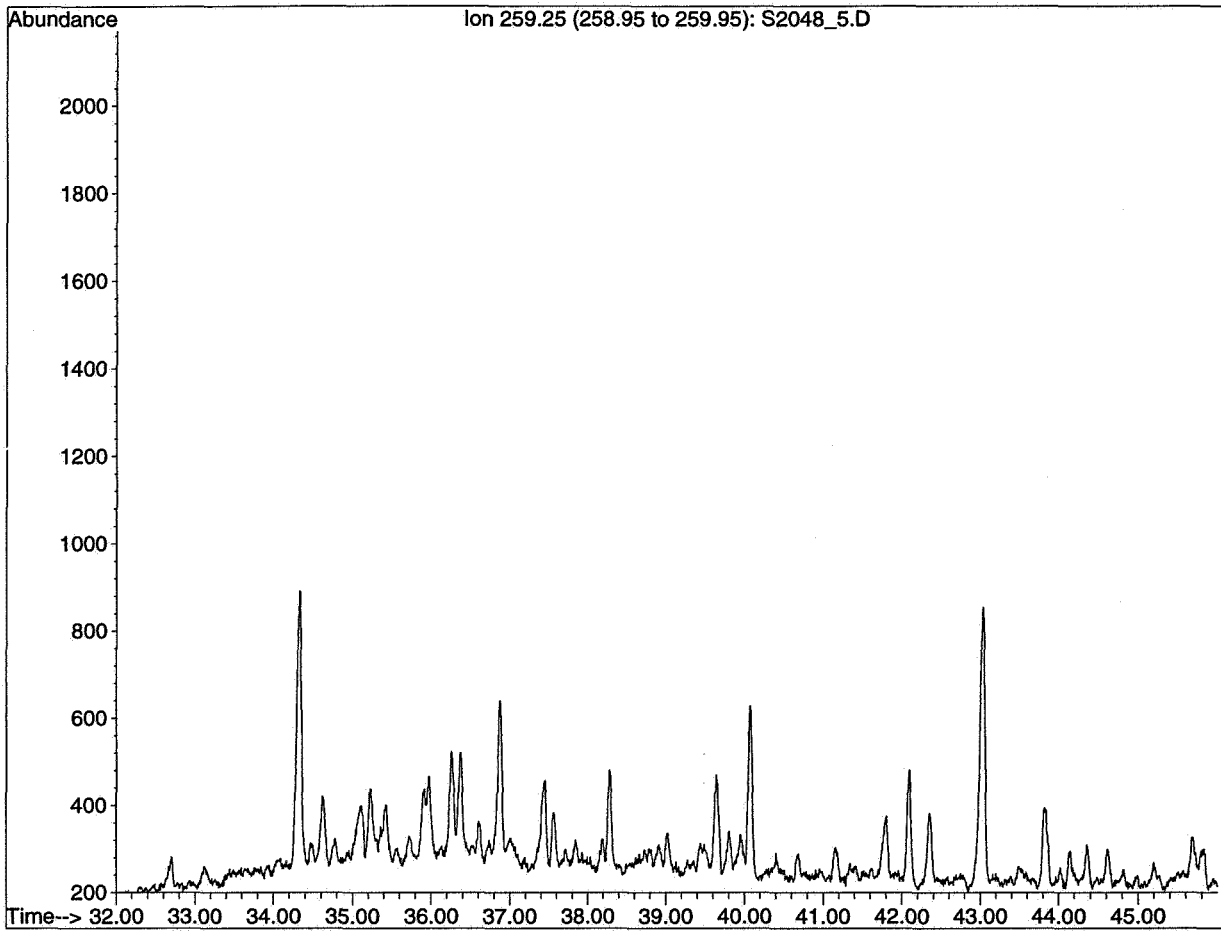
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2048\_5.D Name: 35/11-10 2048.5

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 10:46:22 1997



### Saturated biomarkers

GC/MS detection HP-6890/5973

#### Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: **S2274.D**  
Sample name: **35/11-10 2274 coch sat**  
Data File Path: K:\CAM\GEOKJEM\HPCHEM\W95\DATA\ISA351110\  
Misc. info.:

Vial no.: 7  
Method: MSD\_S\_D  
Operator:  
Date: Thu Oct 30 04:42:10 1997

Response curve  $y = ax$   
Response factor groups: s1...s3, responses as defined in method.

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
<b>Internal standard (if added):</b>						
1)	46.11	217.2		24baa	1355	21
<b>Diterpanes:</b>						
2)	33.77	191.2	s1	19/3	805	9
3)	35.75	191.2	s1	20/3	426	5
4)	37.79	191.2	s1	21/3	499	6
5)	41.76	191.2	s1	23/3	1058	12
6)	42.88	191.2	s1	24/3	561	6
7)	45.21	191.2	s1	25/3	298	3
8)	46.69	191.2	s1	24/4	638	7
9)	46.81	191.2	s1	26/3R	201	2
10)	46.94	191.2	s1	26/3S	246	3
11)	50.46	191.2	s1	28/3R	287	3
12)	50.71	191.2	s1	28/3S	269	3
13)	51.50	191.2	s1	29/3R	401	5
14)	51.79	191.2	s1	29/3S	364	4
<b>Triterpanes:</b>						
15)	52.65	191.2	s1	27Ts	2546	29
16)	52.88	177.2	s1	25nor28ab	1007	12
17)	53.31	191.2	s1	27Tm	1008	12
18)	53.70	177.2	s1	25nor29ab	169	2
19)	53.76	191.2	s1	27b	284	3
20)	54.88	191.2	s1	28ab	1295	15
21)	55.08	177.2	s1	25nor30ab	126	1
22)	55.58	191.2	s1	29ab	3130	36
23)	55.69	191.2	s1	29Ts	2335	27
24)	55.94	191.2	s1	30D	2443	28
25)	56.29	191.2	s1	29ba	365	4
26)	56.95	191.2	s2	30ab	9127	68
27)	57.30	191.2	s1	30D13	620	7
28)	57.58	191.2	s2	30ba	843	6
29)	58.54	191.2	s1	31abS	3526	41
30)	58.74	191.2	s1	31abR	2622	30
31)	59.06	191.2	s1	30G	450	5
32)	59.27	191.2	s1	31ba	484	6
33)	59.78	191.2	s1	32abS	2745	32
34)	60.05	191.2	s1	32abR	1910	22
35)	61.21	191.2	s1	33abS	1979	23
36)	61.58	191.2	s1	33abR	1316	15
37)	62.72	191.2	s1	34abS	1302	15
38)	63.22	191.2	s1	34abR	794	9
39)	64.44	191.2	s1	35abS	852	10
40)	65.15	191.2	s1	35abR	519	6

#	Rt.min.	m/z	Rf.	Name	Height	Amount
					ng/mg	
<b>Steranes:</b>						
41)	38.29	217.2	s3	21aa	1025	17
42)	39.96	217.2	s3	21bb	1123	19
43)	40.08	217.2	s3	22aa	974	16
44)	42.31	217.2	s3	22bb	566	9
45)	48.64	217.2	s3	27dbS	3025	50
46)	49.27	217.2	s3	27dbR	1776	30
47)	51.63	218.2	s3	27bbR	2302	38
48)	51.78	218.2	s3	27bbS	1382	23
49)	52.17	217.2	s3	27aaR	721	12
50)	53.37	218.2	s3	28bbR	1164	19
51)	53.52	218.2	s3	28bbS	1443	24
52)	54.48	217.2	s3	29aaS	793	13
53)	54.79	218.2	s3	29bbR	1938	32
54)	54.89	218.2	s3	29bbS	1756	29
55)	55.50	217.2	s3	29aaR	826	14
56)	55.97	218.2	s3	30bbR	597	10
57)	56.02	218.2	s3	30bbS	463	8

**Saturated biomarkers**

GC/MS detection HP-6890/5973

Ratios, from heights and amounts



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: **S2274.D**  
Sample name: **35/11-10 2274 coch sat**  
Data File Path: K:\CAM\GEOK\JEM\HPCHEM\W95\DATA\SA351110\  
Misc. info.:

Vial no.: 7  
Method: MSD\_S\_D  
Operator:  
Date: Thu Oct 30 04:42:10 1997

**Terpane ratios, heights and amounts**

	Height	Amount
$100 \cdot ((\text{sum}20-25)/3 + 26/3(R+S)) / ((\text{sum}20-25)/3 + 26/3(R+S) + 27(Ts+Tm) + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%Tri	8 9
$100 \cdot 20/3 / ((\text{sum}20-25)/3 + 26/3(R+S))$	%20/3	13 13
$100 \cdot 23/3 / (23/3 + 24/3 + 25/3)$	%23/3	55 55
$100 \cdot 24/4 / (24/4 + 24/3 + 25/3)$	%24/4	43 43
$100 \cdot Ts / (Ts + Tm)$	%27Ts	72 72
$100 \cdot 28ab / (28ab + 30ab)$	%28ab	12 18
$100 \cdot 29Ts / (29Ts + 29ab)$	%29Ts	43 43
$100 \cdot 25nor30ab / (25nor30ab + 30ab)$	%25nor30ab	1 2
$100 \cdot 29ab / (29ab + 30ab)$	%29ab	26 35
$100 \cdot 30ba / (30ba + 30ab)$	%30ba	8 8
$100 \cdot 30D / (30D + 30ab)$	%30D	21 29
$100 \cdot 30G / (30G + 30ab)$	%30G	5 7
$100 \cdot 32abS / (32ab(S+R))$	%32abS	59 59
$100 \cdot 35ab(S+R) / (34-35ab(S+R))$	%35ab	40 40
$100 \cdot (27Ts + 27Tm) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%27HOP	10 11
$100 \cdot (28ab) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%28HOP	4 4
$100 \cdot (29ab+ba) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%29HOP	10 11
$100 \cdot (30ab+ba) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%30HOP	28 20
$100 \cdot 31ab(S+R) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%31HOP	17 19
$100 \cdot 32ab(S+R) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%32HOP	13 14
$100 \cdot 33ab(S+R) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%33HOP	9 10
$100 \cdot 34ab(S+R) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%34HOP	6 6
$100 \cdot 35ab(S+R) / (27Ts + 27Tn + 28ab + \text{sum}29-30(ab+ba) + \text{sum}31-35ab(R+S))$	%35HOP	4 4

**Sterane ratios**

$100 \cdot (21+22)bb / ((21+22)bb + (27+28+29+30)bb(R+S))$	%Preg	13 13
$100 \cdot 29aaS / 29aa(R+S)$	%29aaS	49 49
$100 \cdot 29bb(R+S) / (29bb(R+S) + 29aa(S+R))$	%29bb	70 70
$100 \cdot 27db(S+R) / ((27db(S+R) + 27bb(R+S)))$	%27dia	57 57
$100 \cdot 27bb(R+S) / (27+28+29+30)bb(R+S)$	%27STER	33 33
$100 \cdot 28bb(R+S) / (27+28+29+30)bb(R+S)$	%28STER	24 24
$100 \cdot 29bb(R+S) / (27+28+29+30)bb(R+S)$	%29STER	33 33
$100 \cdot 30bb(R+S) / (27+28+29+30)bb(R+S)$	%30STER	10 10

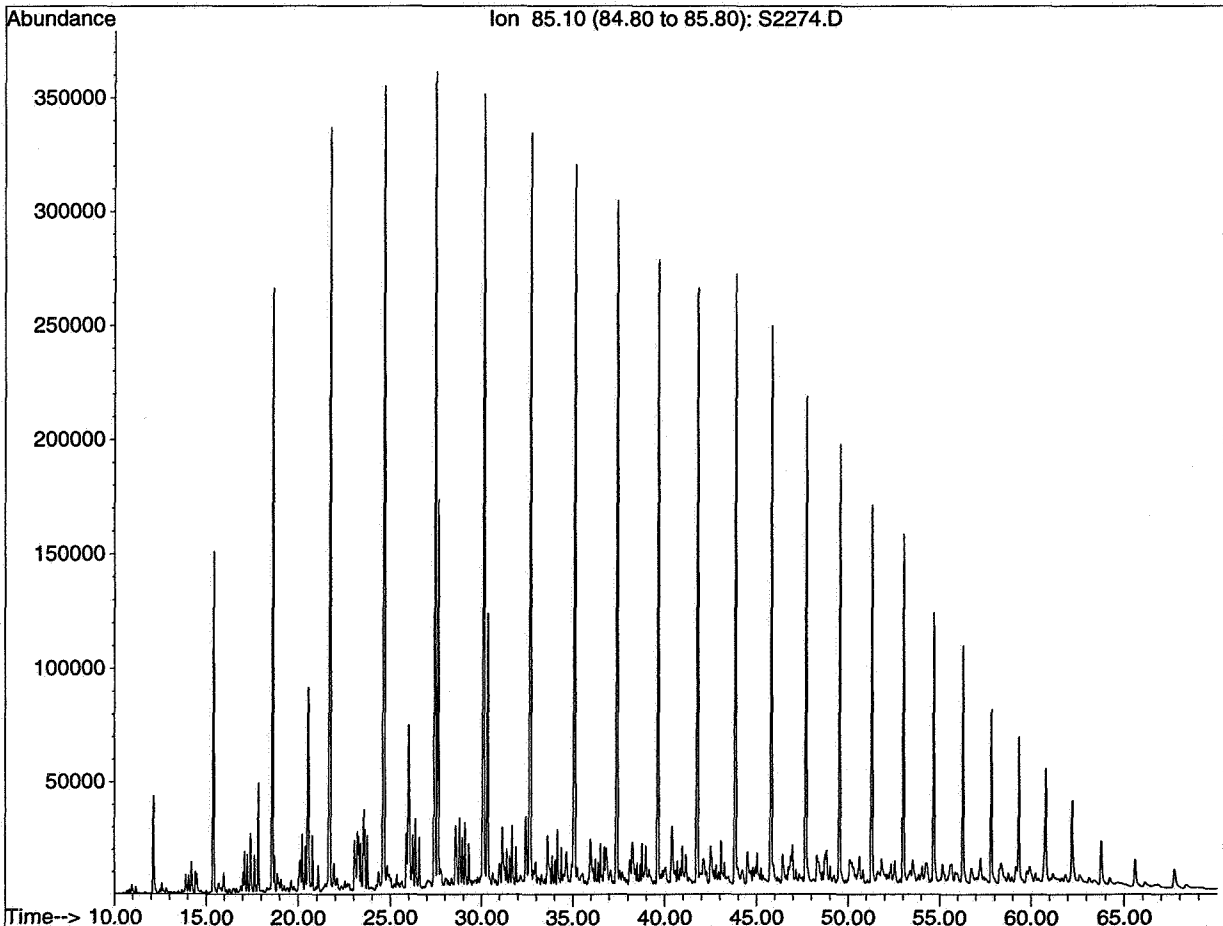
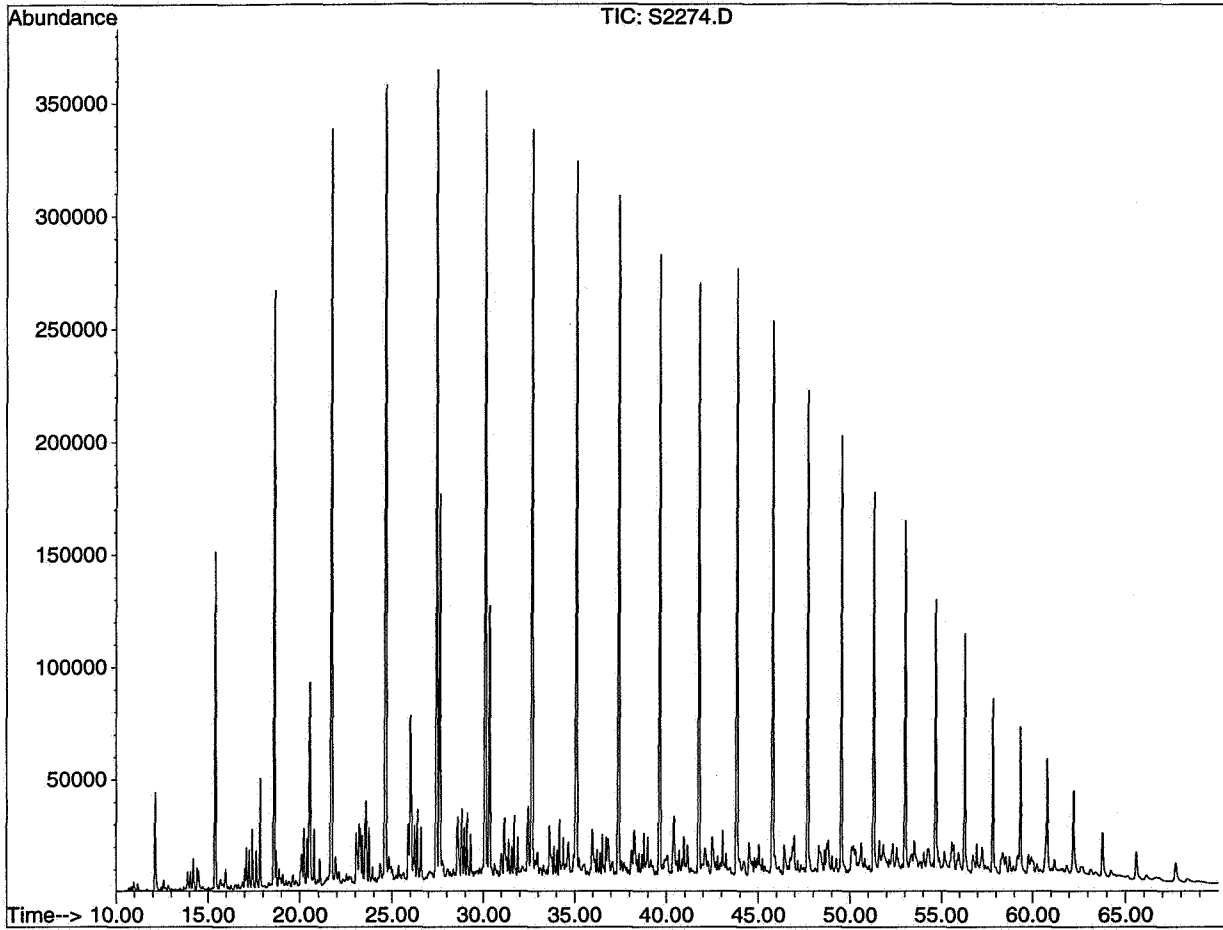
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2274.D Name: 35/11-10 2274 coch

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:30:33 1997



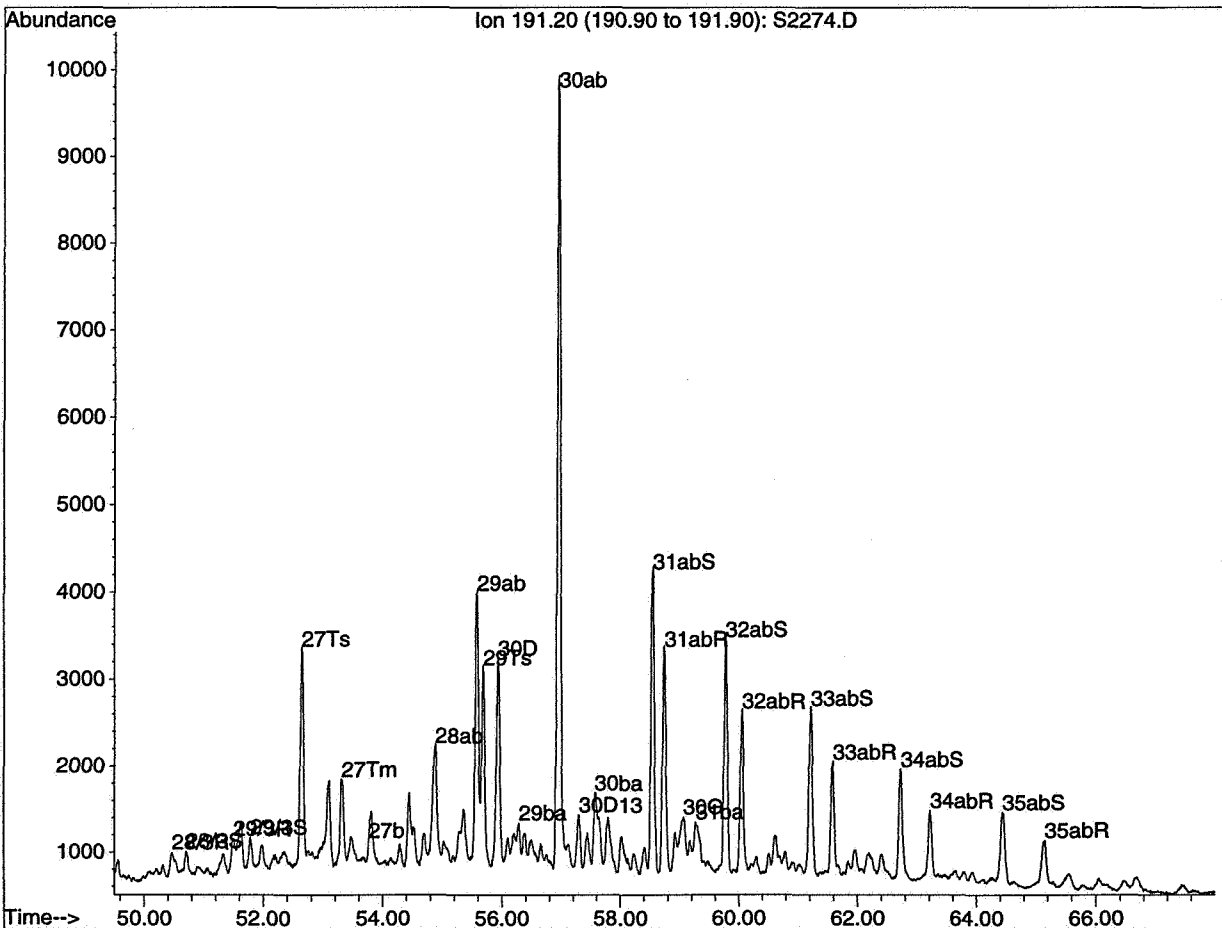
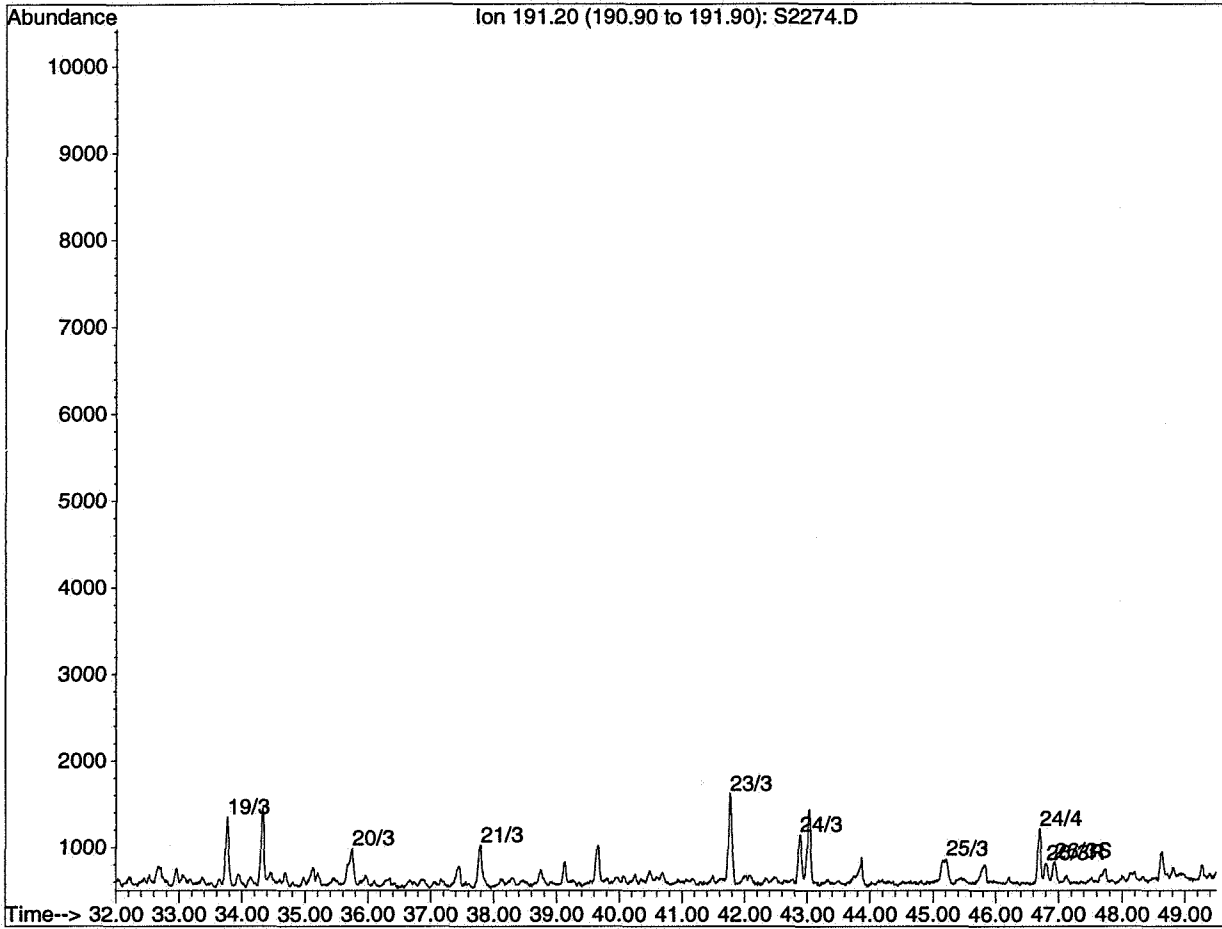
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2274.D Name: 35/11-10 2274 coch

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:30:37 1997



Title: Saturated HC (FID) and Biomarkers (MSD)

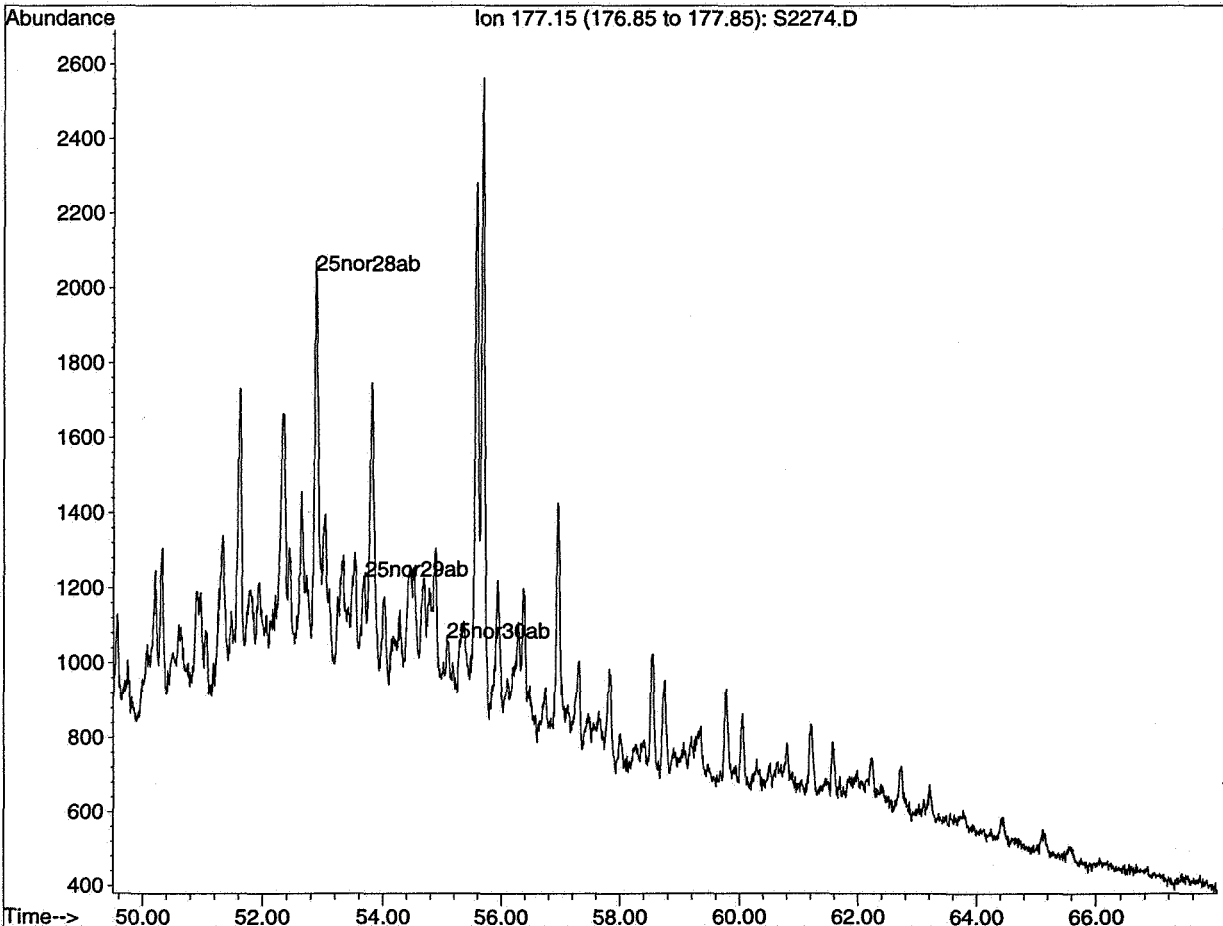
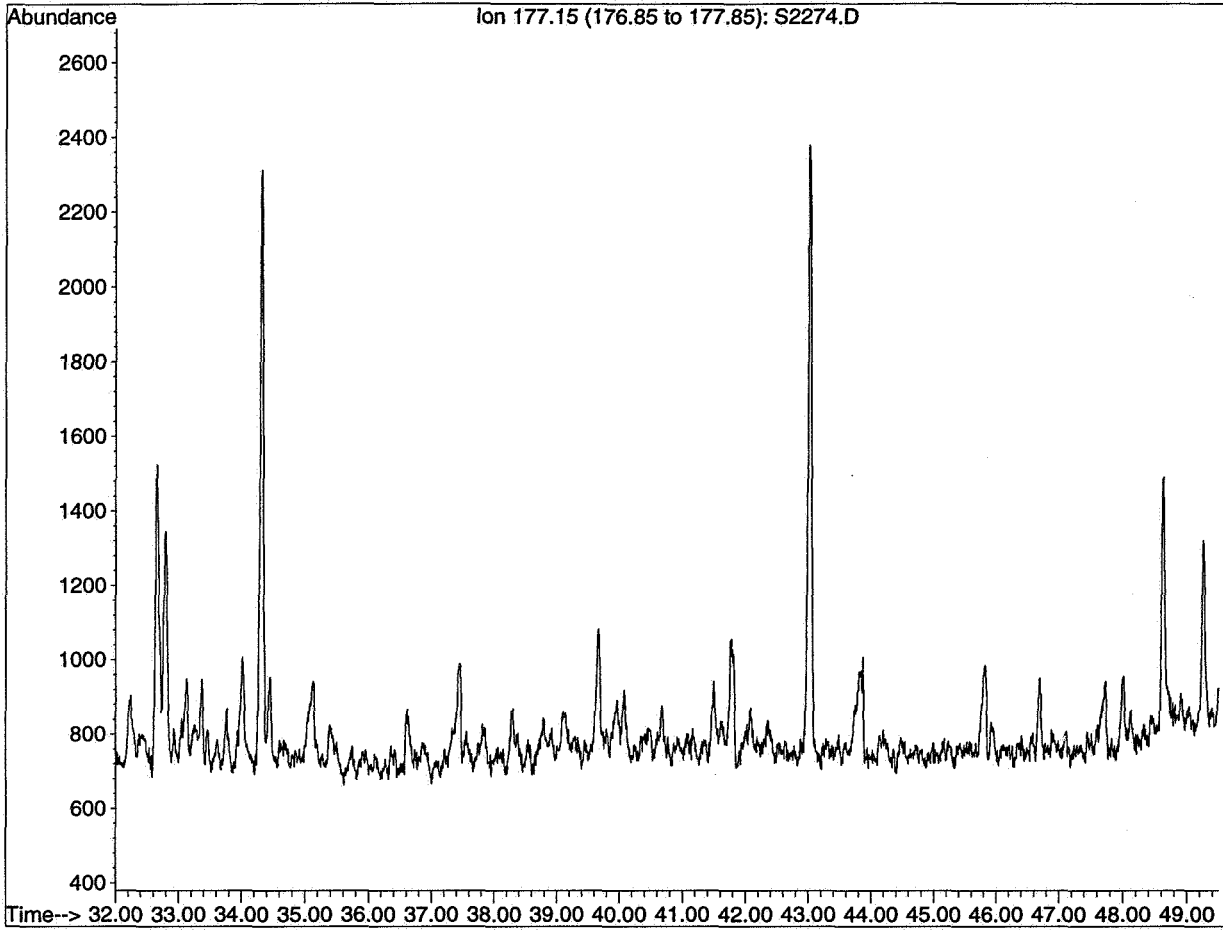
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2274.D Name: 35/11-10 2274 coch

Misc:

Method: MSD\_S\_D

.....Operator:

Date Reported: Tue Nov 04 11:30:52 1997



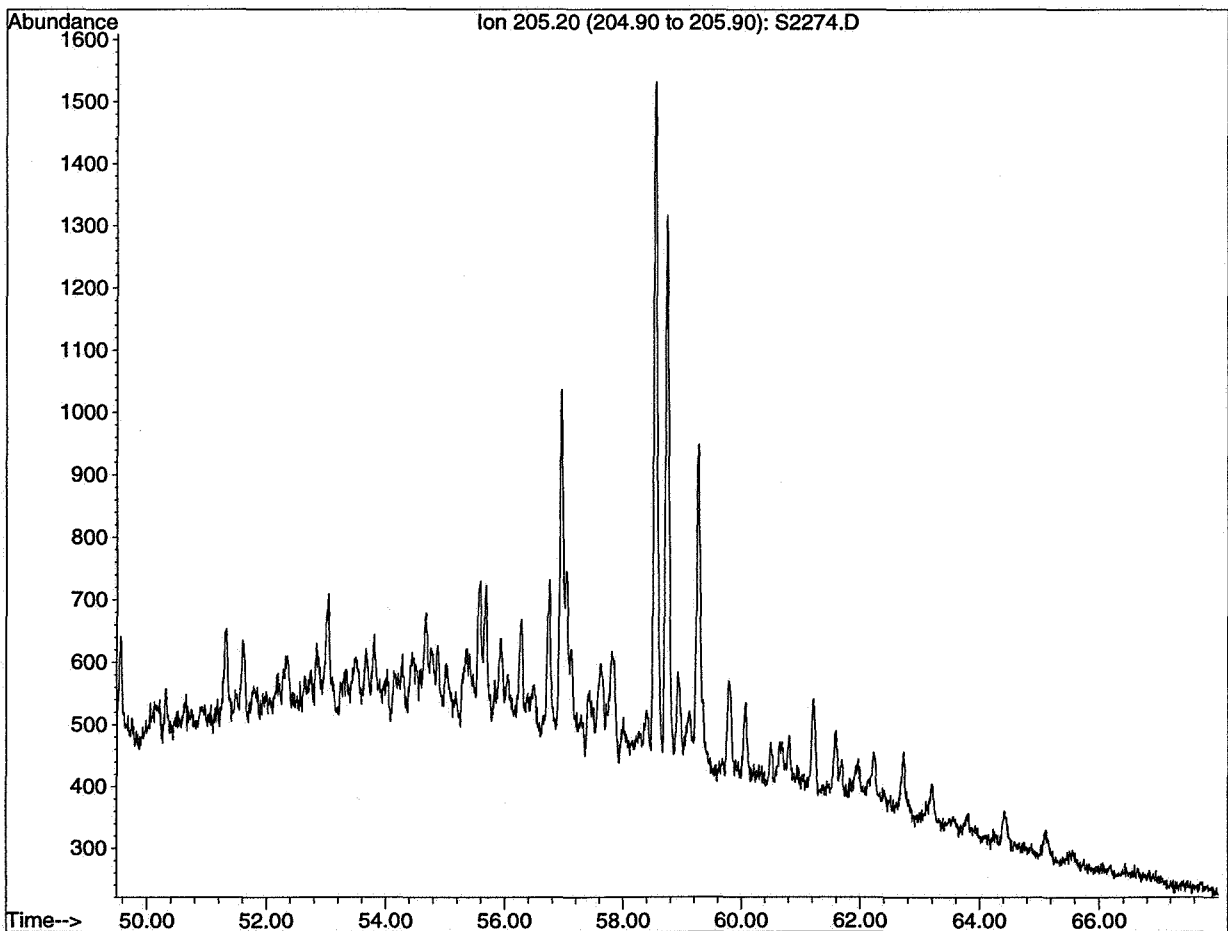
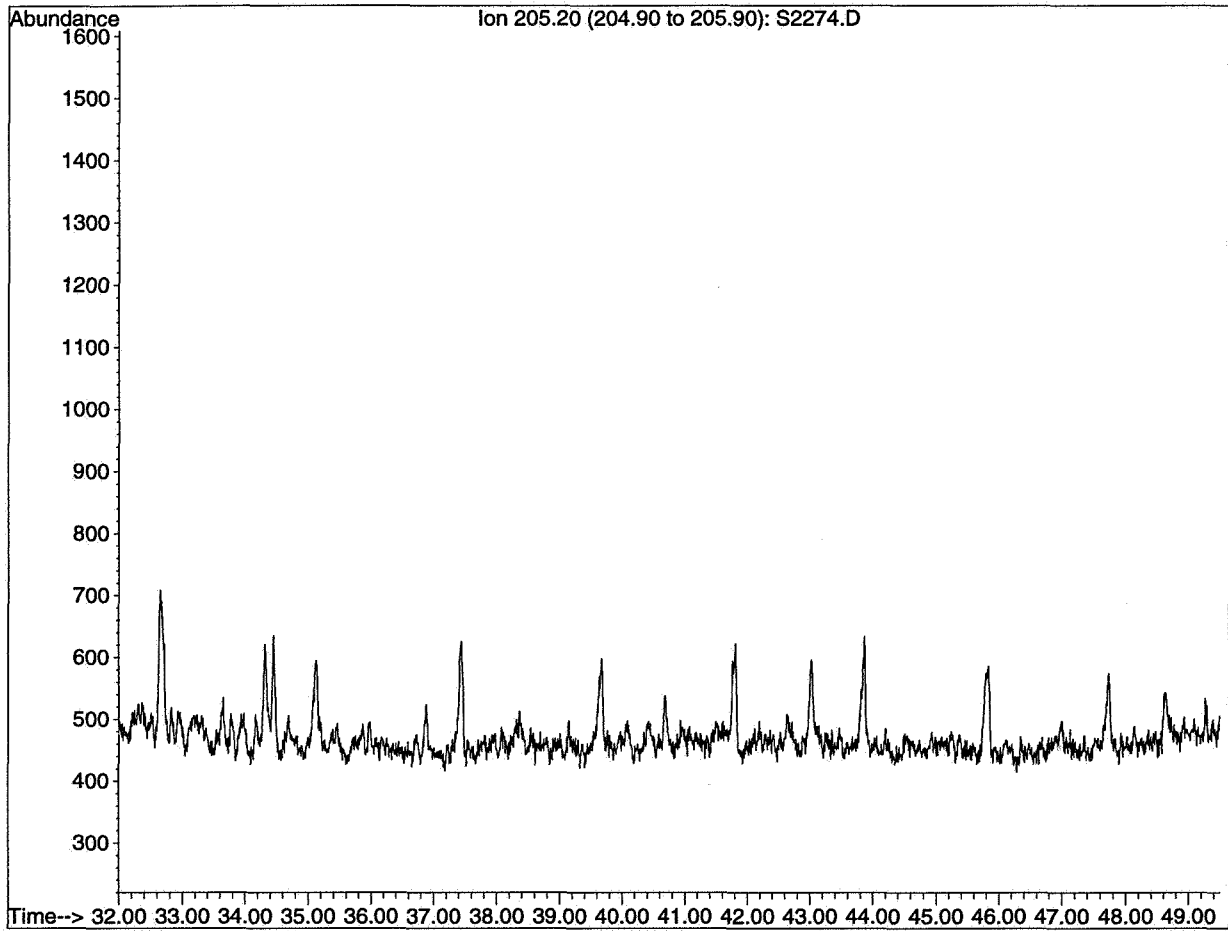
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2274.D Name: 35/11-10 2274 coch

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:30:59 1997



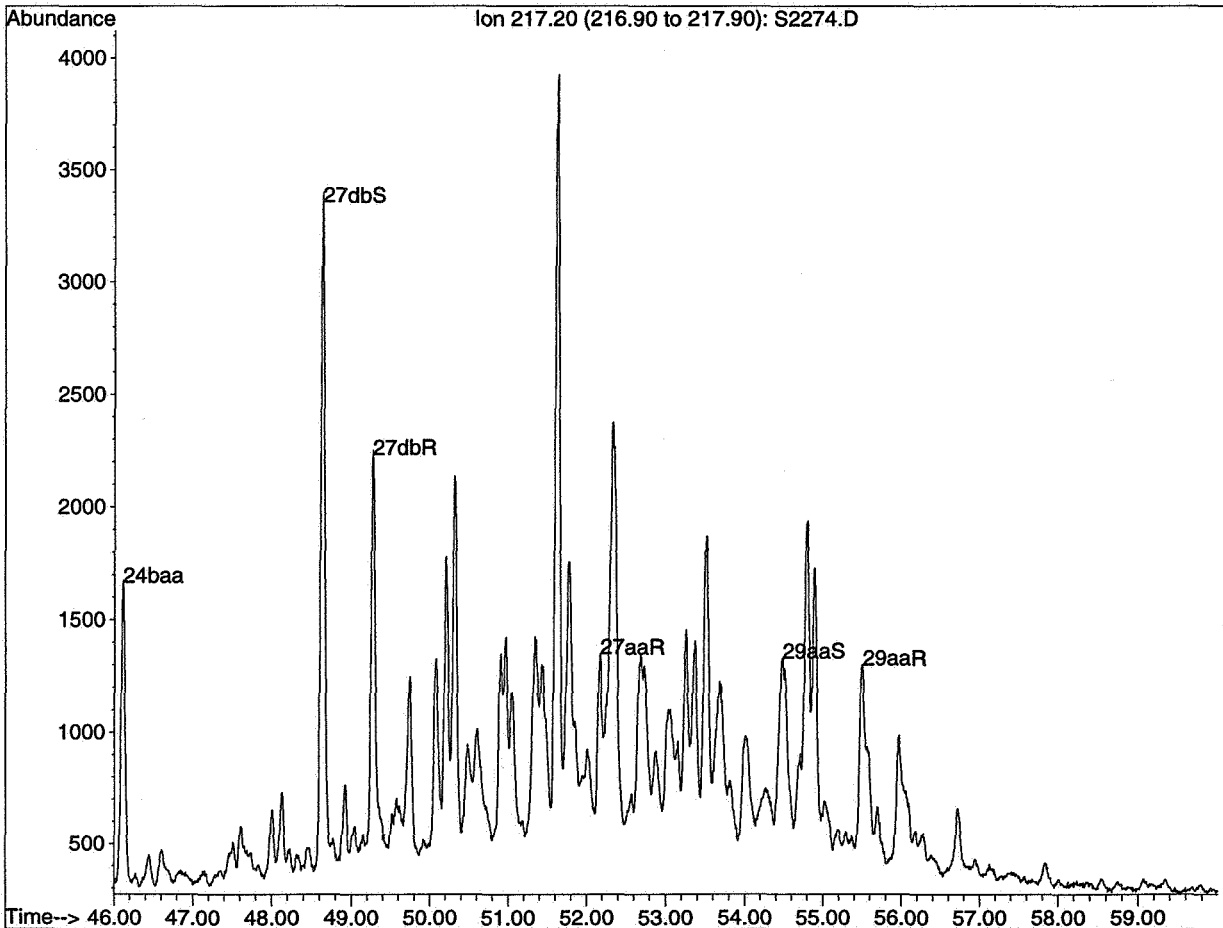
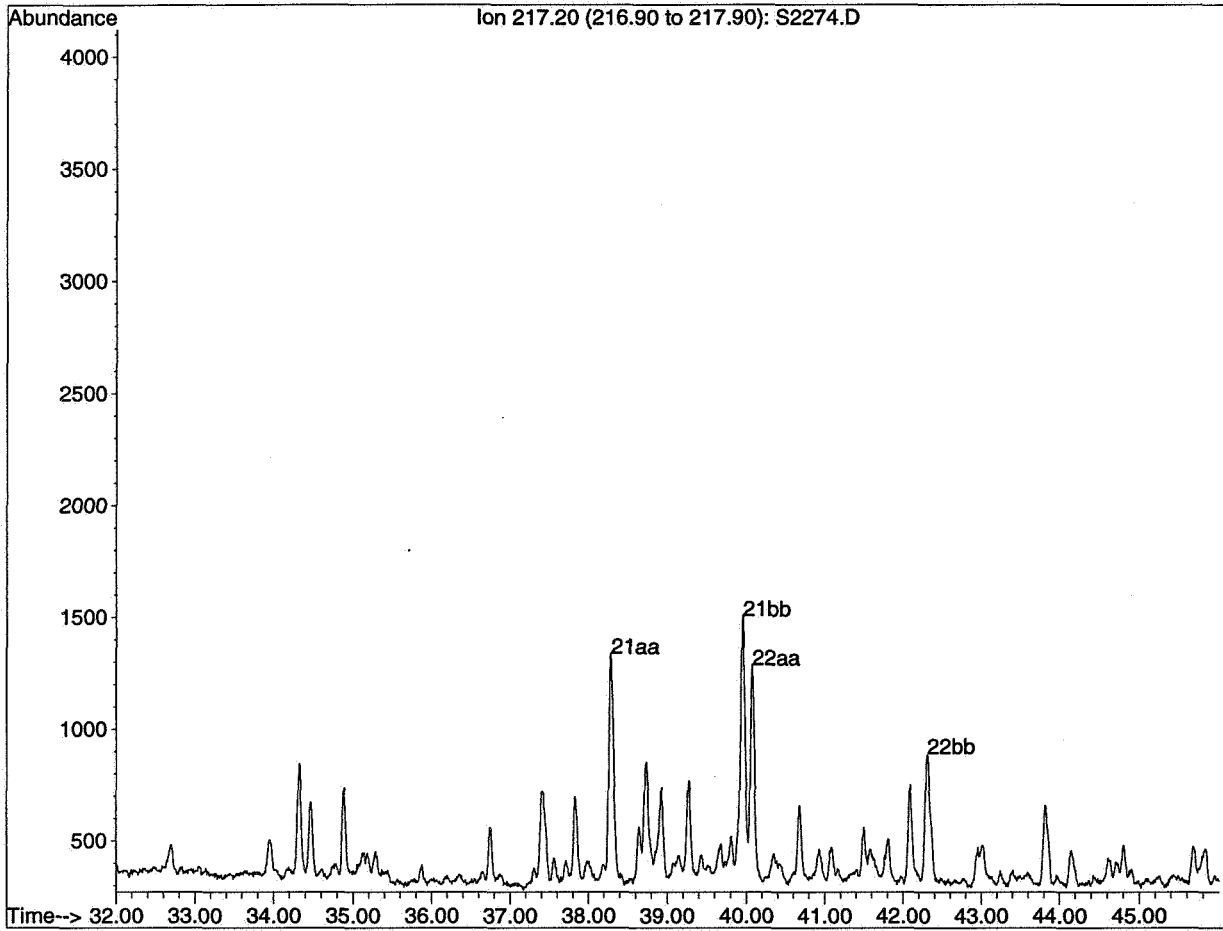
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2274.D Name: 35/11-10 2274 coch

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:31:05 1997



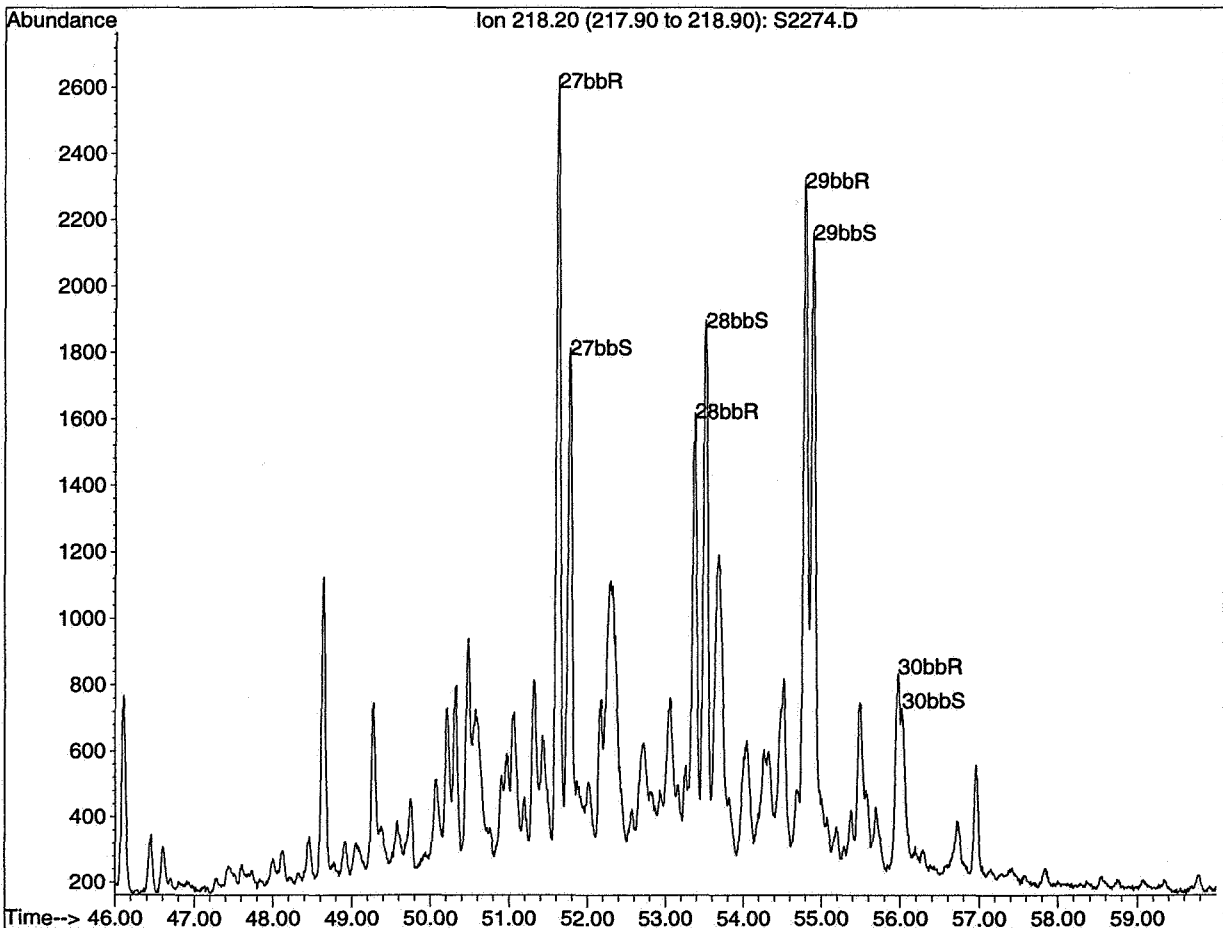
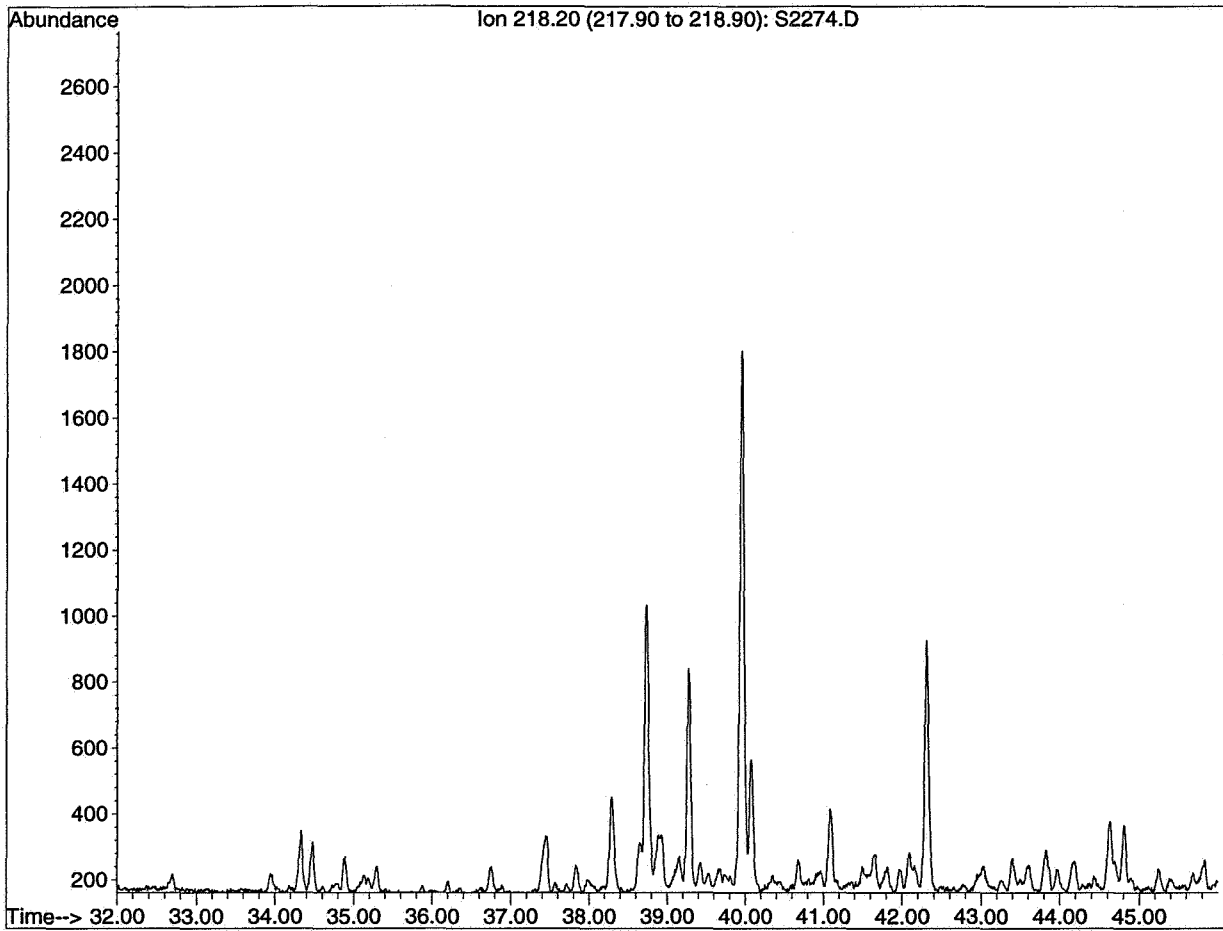
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2274.D Name: 35/11-10 2274 coch

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:31:15 1997



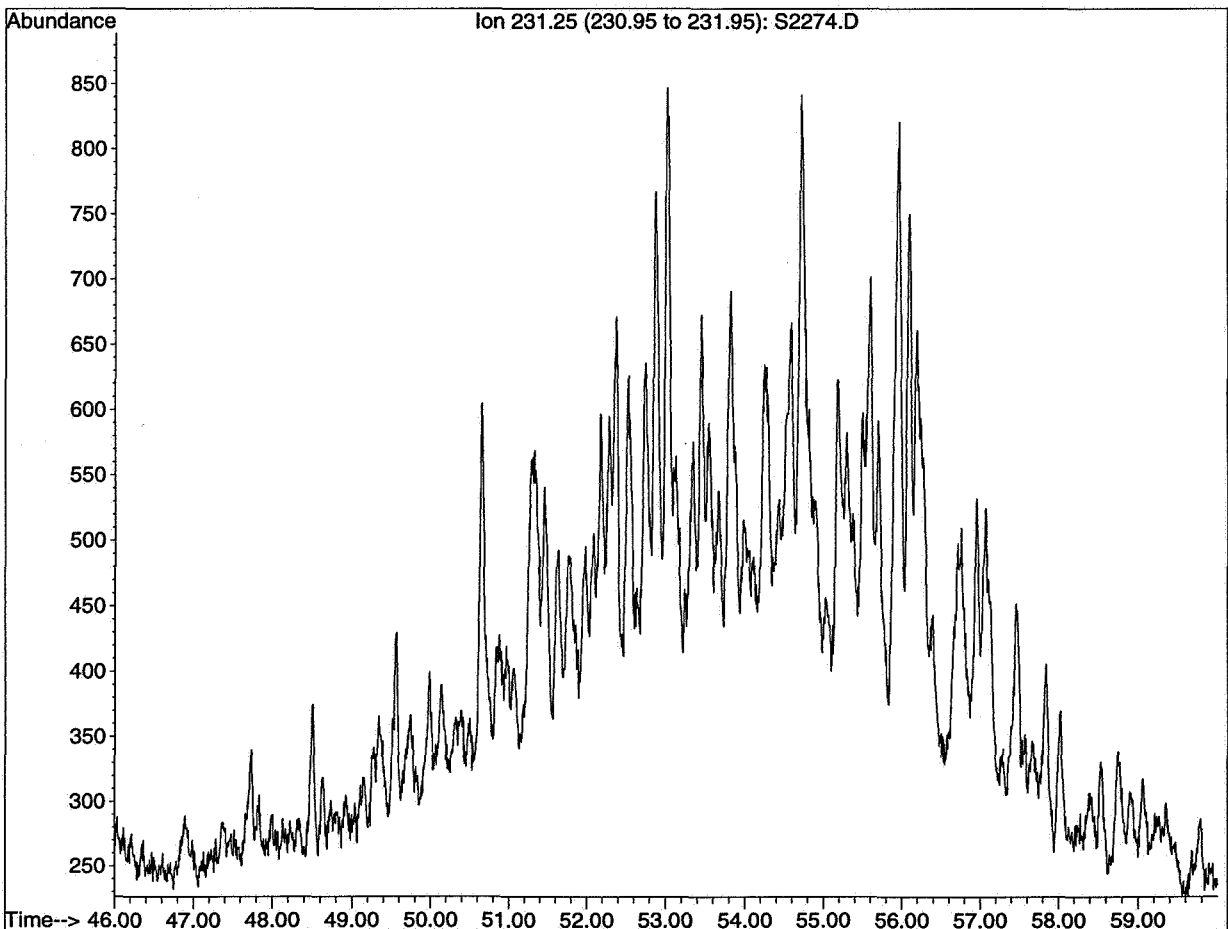
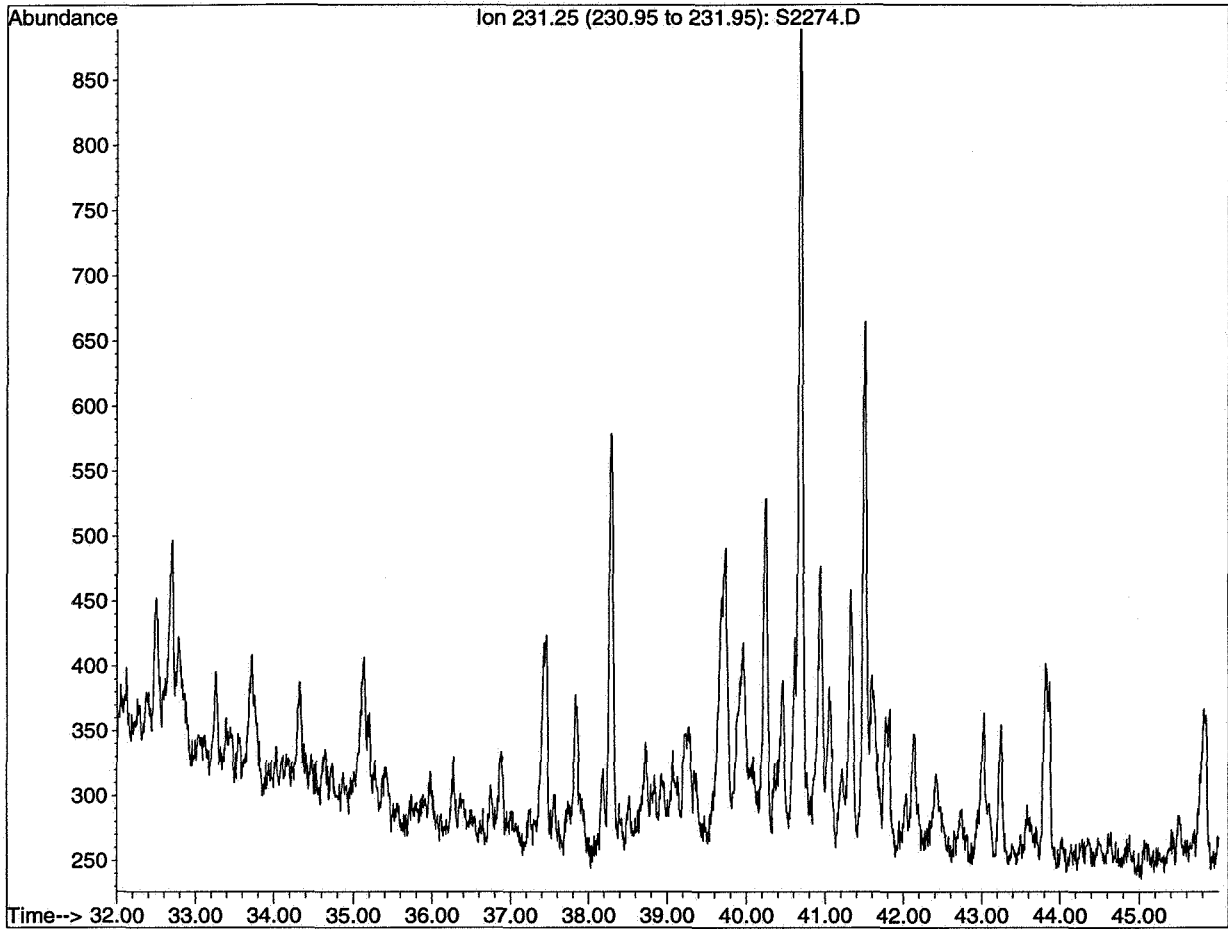
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2274.D Name: 35/11-10 2274 coch

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:31:23 1997



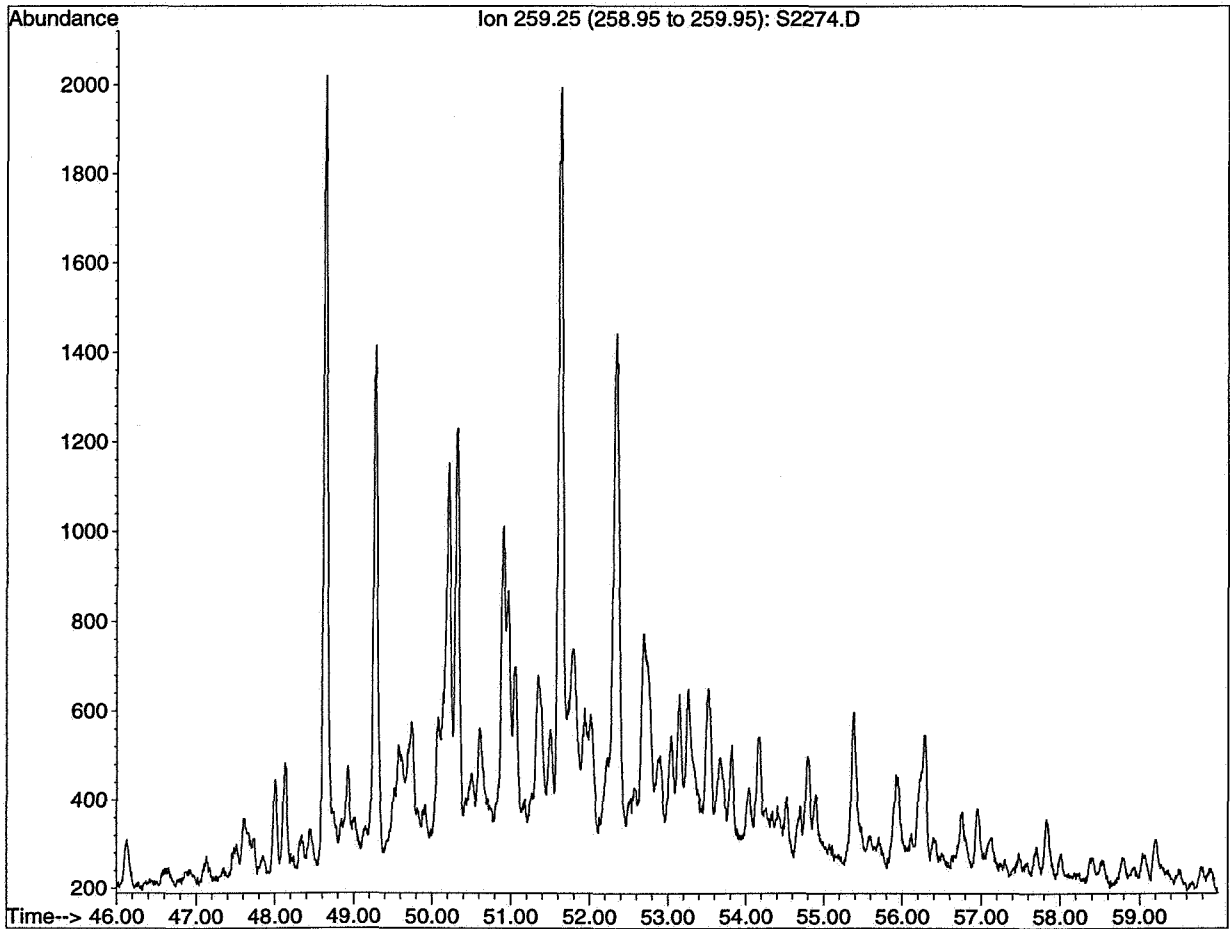
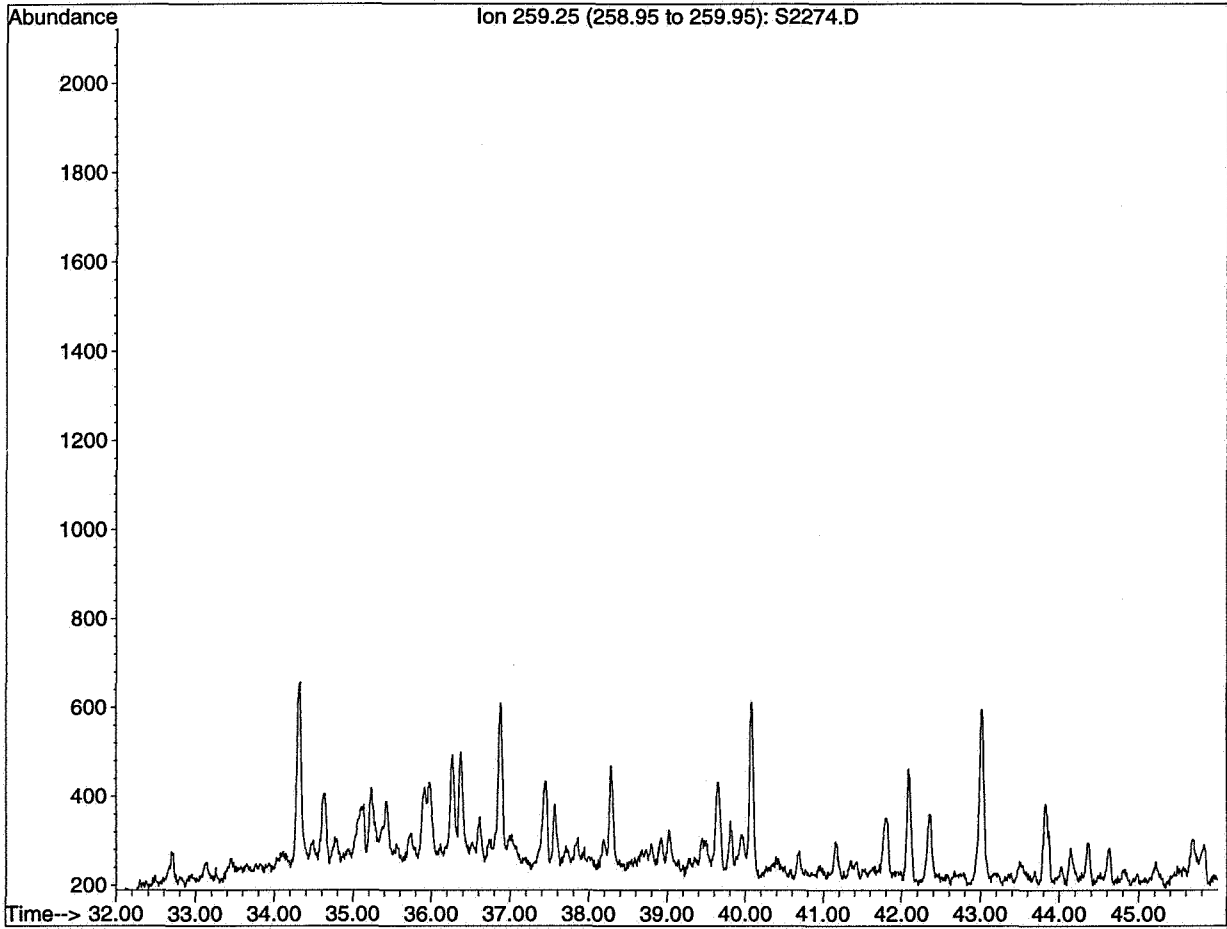
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2274.D Name: 35/11-10 2274 coch

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:31:30 1997



### Saturated biomarkers

GC/MS detection HP-6890/5973

#### Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: S2280\_8.D  
Sample name: 35/11-10 2280.8 coch sat  
Data File Path: K:\CAM\GEOKJEM\HPCHEM\MW95\DATA\SA351110\

Misc. info.:

Vial no.: 8  
Method: MSD\_S\_D  
Operator:  
Date: Thu Oct 30 06:10:39 1997

Response curve  $y = ax$   
Response factor groups: s1...s3, responses as defined in method

#	Rt.min.	m/z	Rf.	Name	Height	Amount
						ng/mg
Internal standard (if added):						
1)	46.12	217.2		24baa	3205	30
<b>Diterpanes:</b>						
2)	33.77	191.2	s1	19/3	1051	7
3)	35.75	191.2	s1	20/3	591	4
4)	37.80	191.2	s1	21/3	684	5
5)	41.77	191.2	s1	23/3	1313	9
6)	42.90	191.2	s1	24/3	758	5
7)	45.19	191.2	s1	25/3	375	3
8)	46.70	191.2	s1	24/4	943	7
9)	46.81	191.2	s1	26/3R	281	2
10)	46.95	191.2	s1	26/3S	329	2
11)	50.48	191.2	s1	28/3R	335	2
12)	50.71	191.2	s1	28/3S	378	3
13)	51.50	191.2	s1	29/3R	503	4
14)	51.79	191.2	s1	29/3S	460	3
<b>Triterpanes:</b>						
15)	52.65	191.2	s1	27Ts	3383	24
16)	52.89	177.2	s1	25nor28ab	1453	10
17)	53.33	191.2	s1	27Tm	1441	10
18)	53.70	177.2	s1	25nor29ab	219	2
19)	53.78	191.2	s1	27b	408	3
20)	54.89	191.2	s1	28ab	1739	12
21)	55.09	177.2	s1	25nor30ab	225	2
22)	55.59	191.2	s1	29ab	4324	31
23)	55.70	191.2	s1	29Ts	2955	21
24)	55.95	191.2	s1	30D	3053	22
25)	56.30	191.2	s1	29ba	432	3
26)	56.97	191.2	s2	30ab	11796	54
27)	57.30	191.2	s1	30D13	831	6
28)	57.59	191.2	s2	30ba	1156	5
29)	58.55	191.2	s1	31abS	4458	32
30)	58.75	191.2	s1	31abR	3532	25
31)	59.08	191.2	s1	30G	620	4
32)	59.29	191.2	s1	31ba	608	4
33)	59.78	191.2	s1	32abS	3550	25
34)	60.06	191.2	s1	32abR	2367	17
35)	61.21	191.2	s1	33abS	2550	18
36)	61.59	191.2	s1	33abR	1681	12
37)	62.73	191.2	s1	34abS	1641	12
38)	63.23	191.2	s1	34abR	953	7
39)	64.45	191.2	s1	35abS	1106	8
40)	65.15	191.2	s1	35abR	690	5

#	Rt.min.	m/z	Rf.	Name	Height	Amount
						ng/mg
<b>Steranes:</b>						
41)	38.30	217.2	s3	21aa	1355	14
42)	39.97	217.2	s3	21bb	1637	17
43)	40.08	217.2	s3	22aa	1269	13
44)	42.32	217.2	s3	22bb	831	9
45)	48.65	217.2	s3	27dbS	3643	37
46)	49.28	217.2	s3	27dbR	2191	22
47)	51.63	218.2	s3	27bbR	2825	29
48)	51.78	218.2	s3	27bbS	1800	18
49)	52.19	217.2	s3	27aaR	1000	10
50)	53.37	218.2	s3	28bbR	1526	16
51)	53.52	218.2	s3	28bbS	1994	20
52)	54.51	217.2	s3	29aaS	983	10
53)	54.80	218.2	s3	29bbR	2391	25
54)	54.91	218.2	s3	29bbS	2271	23
55)	55.50	217.2	s3	29aaR	1171	12
56)	55.98	218.2	s3	30bbR	690	7
57)	56.03	218.2	s3	30bbS	588	6

### Saturated biomarkers

GC/MS detection HP-6890/5973

Ratios, from heights and amounts



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: S2280\_8.D  
Sample name: 35/11-10 2280.8 coch sat  
Data File Path: K:\CAM\GEOKJEMI\HPCHEM\MW95\DATA\SA351110A  
Misc. info.:

Vial no.: 8  
Method: MSD\_S\_D  
Operator:  
Date: Thu Oct 30 06:10:39 1997

Terpane ratios, heights and amounts		Height	Amount
100*((sum20-25)/3+26/3(R+S)) / ((sum20-25)/3+26/3(R+S)+27(Ts+Tm)+28ab+sum29-30(ab+ba)+sum31-35ab(R+S))	%Tri	8	9
100*20/3/((sum20-25)/3+26/3(R+S))	%20/3	14	14
100*23/3/(23/3+24/3+25/3)	%23/3	54	54
100*24/4/(24/4+24/3+25/3)	%24/4	45	45
100*Ts/(Ts+Tm)	%27Ts	70	70
100*28ab/(28ab+30ab)	%28ab	13	19
100*29Ts/(29Ts+29ab)	%29Ts	41	41
100*25nor30ab/(25nor30ab+30ab)	%25nor30ab	2	3
100*29ab/(29ab+30ab)	%29ab	27	36
100*30ba/(30ba+30ab)	%30ba	9	9
100*30D/(30D+30ab)	%30D	21	29
100*30G/(30G+30ab)	%30G	5	8
100*32abS/(32ab(S+R))	%32abS	60	60
100*35ab(S+R)/(34-35ab(S+R))	%35ab	41	41
100*(27Ts+27Tm)/(27Ts+27Tn+28ab+sum29-30(ab+ba)+sum31-35ab(R+S))	%27HOP	10	11
100*(28ab)/(27Ts+27Tn+28ab+sum29-30(ab+ba)+sum31-35ab(R+S))	%28HOP	4	4
100*(29ab+ba)/(27Ts+27Tn+28ab+sum29-30(ab+ba)+sum31-35ab(R+S))	%29HOP	10	11
100*(30ab+ba)/(27Ts+27Tn+28ab+sum29-30(ab+ba)+sum31-35ab(R+S))	%30HOP	28	20
100*31ab(S+R)/(27Ts+27Tn+28ab+sum29-30(ab+ba)+sum31-35ab(R+S))	%31HOP	17	19
100*32ab(S+R)/(27Ts+27Tn+28ab+sum29-30(ab+ba)+sum31-35ab(R+S))	%32HOP	13	14
100*33ab(S+R)/(27Ts+27Tn+28ab+sum29-30(ab+ba)+sum31-35ab(R+S))	%33HOP	9	10
100*34ab(S+R)/(27Ts+27Tn+28ab+sum29-30(ab+ba)+sum31-35ab(R+S))	%34HOP	6	6
100*35ab(S+R)/(27Ts+27Tn+28ab+sum29-30(ab+ba)+sum31-35ab(R+S))	%35HOP	4	4
<b>Sterane ratios</b>			
100*(21+22)bb/((21+22)bb+(27+28+29+30)bb(R+S))	%Preg	15	15
100*29aaS/29aa(R+S)	%29aaS	46	46
100*29bb(R+S)/(29bb(R+S)+29aa(S+R))	%29bb	68	68
100*27db(S+R)/(27db(S+R)+27bb(R+S))	%27dia	56	56
100*27bb(R+S)/(27+28+29+30)bb(R+S)	%27STER	33	33
100*28bb(R+S)/(27+28+29+30)bb(R+S)	%28STER	25	25
100*29bb(R+S)/(27+28+29+30)bb(R+S)	%29STER	33	33
100*30bb(R+S)/(27+28+29+30)bb(R+S)	%30STER	9	9

Title: Saturated HC (FID) and Biomarkers (MSD)

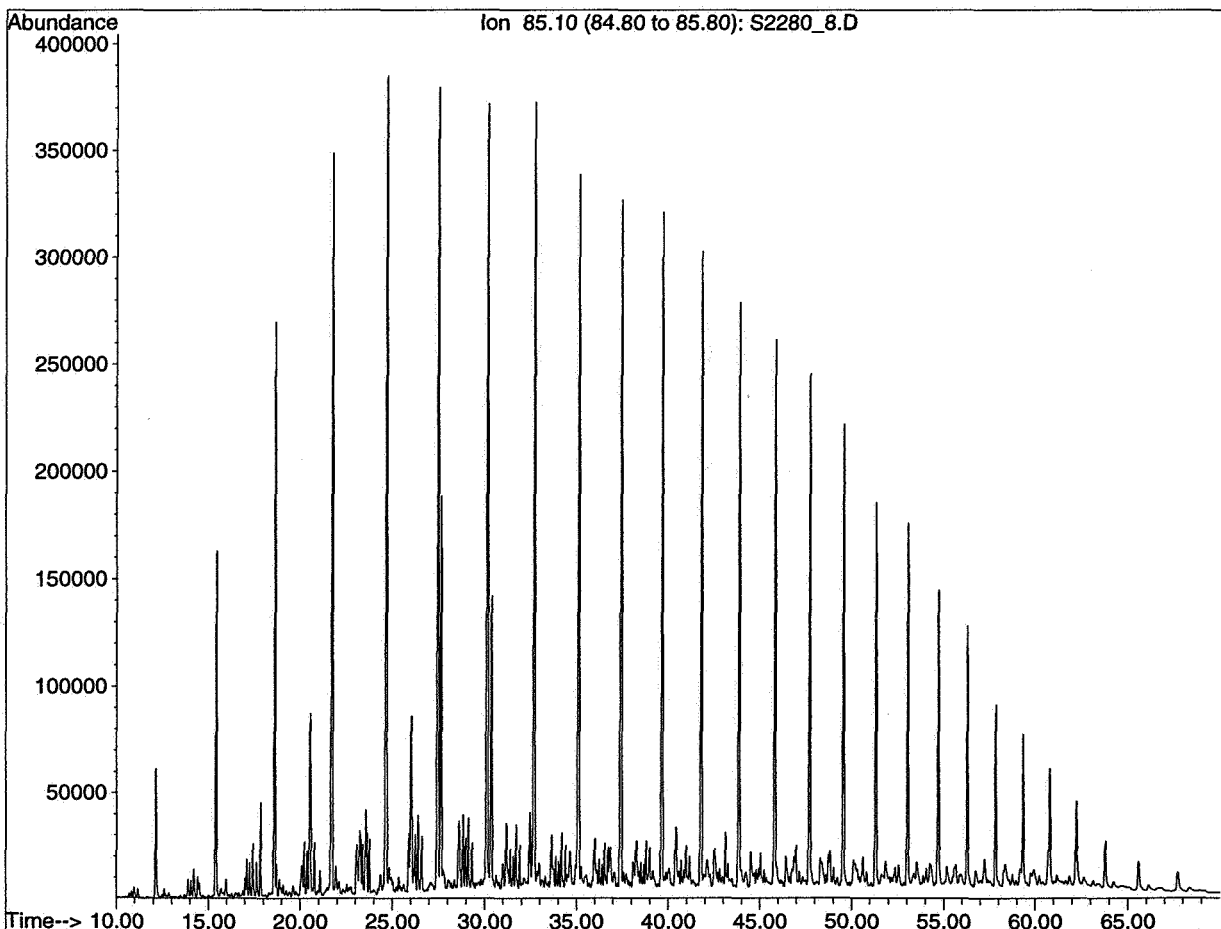
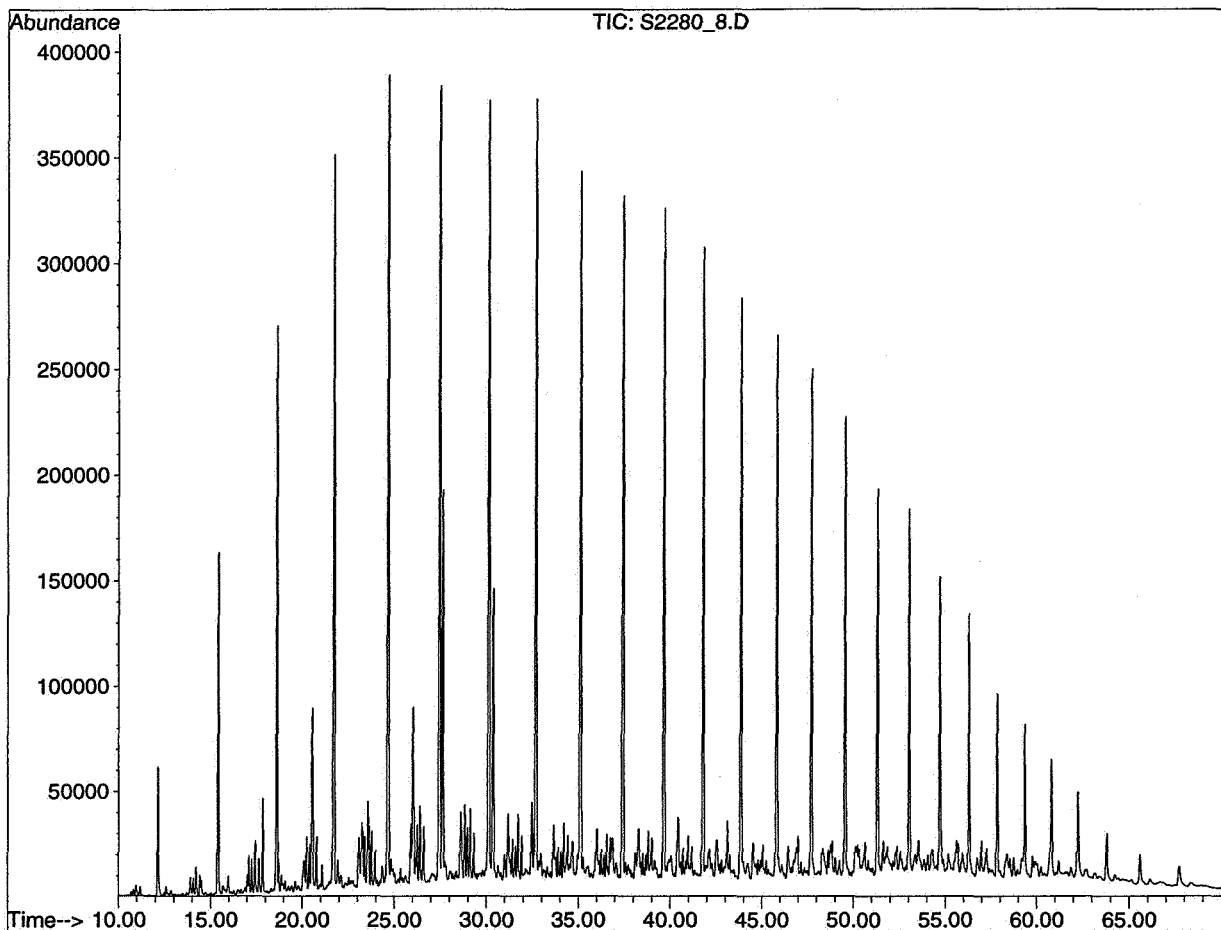
Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2280\_8.D Name: 35/11-10 2280.8

Misc:

Method: MSD\_S\_D

.....Operator:

Date Reported: Tue Nov 04 11:37:16 1997



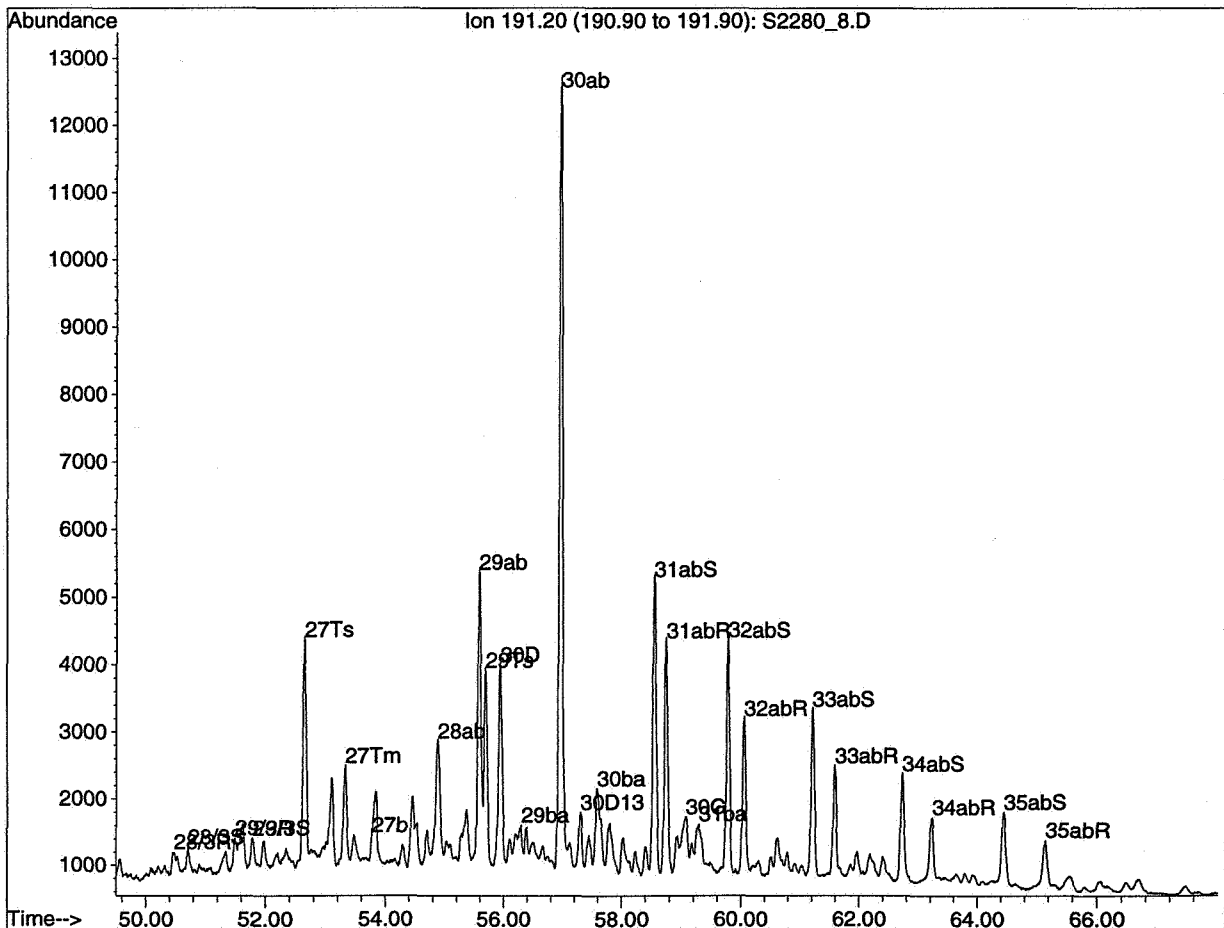
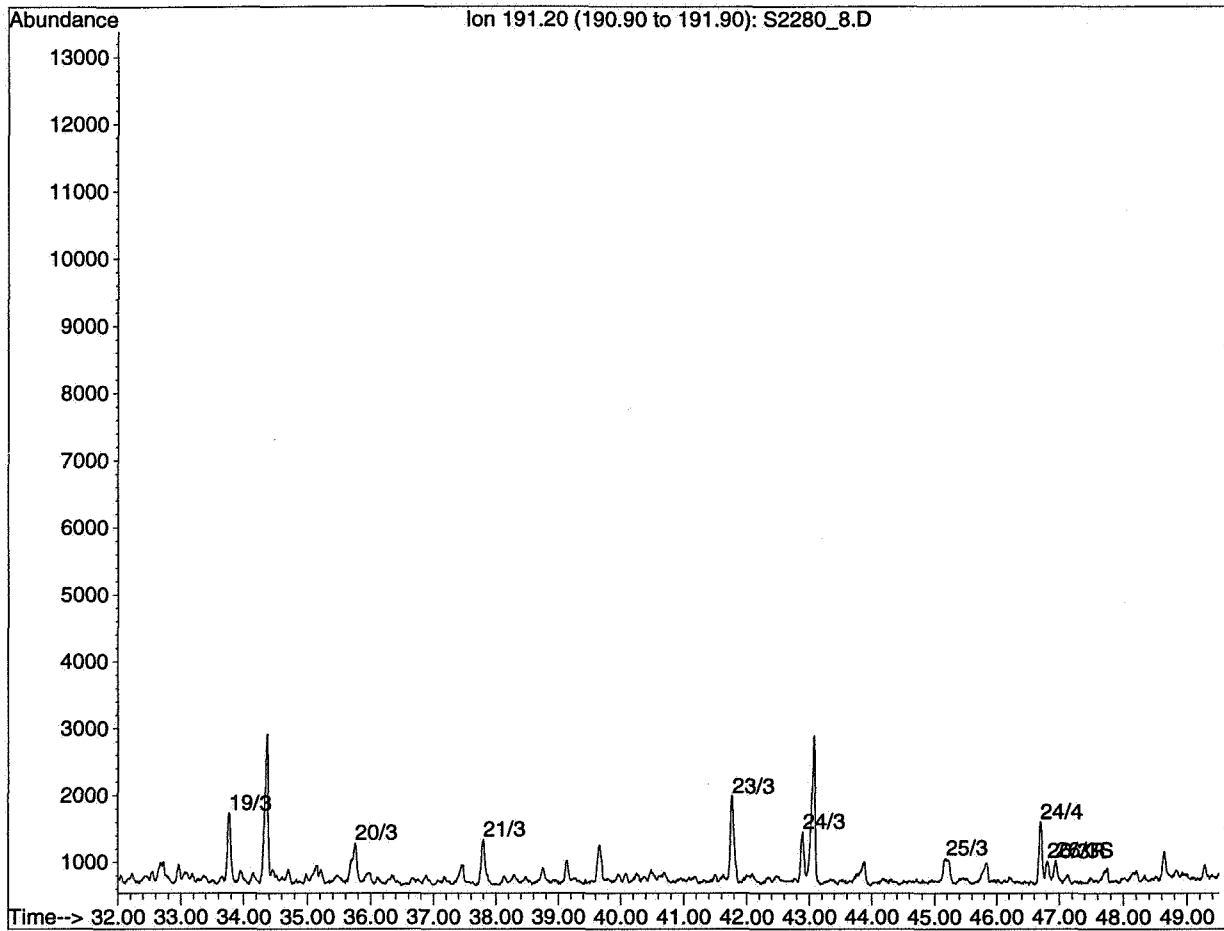
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2280\_8.D Name: 35/11-10 2280.8

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:37:20 1997



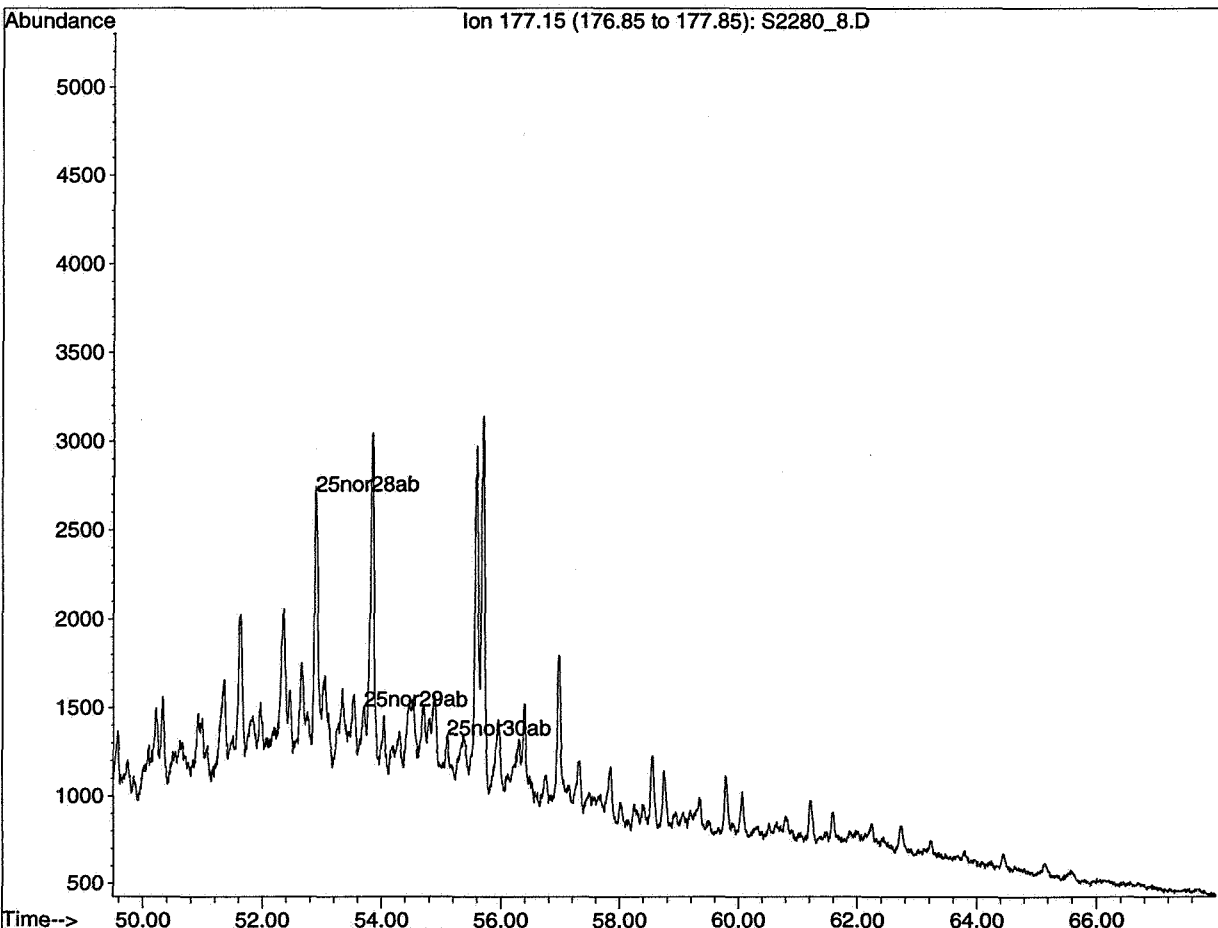
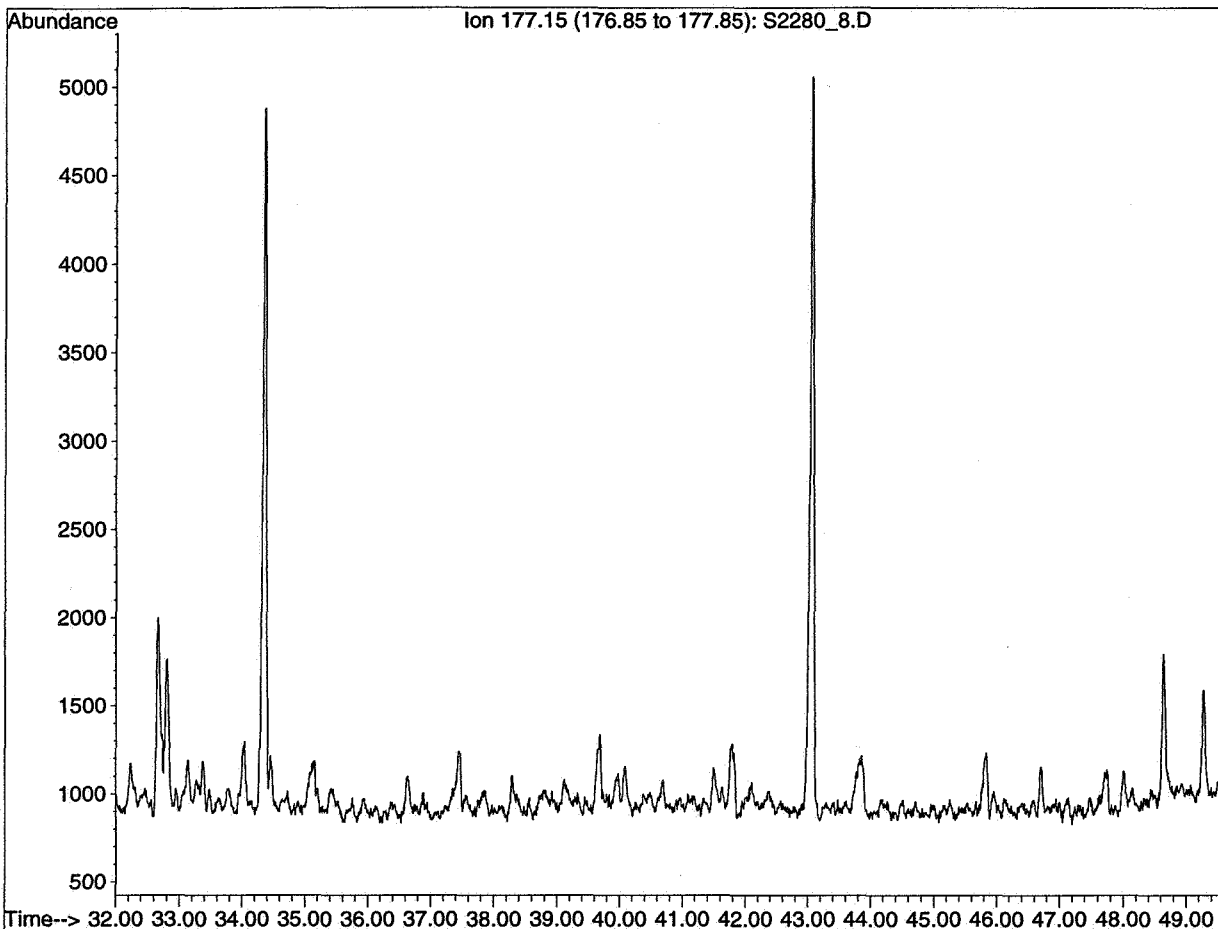
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2280\_8.D Name: 35/11-10 2280.8

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:37:37 1997



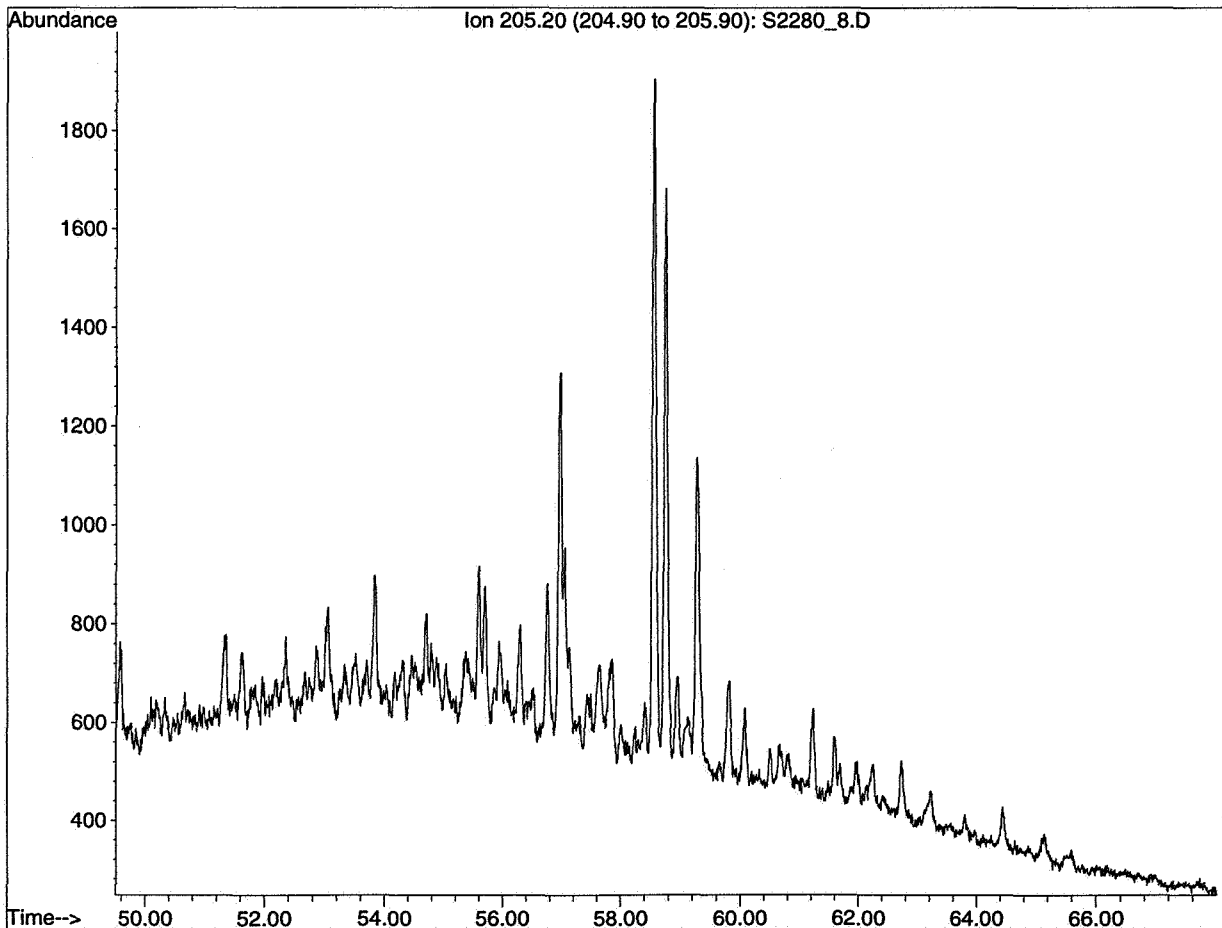
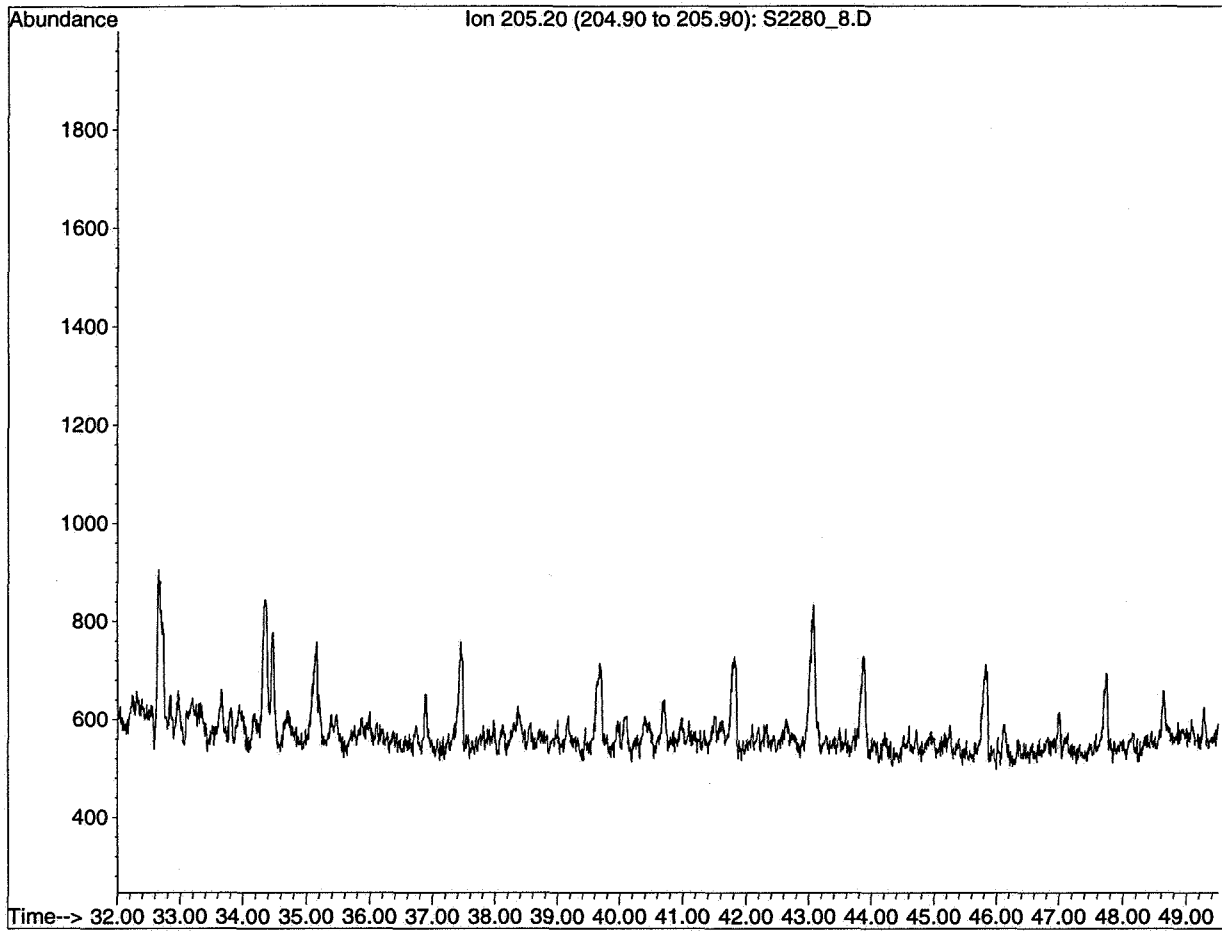
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2280\_8.D Name: 35/11-10 2280.8

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:37:44 1997



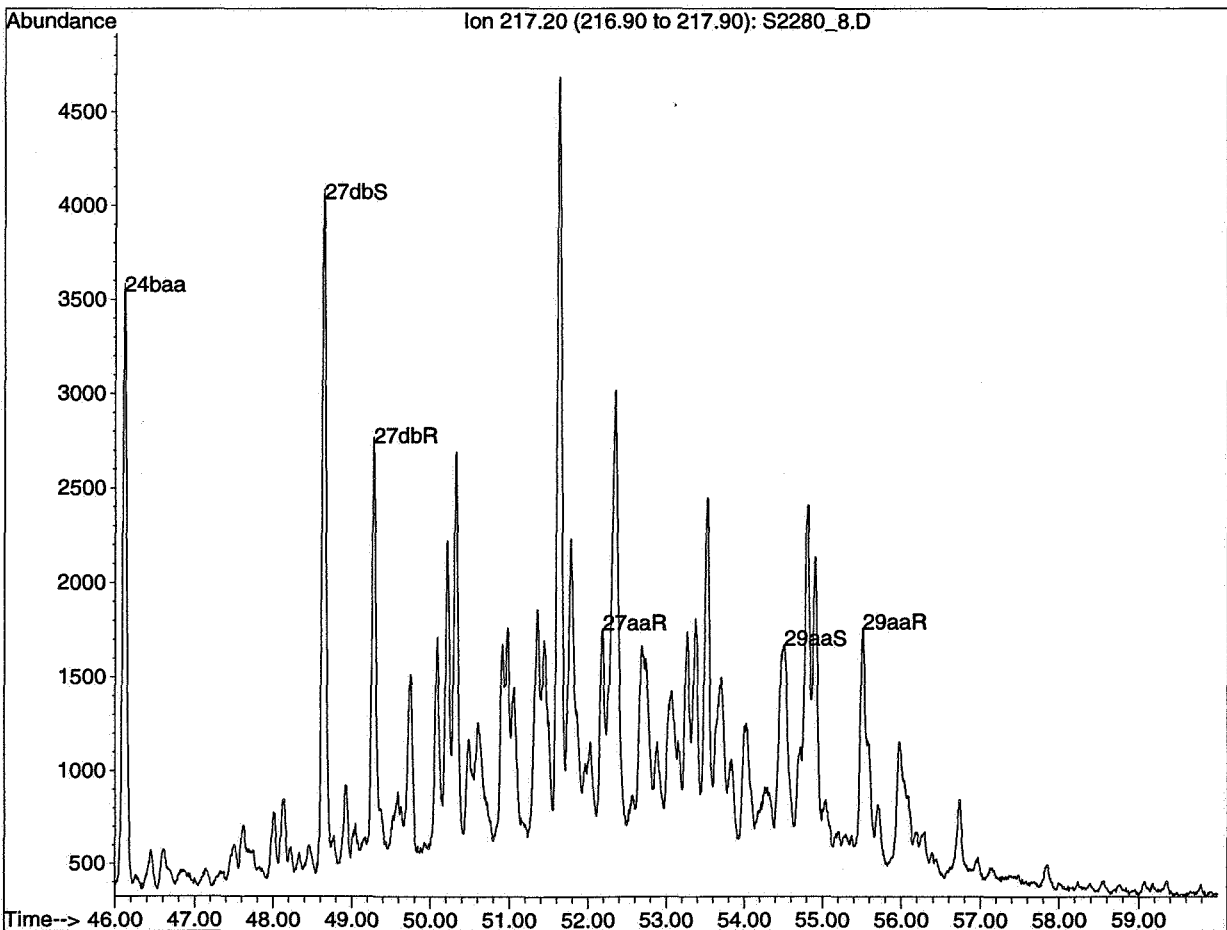
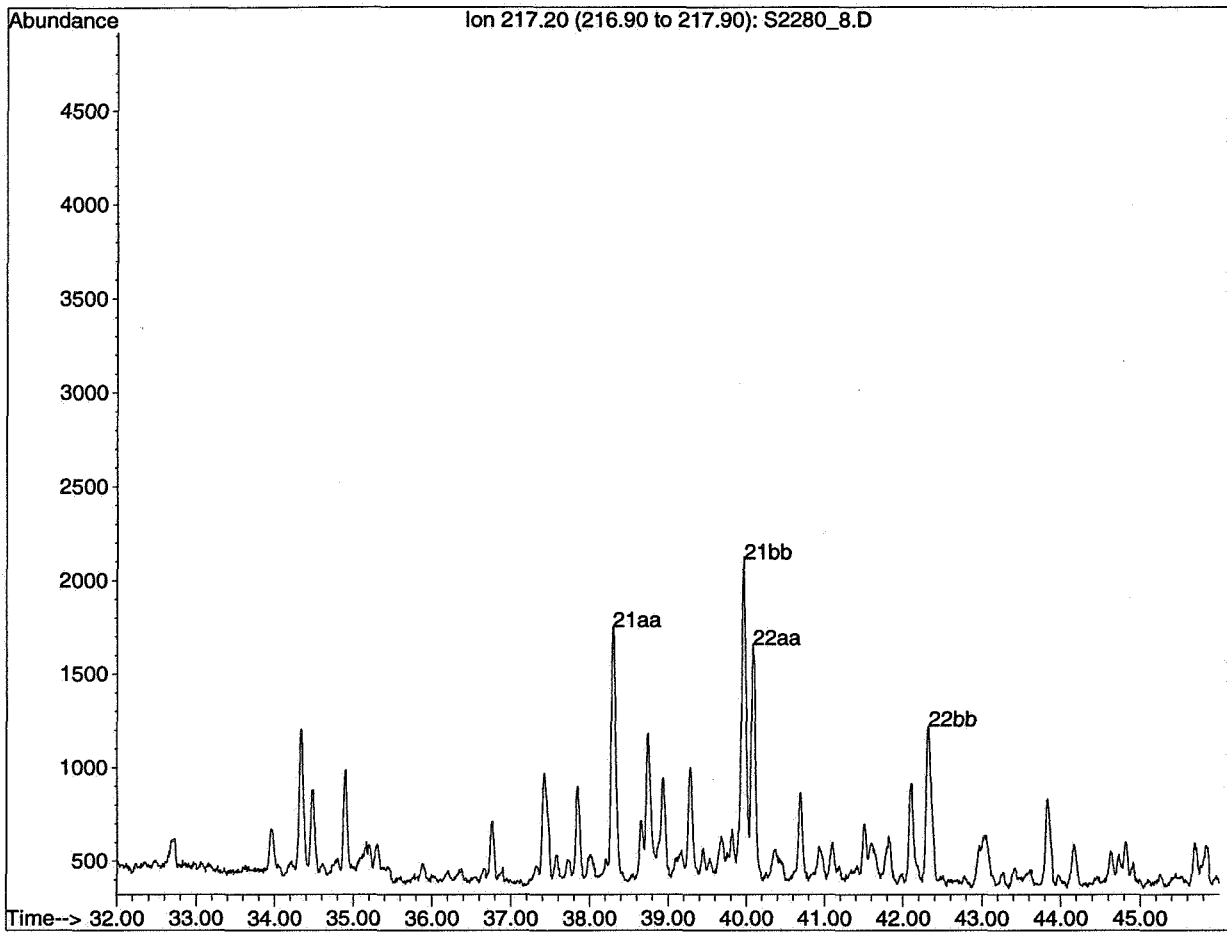
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2280\_8.D Name: 35/11-10 2280.8

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:37:49 1997



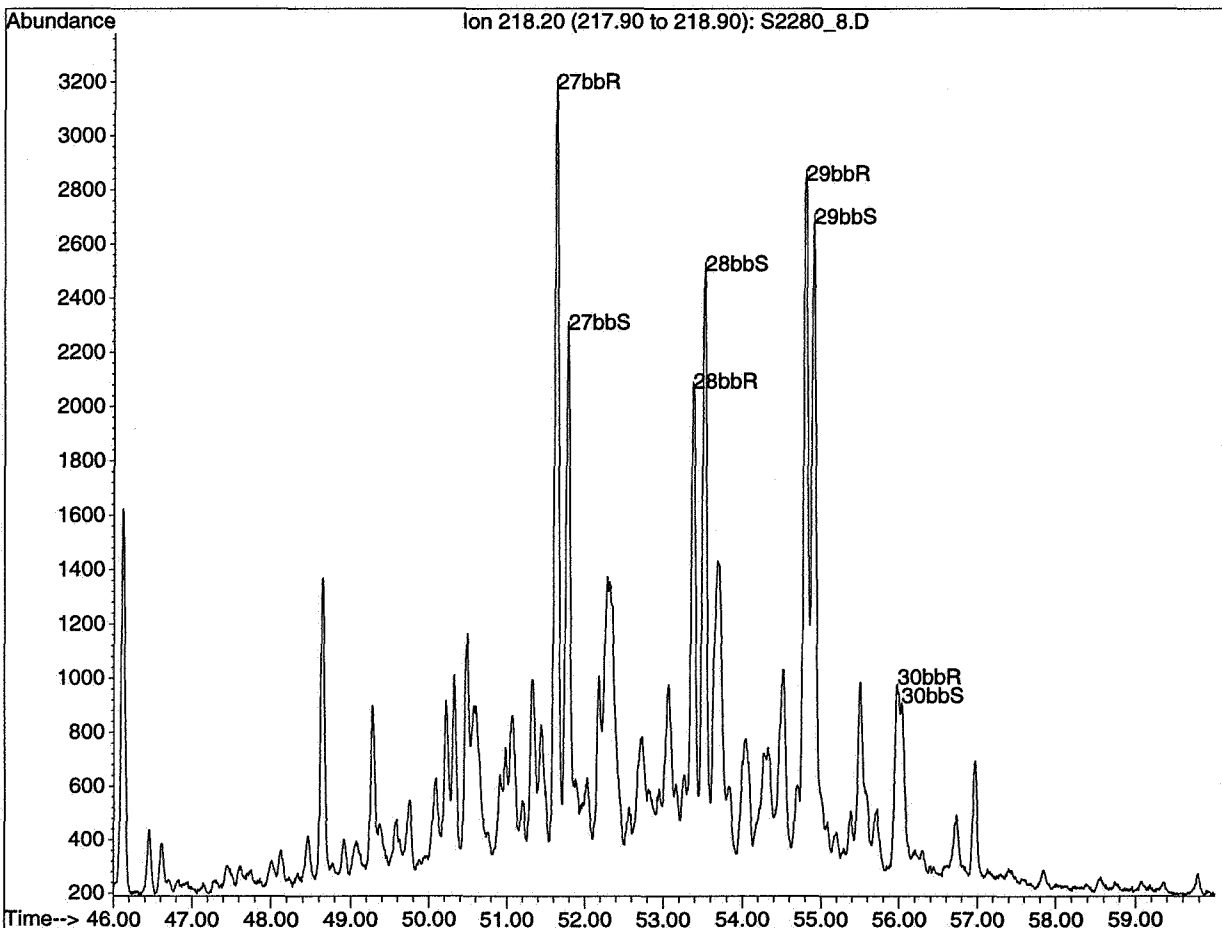
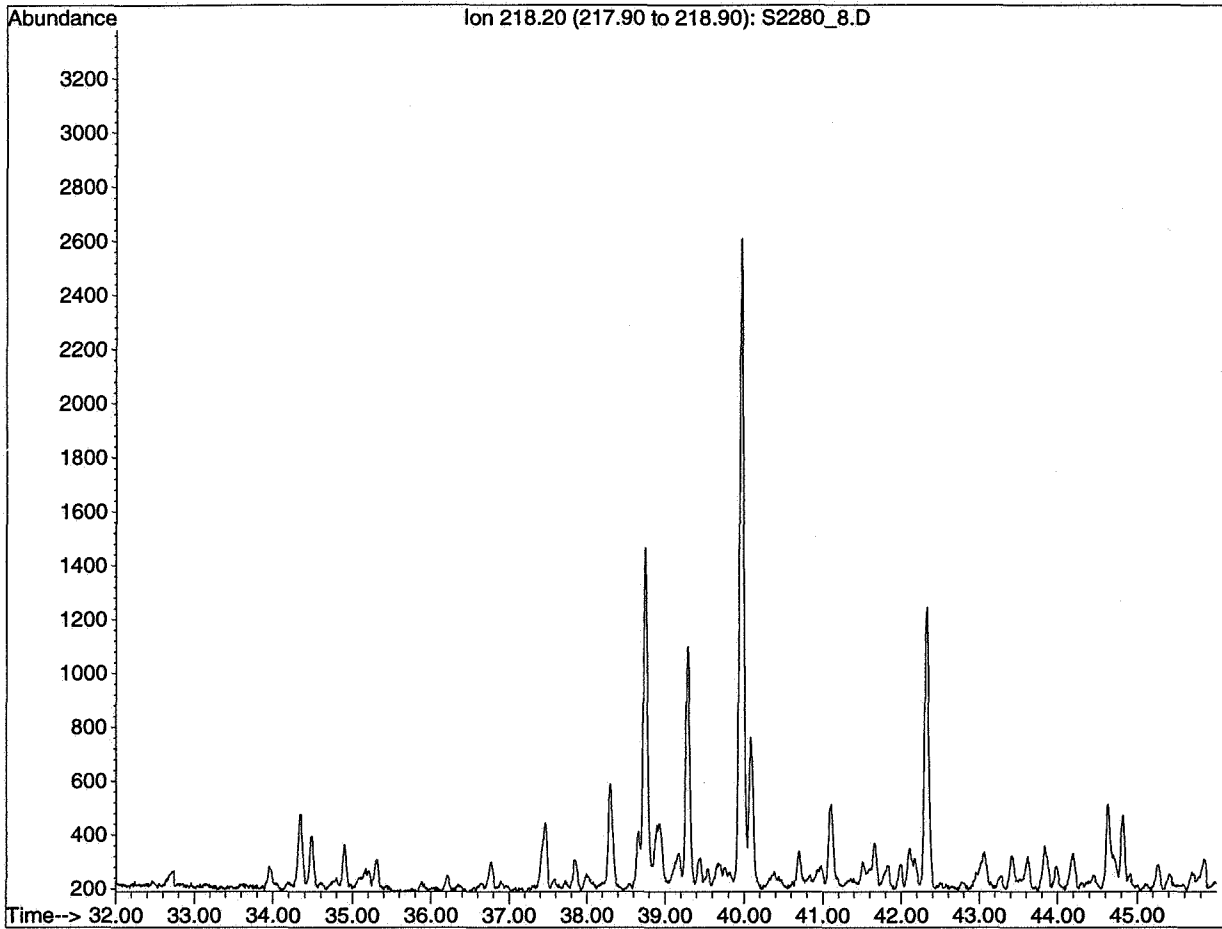
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2280\_8.D Name: 35/11-10 2280.8

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:37:58 1997



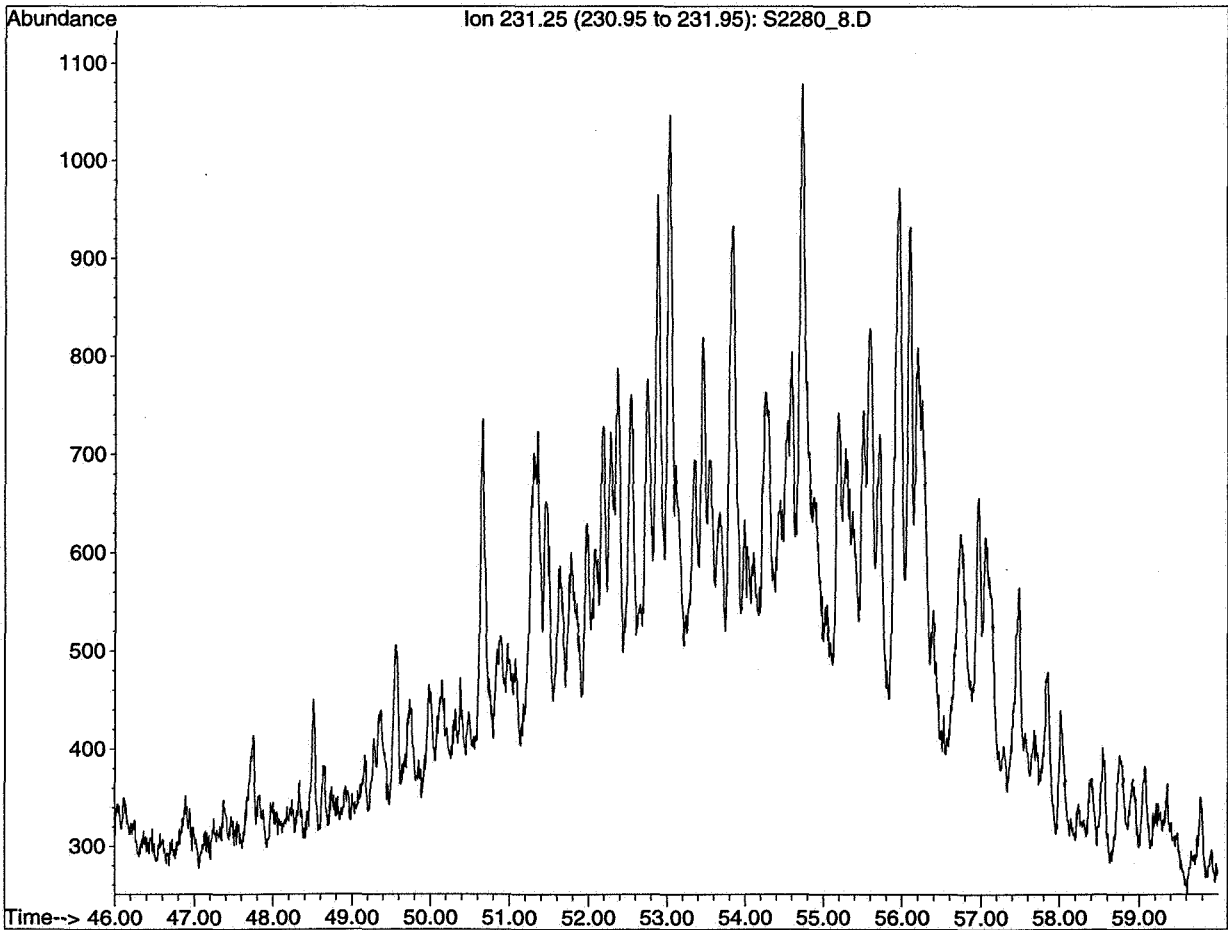
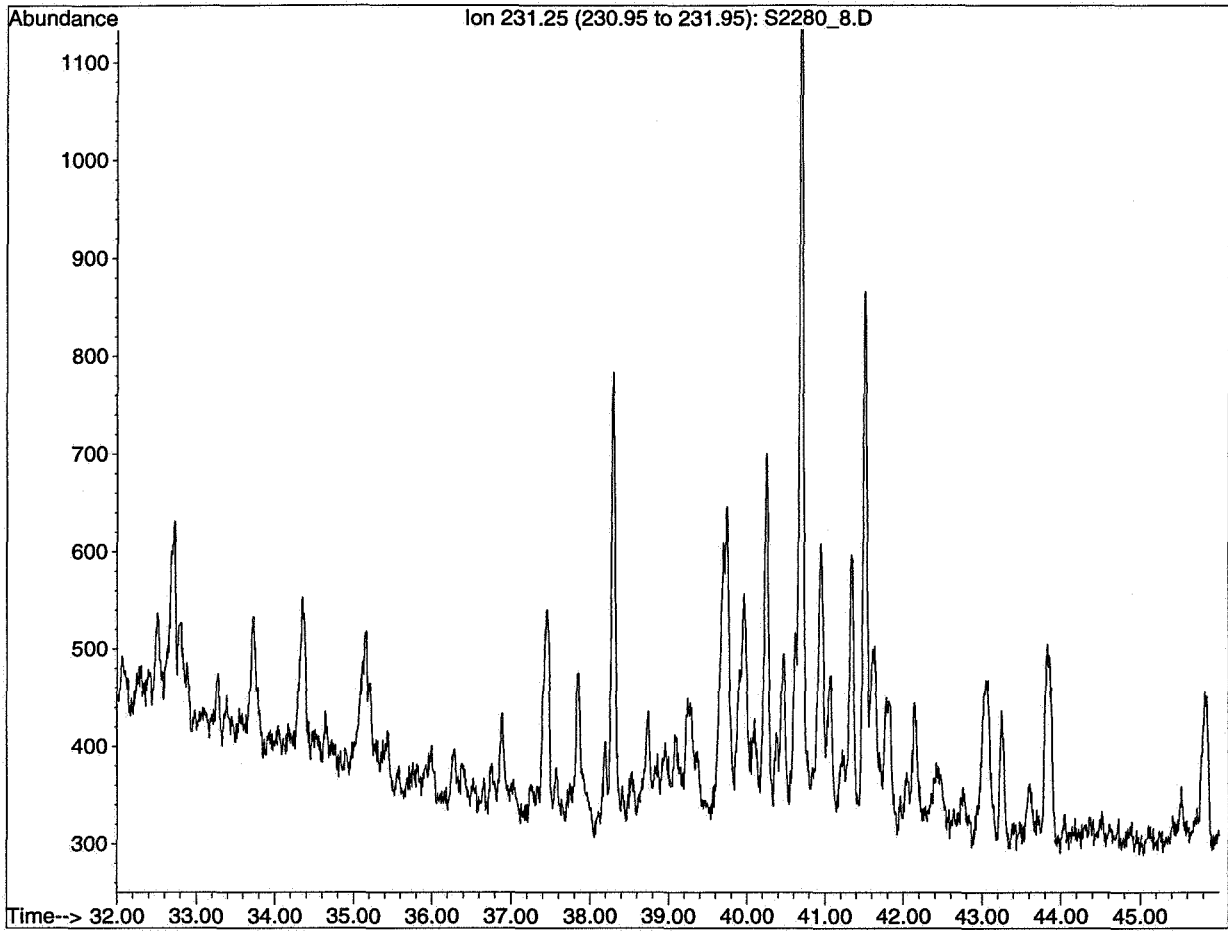
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2280\_8.D Name: 35/11-10 2280.8

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:38:06 1997



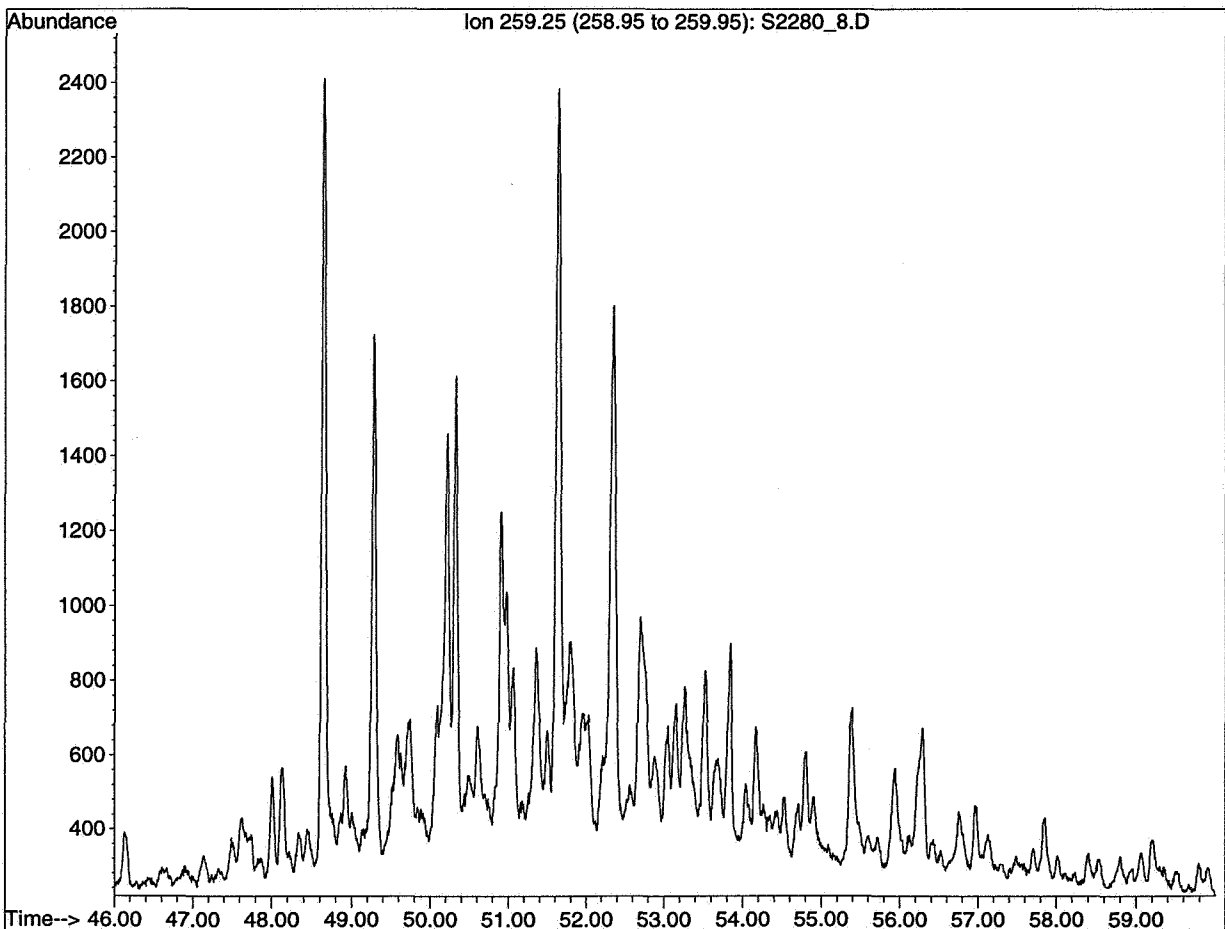
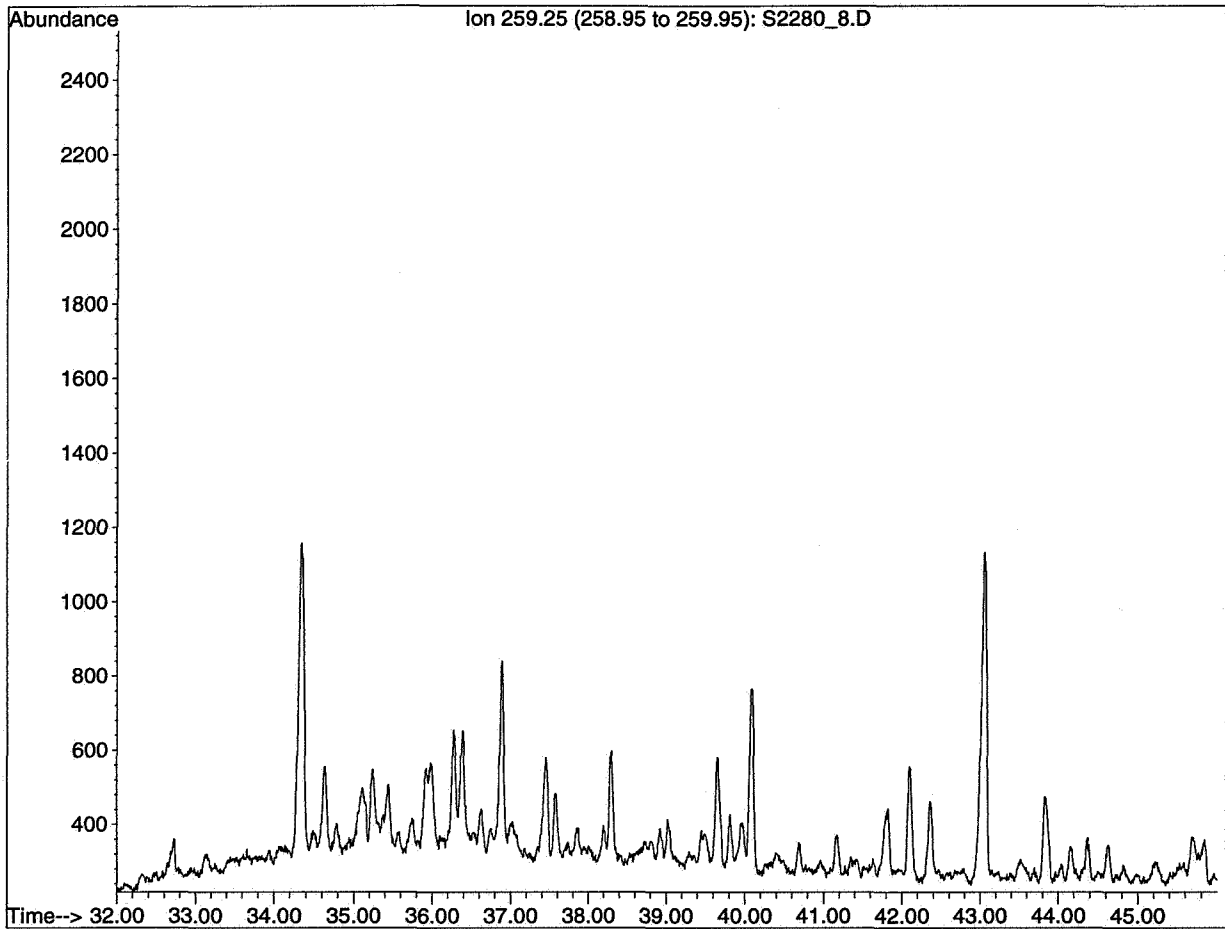
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2280\_8.D Name: 35/11-10 2280.8

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 11:38:11 1997



#	Rt.min.	m/z	Rf.	Name	Height	Amount
						ng/mg
Internal standard (if added):						
1)	46.13	217.2		24baa	1030	19
<b>Diterpanes:</b>						
2)	33.79	191.2	s1	19/3	675	10
3)	35.77	191.2	s1	20/3	355	5
4)	37.80	191.2	s1	21/3	425	6
5)	41.79	191.2	s1	23/3	861	12
6)	42.90	191.2	s1	24/3	515	7
7)	45.18	191.2	s1	25/3	273	4
8)	46.71	191.2	s1	24/4	545	8
9)	46.83	191.2	s1	26/3R	193	3
10)	46.96	191.2	s1	26/3S	208	3
11)	50.48	191.2	s1	28/3R	271	4
12)	50.72	191.2	s1	28/3S	242	3
13)	51.52	191.2	s1	29/3R	377	5
14)	51.81	191.2	s1	29/3S	301	4
<b>Triterpanes:</b>						
15)	52.67	191.2	s1	27Ts	2128	30
16)	52.91	177.2	s1	25nor28ab	862	12
17)	53.35	191.2	s1	27Tm	860	12
18)	53.70	177.2	s1	25nor29ab	183	3
19)	53.78	191.2	s1	27b	239	3
20)	54.89	191.2	s1	28ab	1040	15
21)	55.12	177.2	s1	25nor30ab	141	2
22)	55.61	191.2	s1	29ab	2697	38
23)	55.71	191.2	s1	29Ts	1952	28
24)	55.95	191.2	s1	30D	2103	30
25)	56.31	191.2	s1	29ba	274	4
26)	56.98	191.2	s2	30ab	8016	73
27)	57.32	191.2	s1	30D13	538	8
28)	57.60	191.2	s2	30ba	801	7
29)	58.57	191.2	s1	31abS	2936	42
30)	58.76	191.2	s1	31abR	2391	34
31)	59.09	191.2	s1	30G	430	6
32)	59.29	191.2	s1	31ba	384	5
33)	59.79	191.2	s1	32abS	2333	33
34)	60.07	191.2	s1	32abR	1631	23
35)	61.23	191.2	s1	33abS	1704	24
36)	61.60	191.2	s1	33abR	1151	16
37)	62.74	191.2	s1	34abS	1160	16
38)	63.23	191.2	s1	34abR	647	9
39)	64.47	191.2	s1	35abS	761	11
40)	65.17	191.2	s1	35abR	447	6

## Saturated biomarkers

GC/MS detection HP-6890/5973

### Compound data



Norsk Hydro E&P Research Centre, Bergen, Norway  
Petroleum Geochemistry Laboratories

Data file name: S2298\_4.D

Sample name: 35/11-10 2298.4 coch sat

Data File Path: K:\CAM\GEOKJEM\HPCHEM\W95\DATA\ISA351110\

Misc. info.:

Vial no.: 9

Method: MSD\_S\_D

Operator:

Date: Thu Oct 30 07:39:09 1997

Response curve  $y = ax$

Response factor groups: s1...s3, responses as defined in method

#	Rt.min.	m/z	Rf.	Name	Height	Amount
						ng/mg
<b>Steranes:</b>						
41)	38.31	217.2	s3	21aa	895	18
42)	39.97	217.2	s3	21bb	977	20
43)	40.09	217.2	s3	22aa	824	17
44)	42.32	217.2	s3	22bb	483	10
45)	48.66	217.2	s3	27dbS	2616	53
46)	49.29	217.2	s3	27dbR	1503	31
47)	51.64	218.2	s3	27bbR	1977	40
48)	51.79	218.2	s3	27bbS	1322	27
49)	52.19	217.2	s3	27aaR	637	13
50)	53.39	218.2	s3	28bbR	1020	21
51)	53.52	218.2	s3	28bbS	1288	26
52)	54.50	217.2	s3	29aaS	660	13
53)	54.81	218.2	s3	29bbR	1678	34
54)	54.91	218.2	s3	29bbS	1515	31
55)	55.51	217.2	s3	29aaR	719	15
56)	55.98	218.2	s3	30bbR	495	10
57)	56.04	218.2	s3	30bbS	407	8

**Saturated biomarkers**

GC/MS detection HP-6890/5973

Ratios, from heights and amounts



Norsk Hydro E&P Research Centre, Bergen, Norway  
 Petroleum Geochemistry Laboratories

Data file name: **S2298\_4.D**  
 Sample name: **35/11-10 2298.4 coch sat**  
 Data File Path: K:\CAM\GEOK\JEM\HPCHEM\W95\DATA\ISA351110\

Misc. info.:

Vial no.: 9  
 Method: MSD\_S\_D  
 Operator:  
 Date: Thu Oct 30 07:39:09 1997

Terpane ratios, heights and amounts	Height	Amount
$100 \cdot ((\text{sum}20-25)/3+26/3(R+S)) / ((\text{sum}20-25)/3+26/3(R+S)+27(Ts+Tm)+28ab+\text{sum}29-30(ab+ba)+\text{sum}31-35ab(R+S))$	%Tri	8 9
$100 \cdot 20/3 / ((\text{sum}20-25)/3+26/3(R+S))$	%20/3	13 13
$100 \cdot 23/3 / (23/3+24/3+25/3)$	%23/3	52 52
$100 \cdot 24/4 / (24/4+24/3+25/3)$	%24/4	41 41
$100 \cdot Ts / (Ts+Tm)$	%27Ts	71 71
$100 \cdot 28ab / (28ab+30ab)$	%28ab	11 17
$100 \cdot 29Ts / (29Ts+29ab)$	%29Ts	42 42
$100 \cdot 25nor30ab / (25nor30ab+30ab)$	%25nor30ab	2 3
$100 \cdot 29ab / (29ab+30ab)$	%29ab	25 34
$100 \cdot 30ba / (30ba+30ab)$	%30ba	9 9
$100 \cdot 30D / (30D+30ab)$	%30D	21 29
$100 \cdot 30G / (30G+30ab)$	%30G	5 8
$100 \cdot 32abS / (32ab(S+R))$	%32abS	59 59
$100 \cdot 35ab(S+R) / (34-35ab(S+R))$	%35ab	40 40
$100 \cdot (27Ts+27Tm) / (27Ts+27Tn+28ab+\text{sum}29-30(ab+ba)+\text{sum}31-35ab(R+S))$	%27HOP	10 11
$100 \cdot (28ab) / (27Ts+27Tn+28ab+\text{sum}29-30(ab+ba)+\text{sum}31-35ab(R+S))$	%28HOP	3 4
$100 \cdot (29ab+ba) / (27Ts+27Tn+28ab+\text{sum}29-30(ab+ba)+\text{sum}31-35ab(R+S))$	%29HOP	10 11
$100 \cdot (30ab+ba) / (27Ts+27Tn+28ab+\text{sum}29-30(ab+ba)+\text{sum}31-35ab(R+S))$	%30HOP	28 20
$100 \cdot 31ab(S+R) / (27Ts+27Tn+28ab+\text{sum}29-30(ab+ba)+\text{sum}31-35ab(R+S))$	%31HOP	17 19
$100 \cdot 32ab(S+R) / (27Ts+27Tn+28ab+\text{sum}29-30(ab+ba)+\text{sum}31-35ab(R+S))$	%32HOP	13 14
$100 \cdot 33ab(S+R) / (27Ts+27Tn+28ab+\text{sum}29-30(ab+ba)+\text{sum}31-35ab(R+S))$	%33HOP	9 10
$100 \cdot 34ab(S+R) / (27Ts+27Tn+28ab+\text{sum}29-30(ab+ba)+\text{sum}31-35ab(R+S))$	%34HOP	6 6
$100 \cdot 35ab(S+R) / (27Ts+27Tn+28ab+\text{sum}29-30(ab+ba)+\text{sum}31-35ab(R+S))$	%35HOP	4 4
<b>Sterane ratios</b>		
$100 \cdot (21+22)bb / ((21+22)bb+(27+28+29+30)bb(R+S))$	%Preg	13 13
$100 \cdot 29aaS / 29aa(R+S)$	%29aaS	48 48
$100 \cdot 29bb(R+S) / (29bb(R+S)+29aa(S+R))$	%29bb	70 70
$100 \cdot 27db(S+R) / ((27db(S+R)+27bb(R+S))$	%27dia	56 56
$100 \cdot 27bb(R+S) / (27+28+29+30)bb(R+S)$	%27STER	34 34
$100 \cdot 28bb(R+S) / (27+28+29+30)bb(R+S)$	%28STER	24 24
$100 \cdot 29bb(R+S) / (27+28+29+30)bb(R+S)$	%29STER	33 33
$100 \cdot 30bb(R+S) / (27+28+29+30)bb(R+S)$	%30STER	9 9

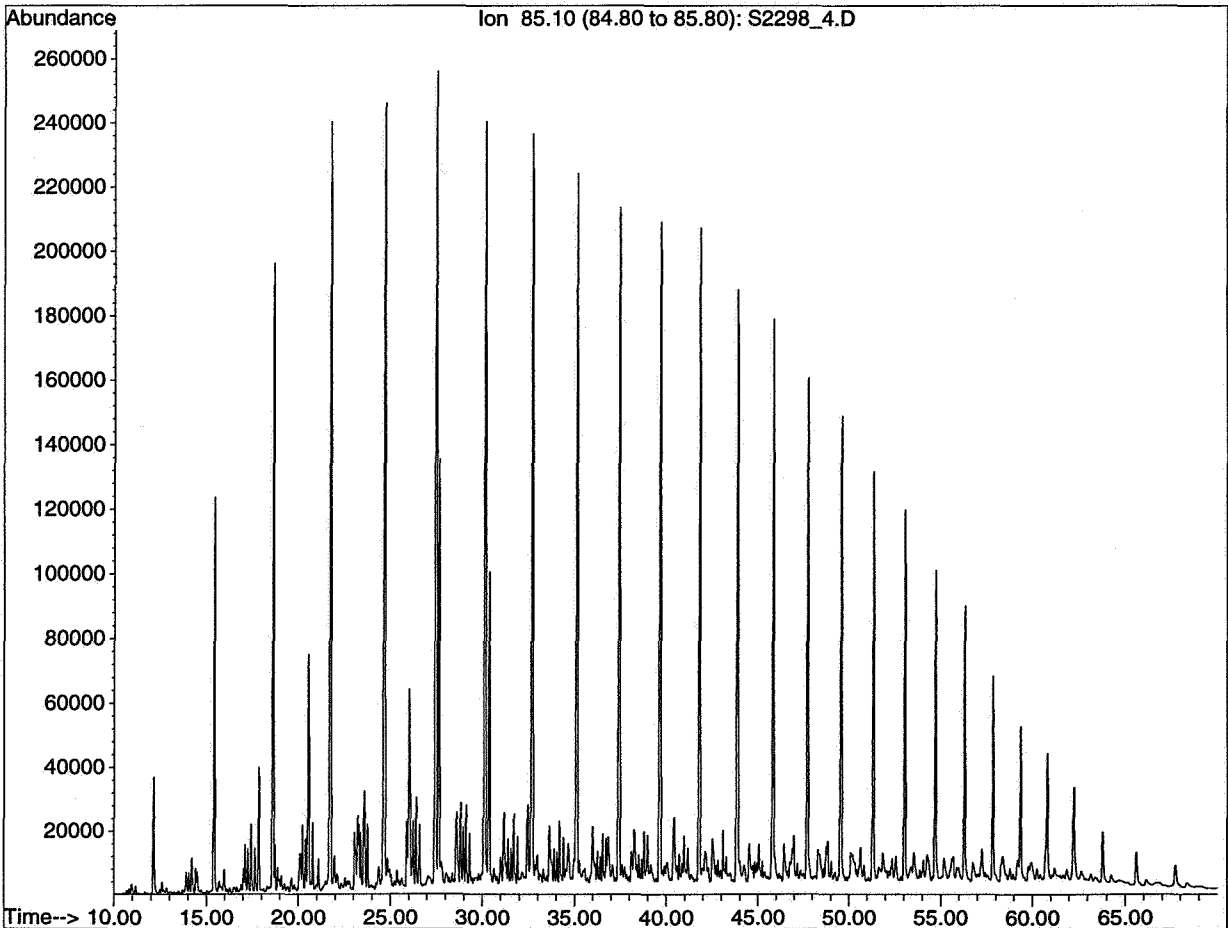
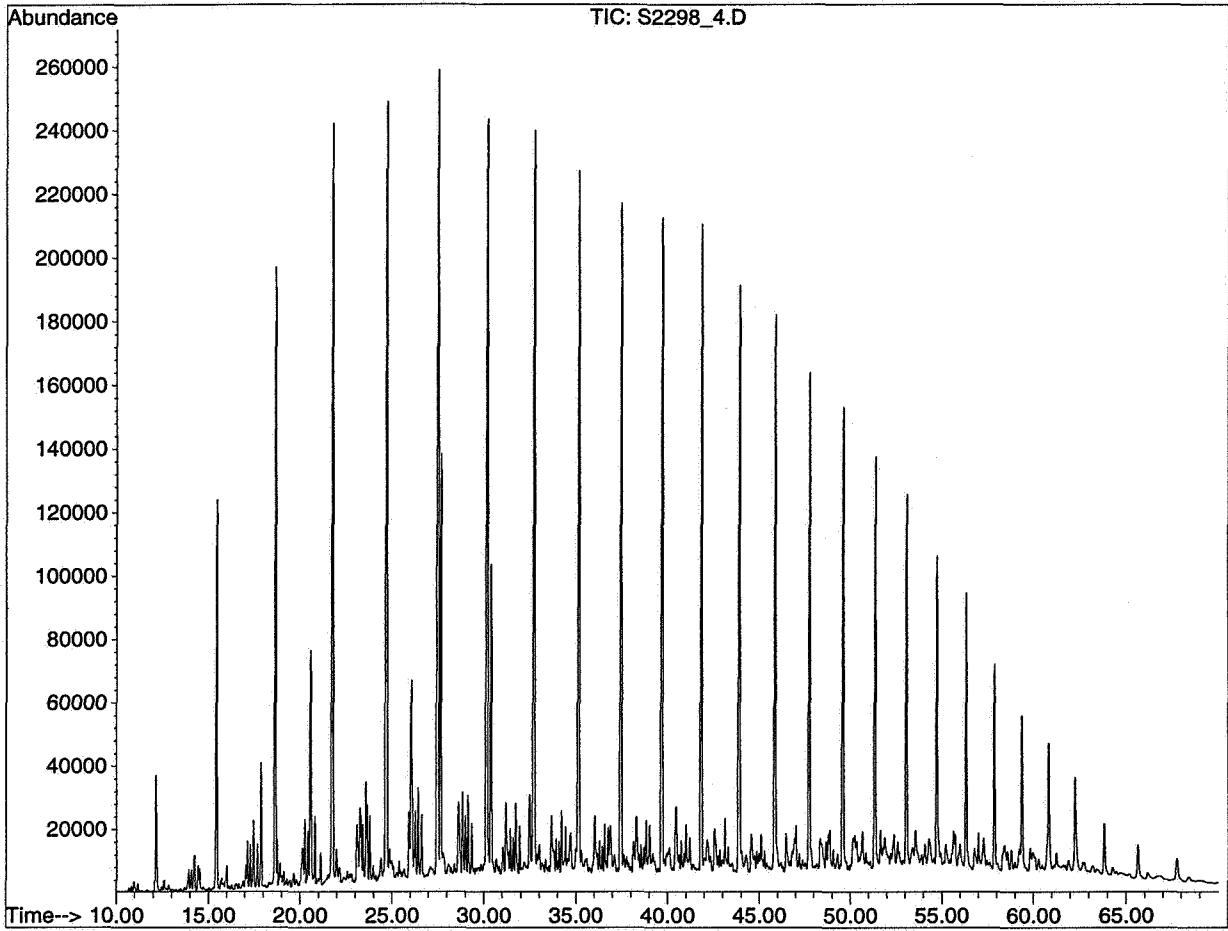
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2298\_4.D Name: 35/11-10 2298.4

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 12:06:21 1997



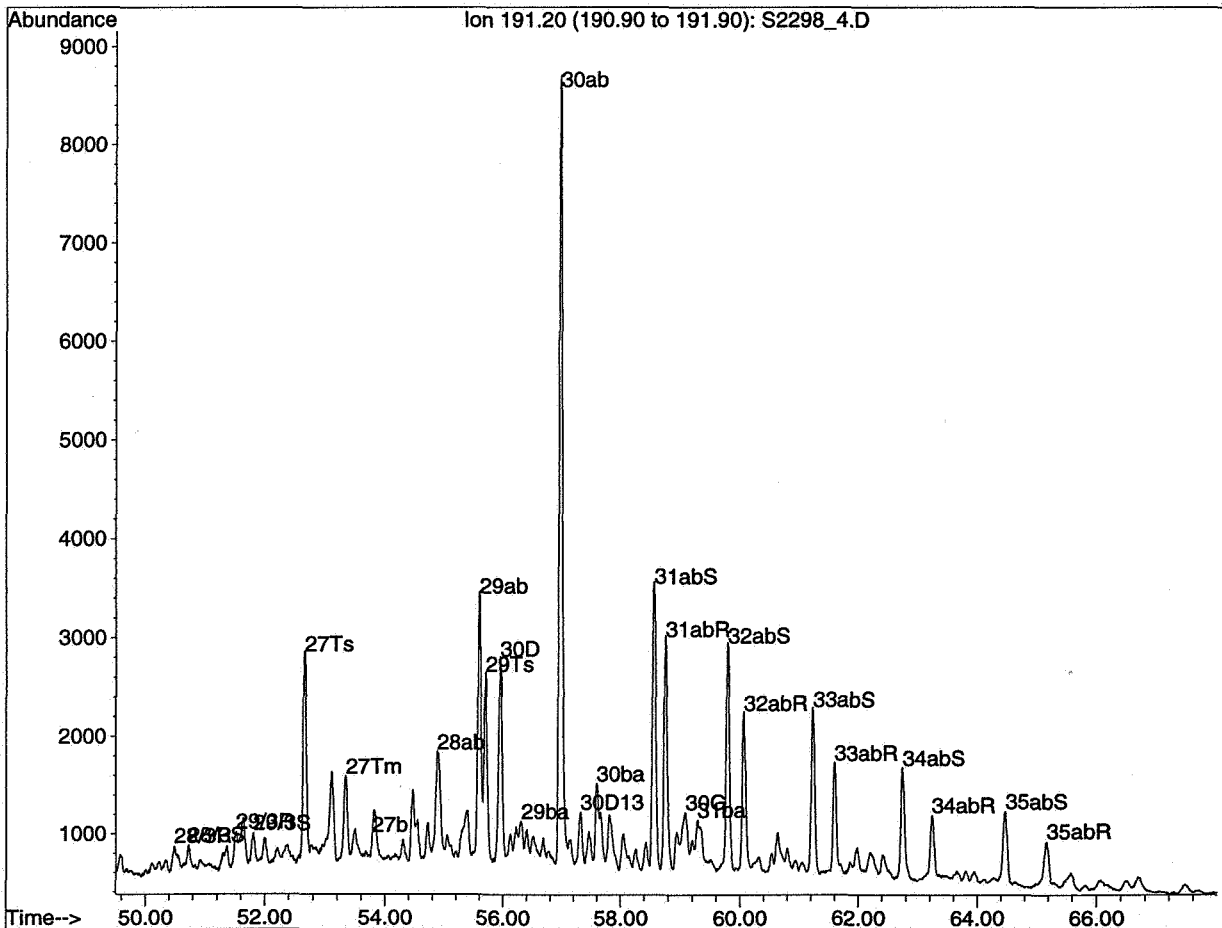
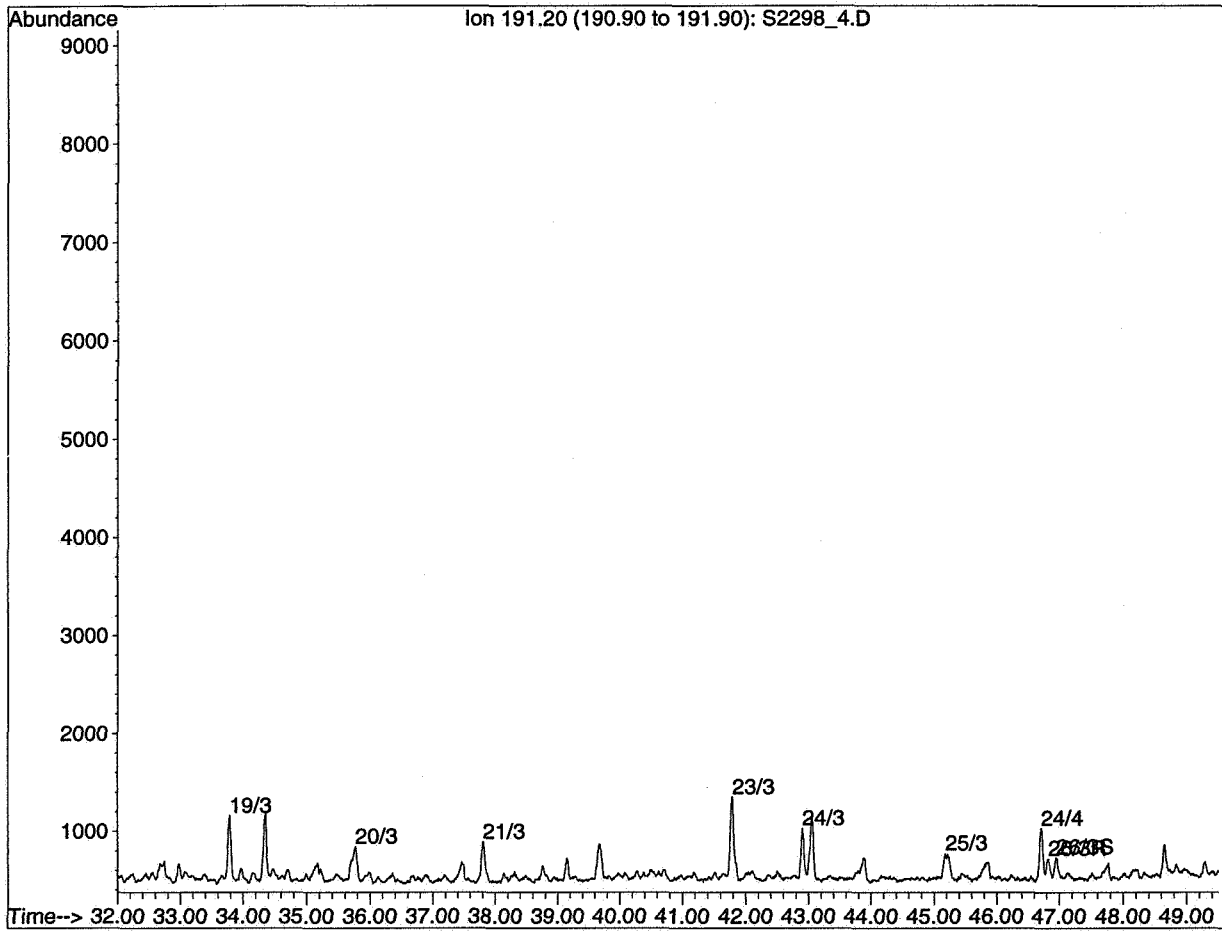
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2298\_4.D Name: 35/11-10 2298.4

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 12:07:10 1997



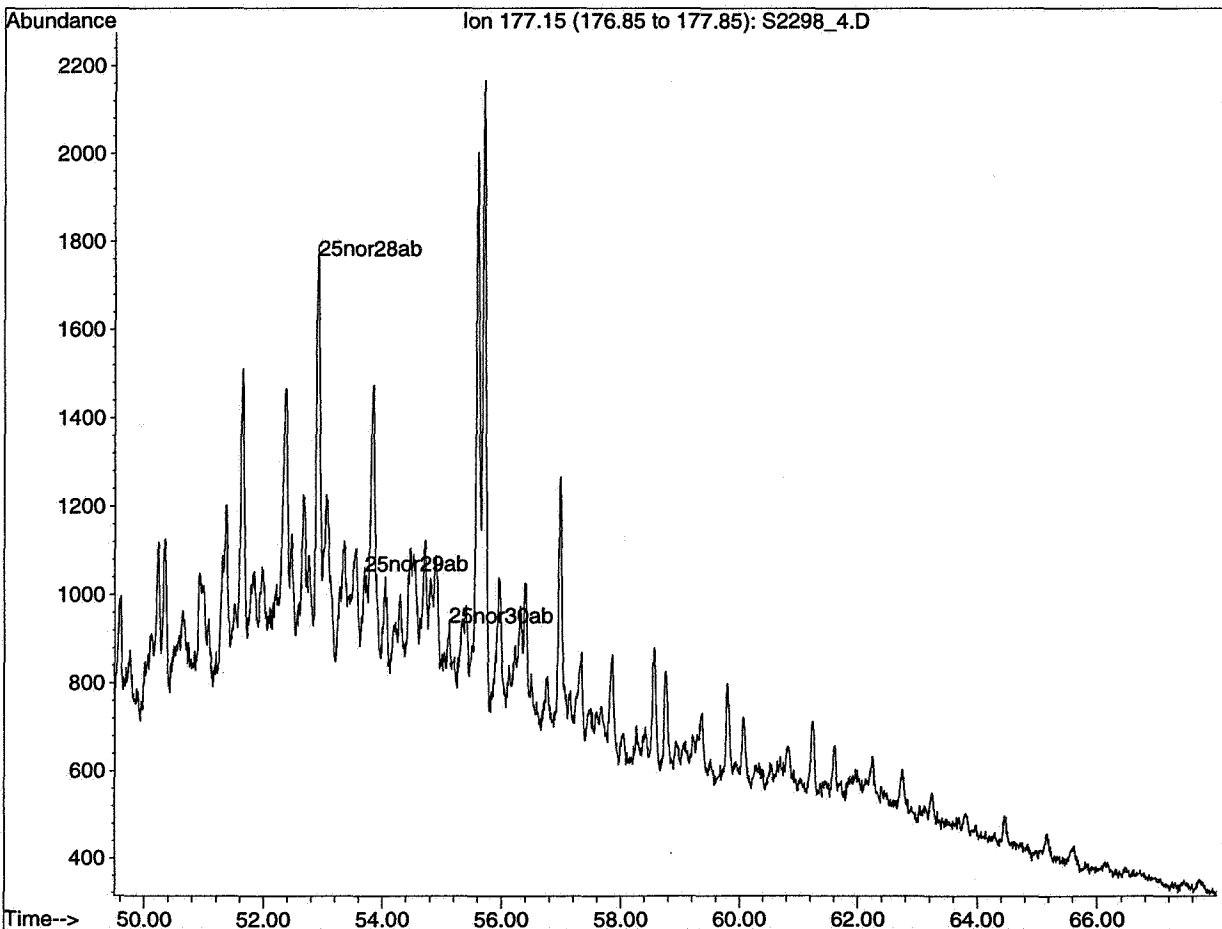
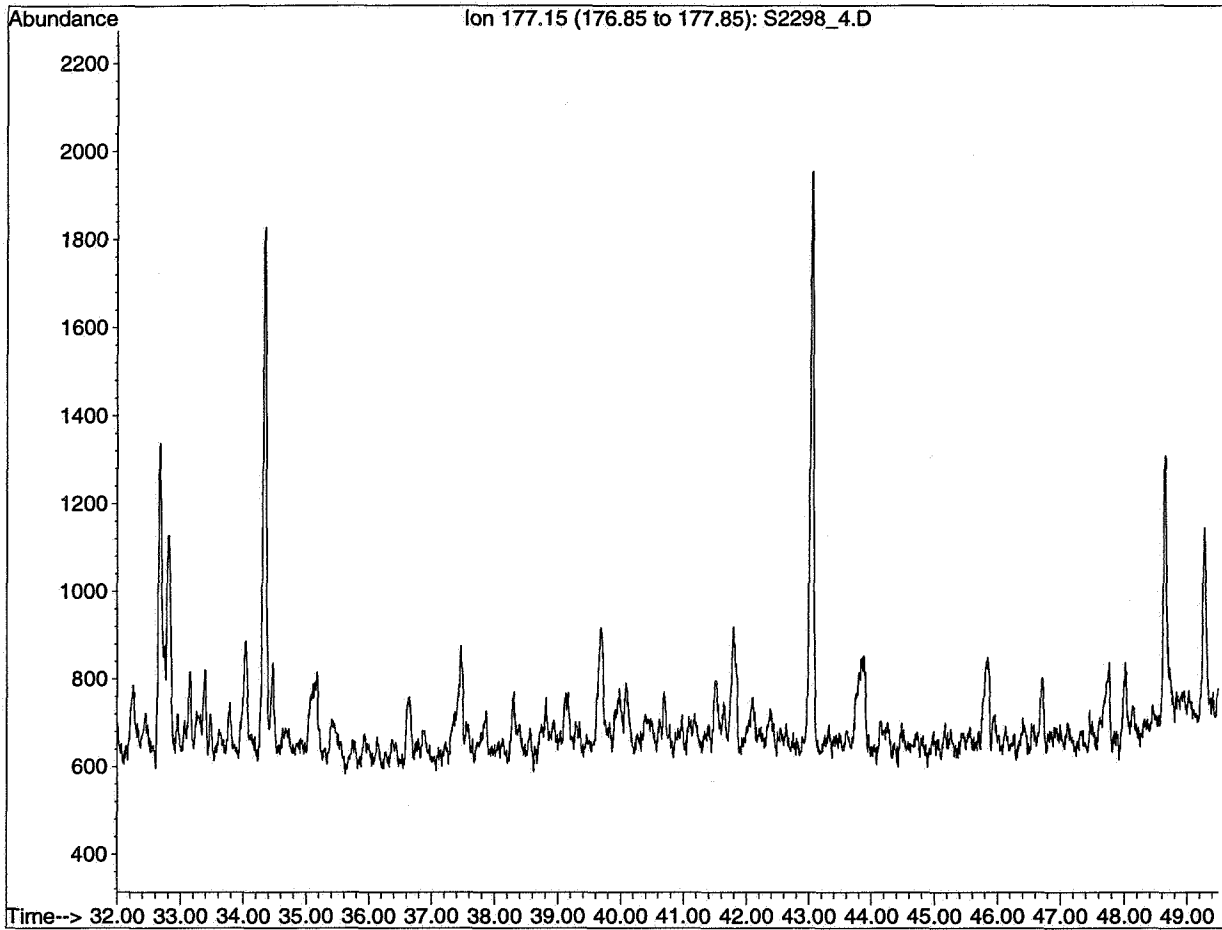
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2298\_4.D Name: 35/11-10 2298.4

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 12:08:03 1997



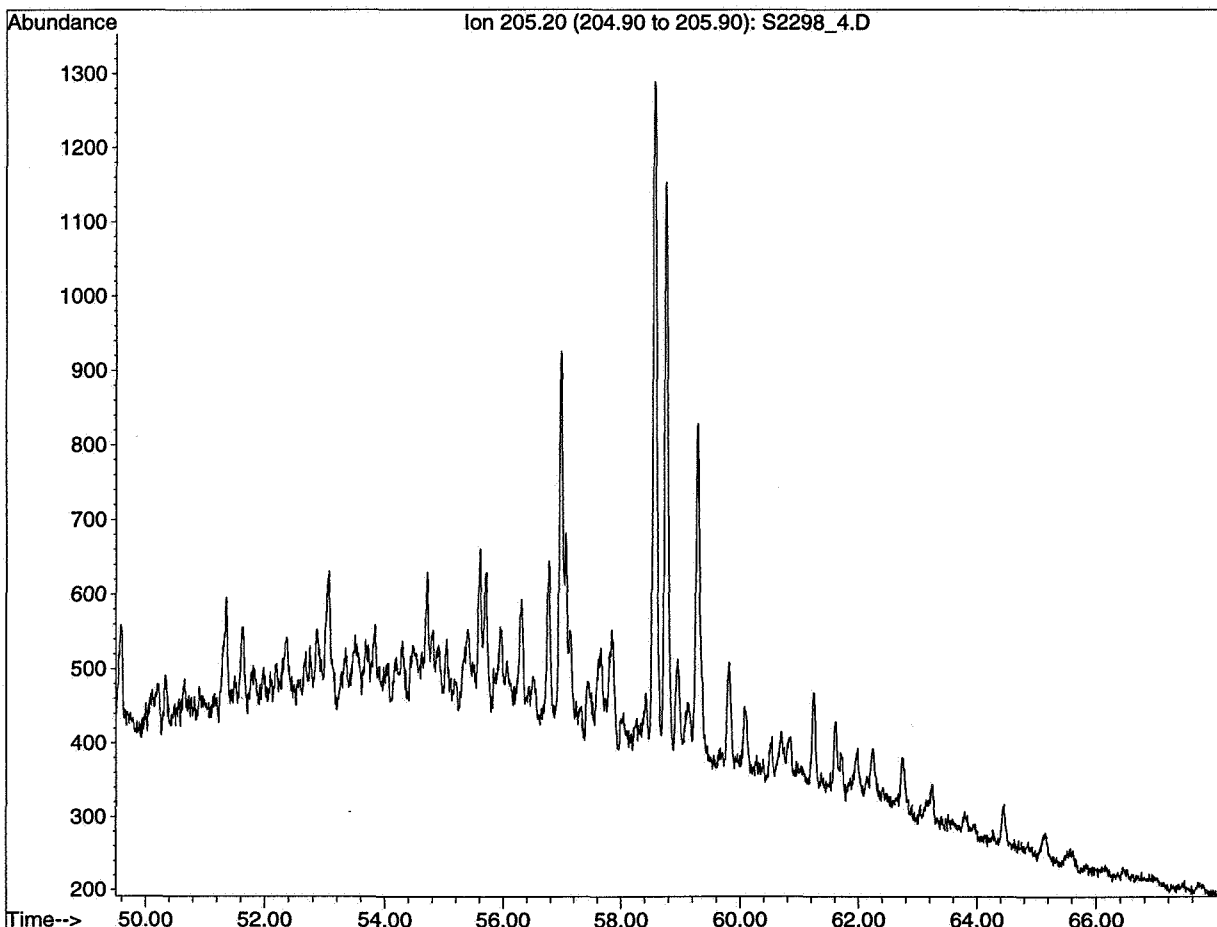
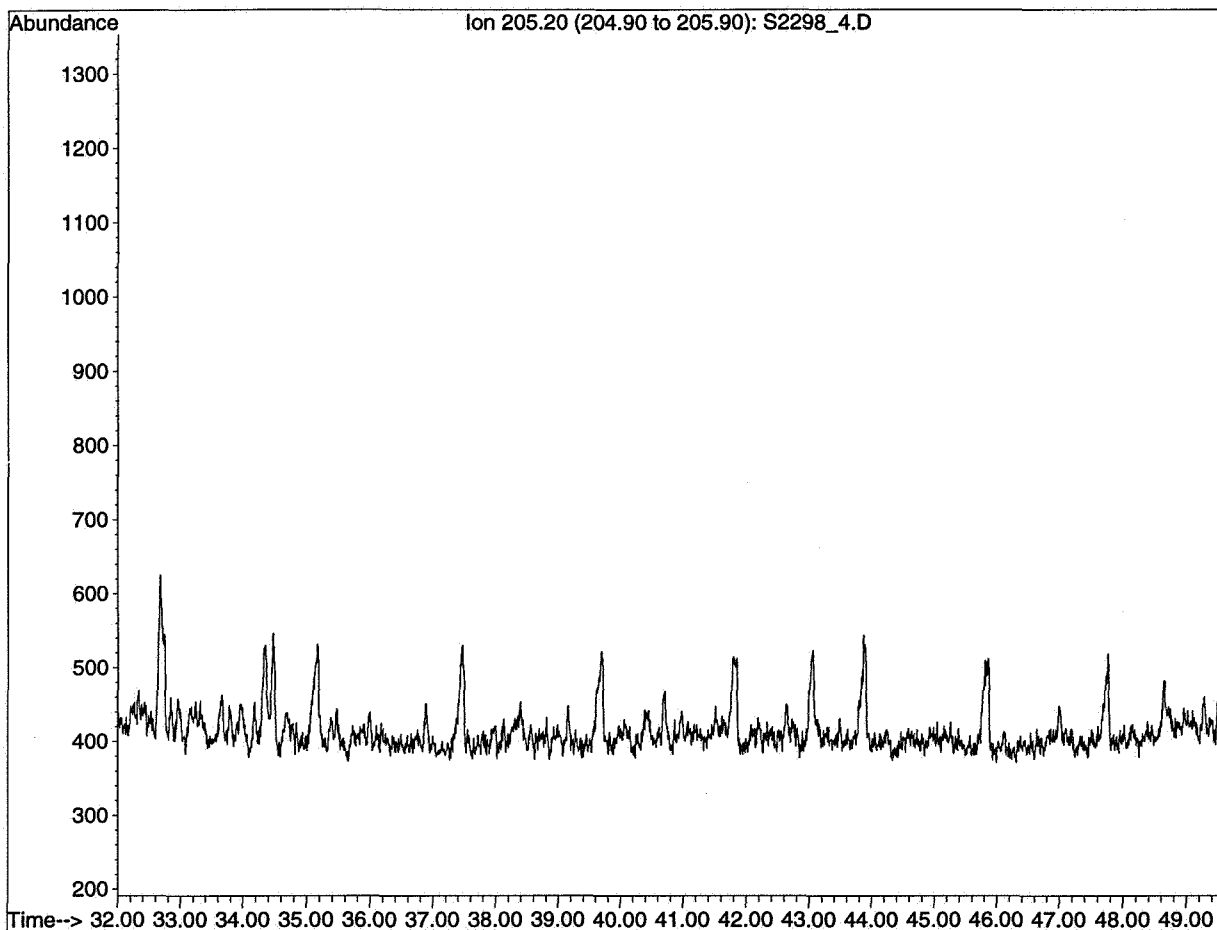
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2298\_4.D Name: 35/11-10 2298.4

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 12:08:38 1997



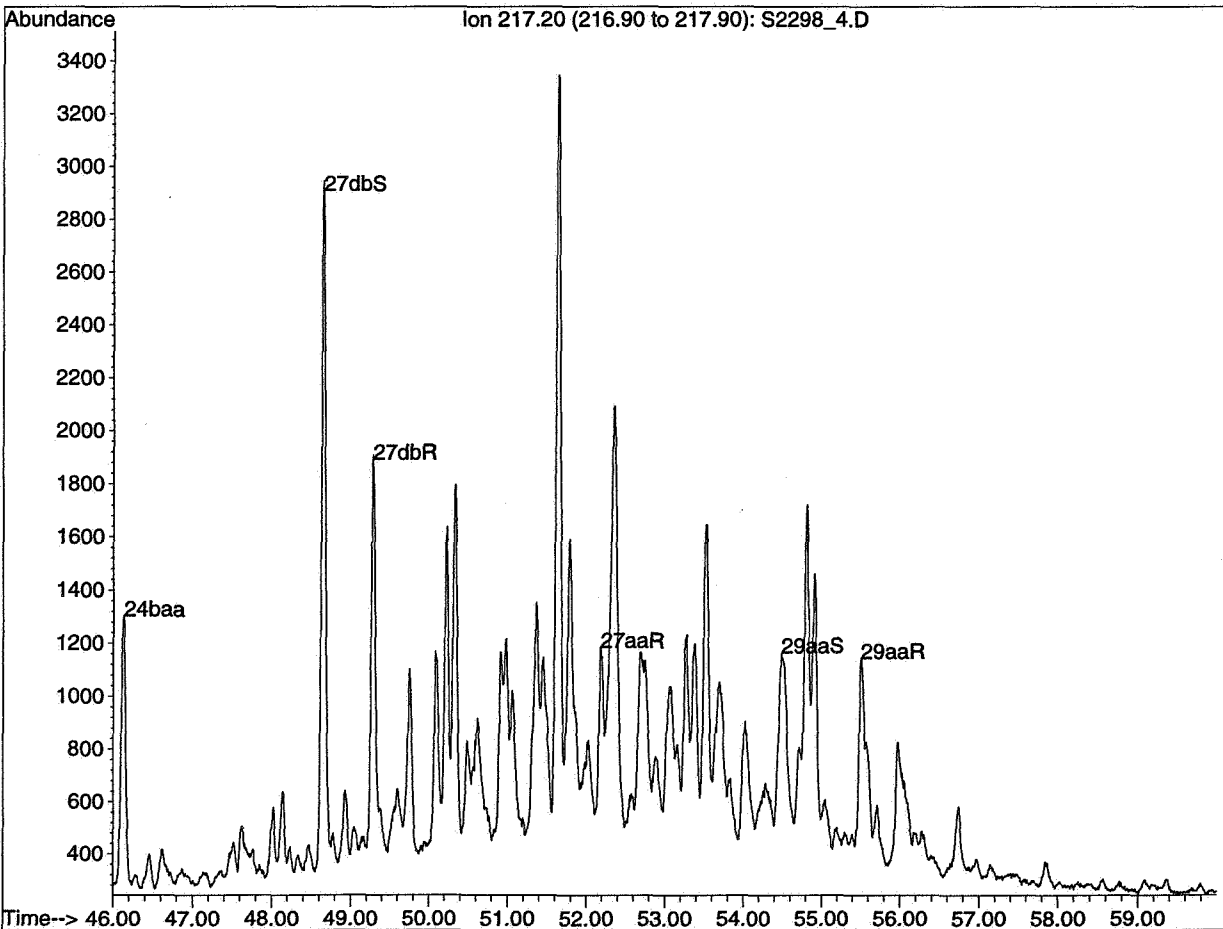
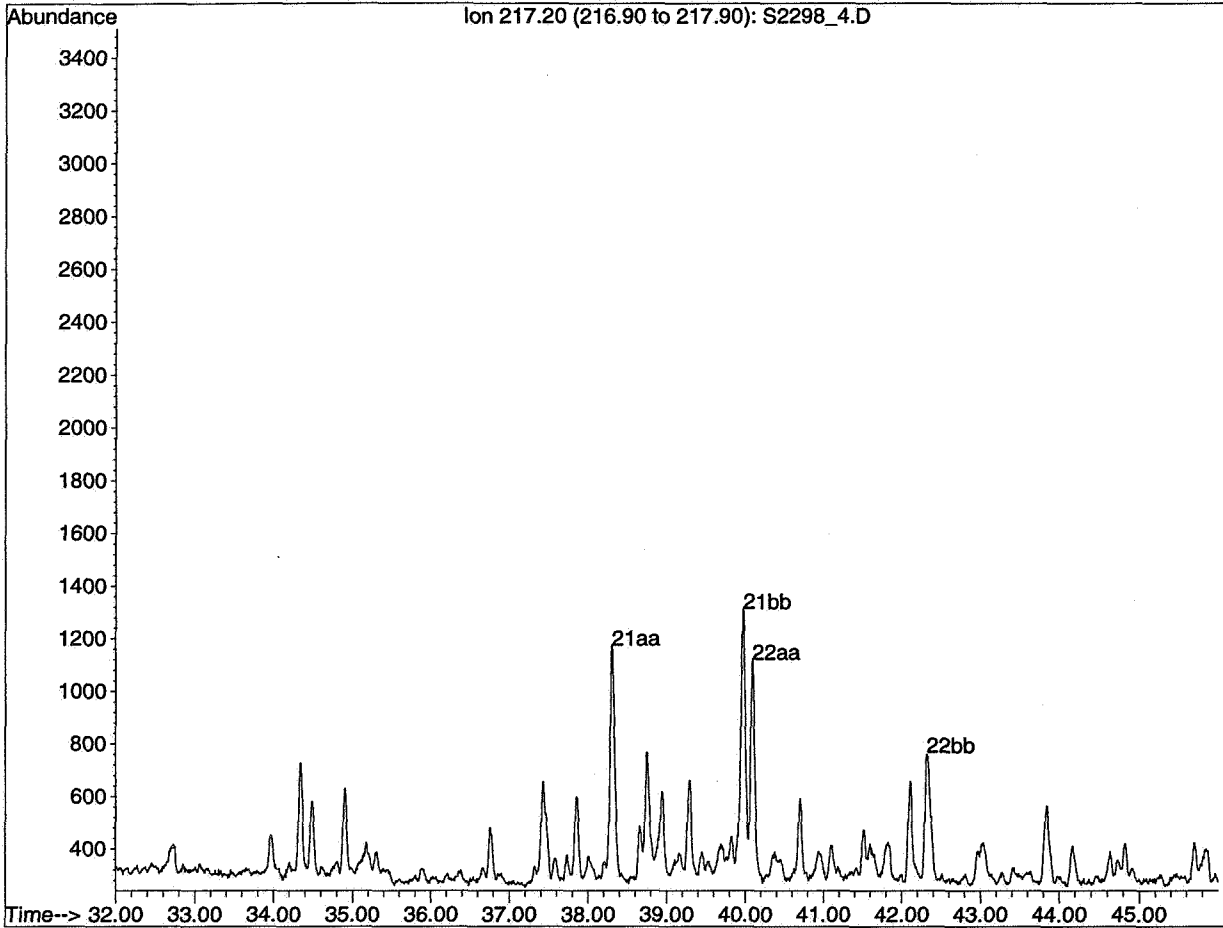
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2298\_4.D Name: 35/11-10 2298.4

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 12:09:10 1997



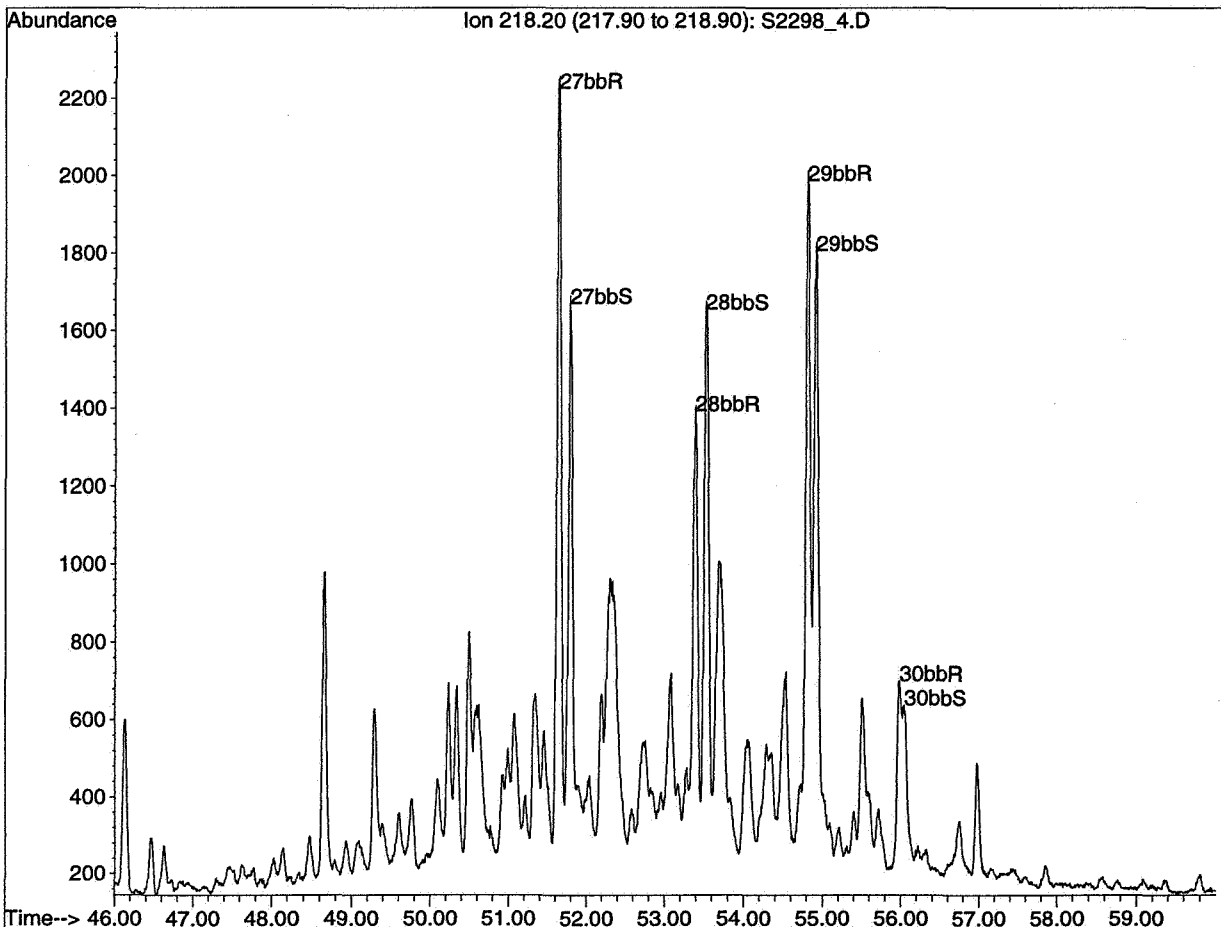
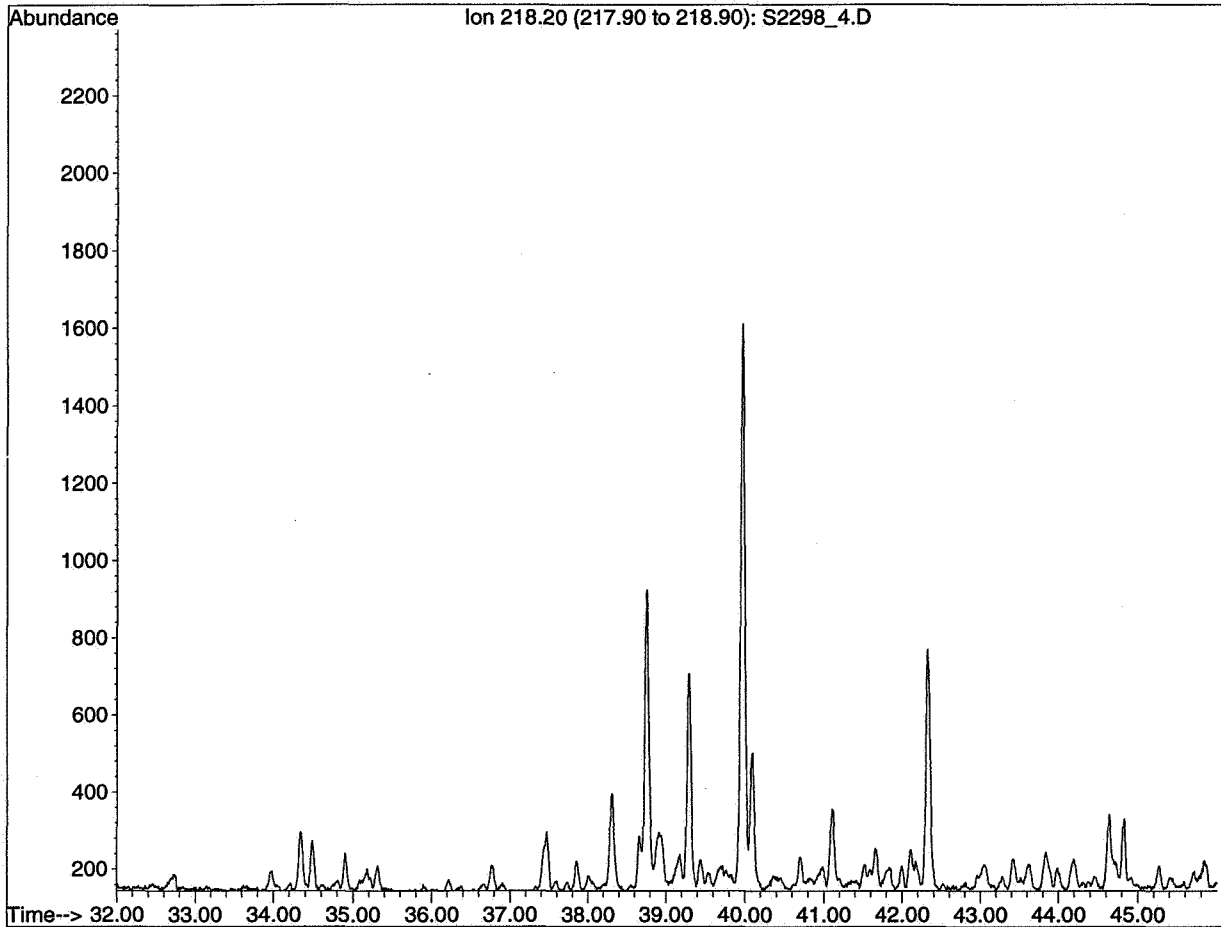
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2298\_4.D Name: 35/11-10 2298.4

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 12:09:40 1997



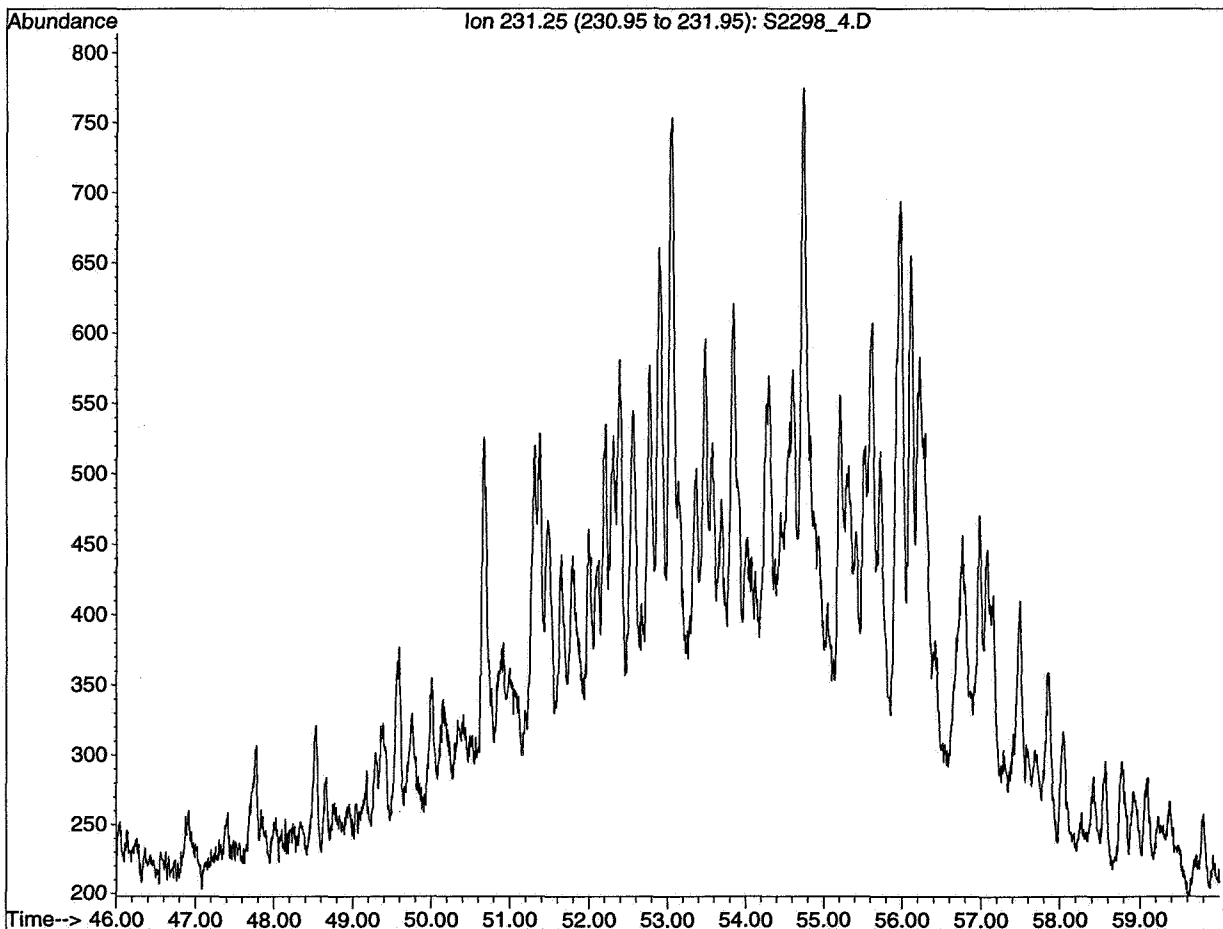
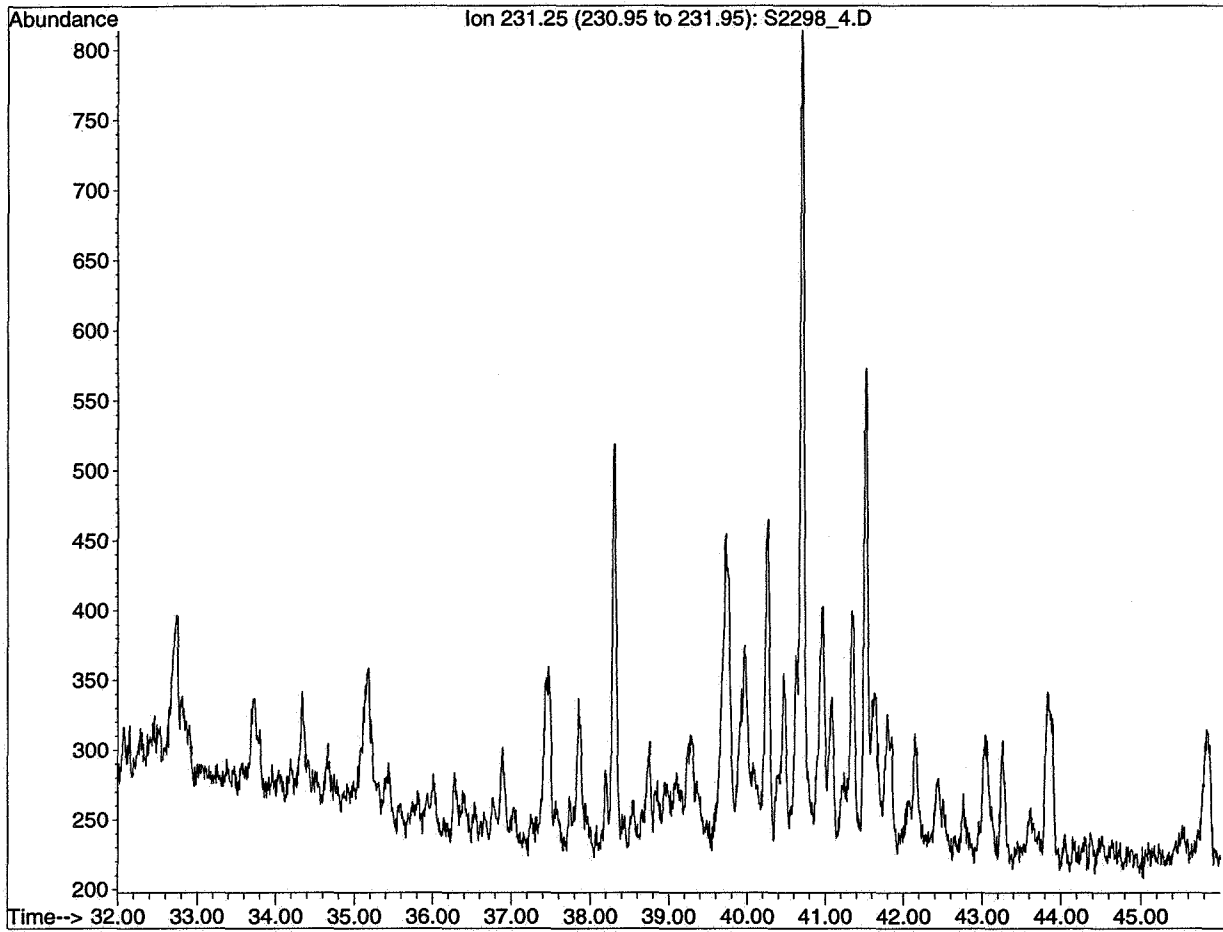
Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2298\_4.D Name: 35/11-10 2298.4

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 12:10:09 1997



Title: Saturated HC (FID) and Biomarkers (MSD)

Data File: K:\CAM\GEOKJEMI\HPCHEM\W95\DATA\SA351110\S2298\_4.D Name: 35/11-10 2298.4

Misc:

Method: MSD\_S\_D .....Operator:

Date Reported: Tue Nov 04 12:10:33 1997

