

Tim Patterson
ENVIRON UK Ltd
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Page 1 of 4 pages

31st March 2004

TEST REPORT

Our Report No: B04001340

Your Order No: Instns. of 17.03.2004

7 no. water samples submitted for analysis on 17.03.2004

Project Name: Morganite

Project Code: 61-C7575

Results enclosed: Pages 2-4

Laboratory analysis started on 17.03.2004

All laboratory analysis completed by 31st March 2004

Rexona Rahman
Project Co-ordinator
ALCONTROL TECHNICHEM

Leigh Burton
Project Co-ordinator
ALCONTROL TECHNICHEM

Test Methods are Documented In House Procedures or where appropriate Standard Methods.

Non accredited tests (if applicable) are identified on each page. Procedures for sampling are outside the scope of the laboratory UKAS accreditation. Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.

All samples connected with this report, including any 'on hold', will be stored and disposed of according to Company policy. A copy of this policy is available on request.

TEST REPORT

GROUNDWATER ANALYTICAL RESULTS - 040 VOC BY HEAD SPACE GC-MS Results in µg/l

Our Report No: B04001340

Page 2 of 4 pages

Your Order No: Instns. of 17.03.2004

CLIENT: ENVIRON UK Ltd

7 no. water samples submitted for analysis on 17.03.2004

DATE OF ISSUE: 31st March 2004

Project Name: Morganite

Project Code: 61-C7575

Lab Ref No.	S04008903	S04008904	S04008905	S04008906	S04008907	S04008908				
Sample Depth (m)	-	-	-	-	-	-				
Sample No.	WS 7	CH2MH BH 6	WS 11	CH2MH BH7	CH2MH BH5	CH2MH BH1				
Sample Description	W	W	W	W	W	W				
Vinyl chloride	<10	<10	<10	<10	<10	<10				
Chloroethane	<1	<1	<1	<1	<1	<1				
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1				
1,1-Dichloroethene	<1	<1	<1	<1	<1	<1				
1,1,2-trichloro-1,2,2-trifluoroethane	<25	<25	<25	<25	<25	<25				
Dichloromethane	<25	<25	<25	<25	<25	<25				
trans-1,2 Dichloroethene	<1	<1	<1	<1	<1	<1				
MTBE	<1	<1	<1	<1	<1	<1				
1,1 -Dichloroethane	1	<1	<1	<1	<1	<1				
Cis-1,2 dichloroethene	<1	<1	<1	<1	<1	<1				
Chloroform	<1	<1	<1	<1	<1	<1				
1,1,1-Trichloroethane	5	<1	<1	<1	<1	<1				
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1				
Benzene	<1	<1	<1	<1	<1	<1				
Carbon tetrachloride	<1	<1	<1	<1	<1	<1				
Trichloroethene	<1	<1	<1	<1	<1	<1				
Bromodichloromethane	<1	<1	<1	<1	<1	<1				
cis-1,3 Dichloropropene	<1	<1	<1	<1	<1	<1				
Toluene	<1	<1	<1	<1	<1	<1				
trans-1,3 dichloropropene	<1	<1	<1	<1	<1	<1				
1,1,2-Trichloroethane	<1	<1	<1	<1	<1	<1				
Dibromochloromethane	<1	<1	<1	<1	<1	<1				
Tetrachloroethene	<1	<1	<1	<1	<1	<1				
Chlorobenzene	<1	<1	<1	<1	<1	<1				
Ethyl benzene	<1	<1	<1	<1	<1	<1				
m,p-Xylenes	<1	<1	<1	<1	<1	<1				
Bromoform	<1	<1	<1	<1	<1	<1				
o-Xylene	<1	<1	<1	<1	<1	<1				
1,1,2,2 Tetrachloroethane	<1	<1	<1	<1	<1	<1				
1,3,5 Trimethylbenzene	<1	<1	<1	<1	<1	<1				
1,2,4 Trimethylbenzene	<1	<1	<1	<1	<1	<1				
1,3 Dichlorobenzene	<1	<1	<1	<1	<1	<1				
1,4 Dichlorobenzene	<1	<1	<1	<1	<1	<1				
1,2 Dichlorobenzene	<1	<1	<1	<1	<1	<1				

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DATE OF ISSUE: 31st March 2004

Project Name: Morganite

Project Code: 61-C7575

WATER - RESULTS

Lab Ref No.	Sample Depth (m)	Sample No.	Sample Description	*PRO (C ₆ - C ₁₀)	†*TPH by GC-FID (C ₁₀ - C ₃₀) (C ₃₀ - C ₄₀)		*Sum (C ₆ - C ₄₀)	Description
S04008902	-	BH 2	Product	5.0	#	#	#	The sample chromatogram exhibits a hump of unresolved complex material eluting predominantly through the diesel range, overlain by a series of peaks unidentifiable by this method. 25% v/v product (visual estimate).
S04008903	-	WS 7	W	<1	1.7	<0.2‡	1.7	The sample chromatogram exhibits a hump of unresolved complex material eluting predominantly through the diesel range, overlain by several peaks unidentifiable by this method.
S04008904	-	CH2MH BH 6	W	<1	<0.1	<0.1	ND	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
S04008905	-	WS 11	W	<1	1.1	0.1	1.2	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₁₄ to C ₃₆ .

NOTE:

(i) † This method provides information only on Gas Chromatograph (GC) amenable material with elutions ranging between 40 °C and 325 °C.

(ii) The results are expressed as mg/l.

(iii) Total (C₆-C₄₀) is expressed as a sum of the individual ranges and as such cannot be rounded.

(iv) ND denotes Not Detected.

denotes sample(s) unsuitable for TPH quantification - Product Identification carried out.

‡ denotes detection limit(s) raised due to nature of sample.

*Denotes analysis outside the scope of our UKAS accreditation.

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Project Name: Morganite

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WATER - RESULTS

Lab Ref No.	Sample Depth (m)	Sample No.	Sample Description	*PRO (C ₆ - C ₁₀)	†*TPH by GC-FID (C ₁₀ - C ₃₀) (C ₃₀ - C ₄₀)		*Sum (C ₆ - C ₄₀)	Description
S04008906	-	CH2MH BH7	W	<1	0.8	<0.1	0.8	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₁₂ to C ₃₆ .
S04008907	-	CH2MH BH5	W	<1	2.3	<0.1	2.3	The sample chromatogram exhibits a hump of unresolved complex material eluting predominantly through the diesel range.
S04008908	-	CH2MH BH1	W	<1	<0.1	<0.1	ND	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.

NOTE:

(i) † This method provides information only on Gas Chromatograph (GC) amenable material with elutions ranging between 40 °C and 325 °C.

(ii) The results are expressed as mg/l.

(iii) Total (C₆-C₄₀) is expressed as a sum of the individual ranges and as such cannot be rounded.

(iv) ND denotes Not Detected.

denotes sample(s) unsuitable for TPH quantification - Product Identification carried out.

‡ denotes detection limit(s) raised due to nature of sample.

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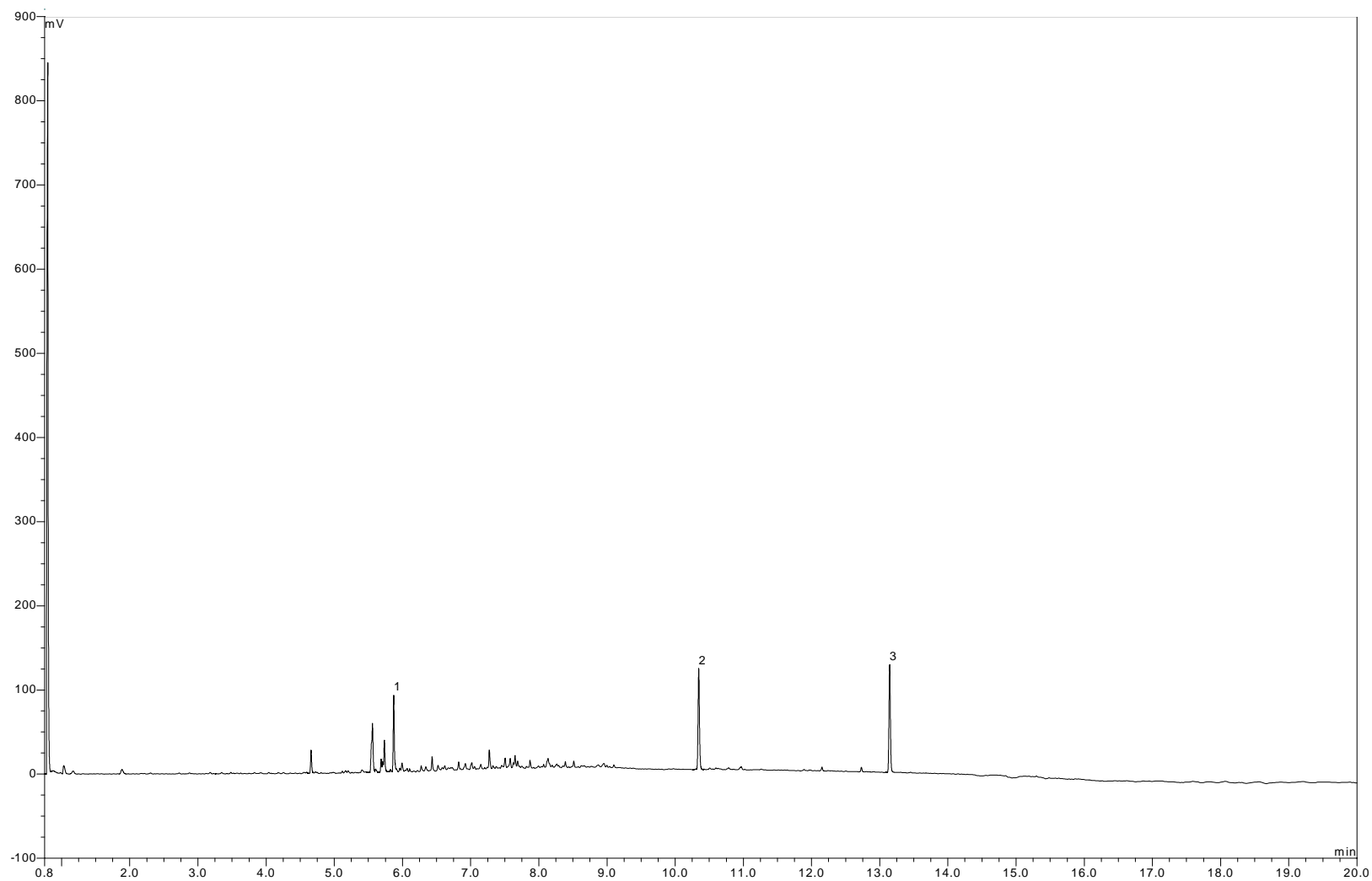
APPENDIX - Sample Statistics - Waters

<u>Test</u>	<u>Samples Analysed</u>
040 VOC	6
* TPH basic carbon banding (C ₆ -C ₁₀ , C ₁₀ -C ₃₀ , C ₃₀ -C ₄₀)	7

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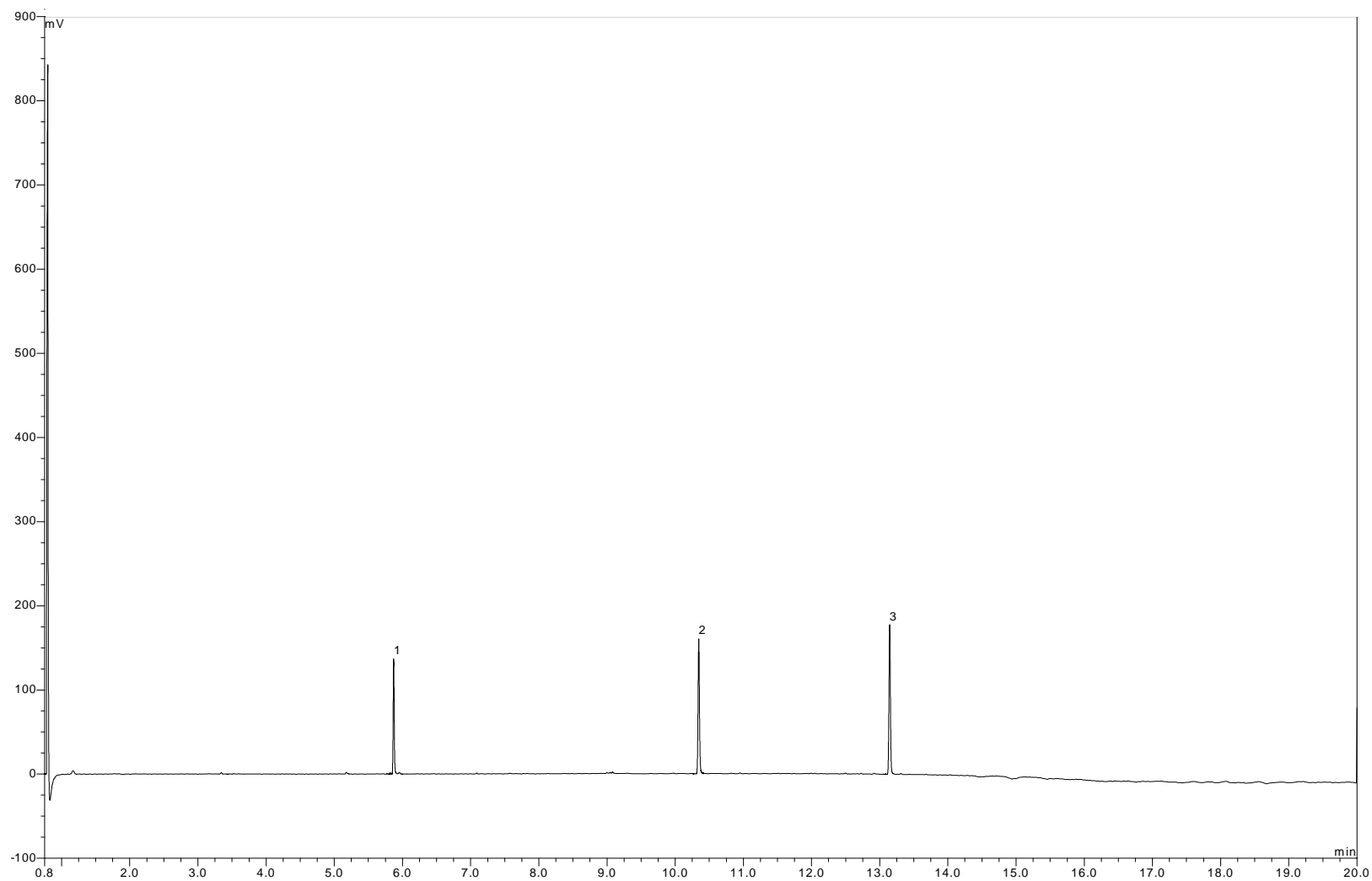
Lab Ref No. - S04008903
Sample Depth (m) - -
Sample No. - WS 7
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



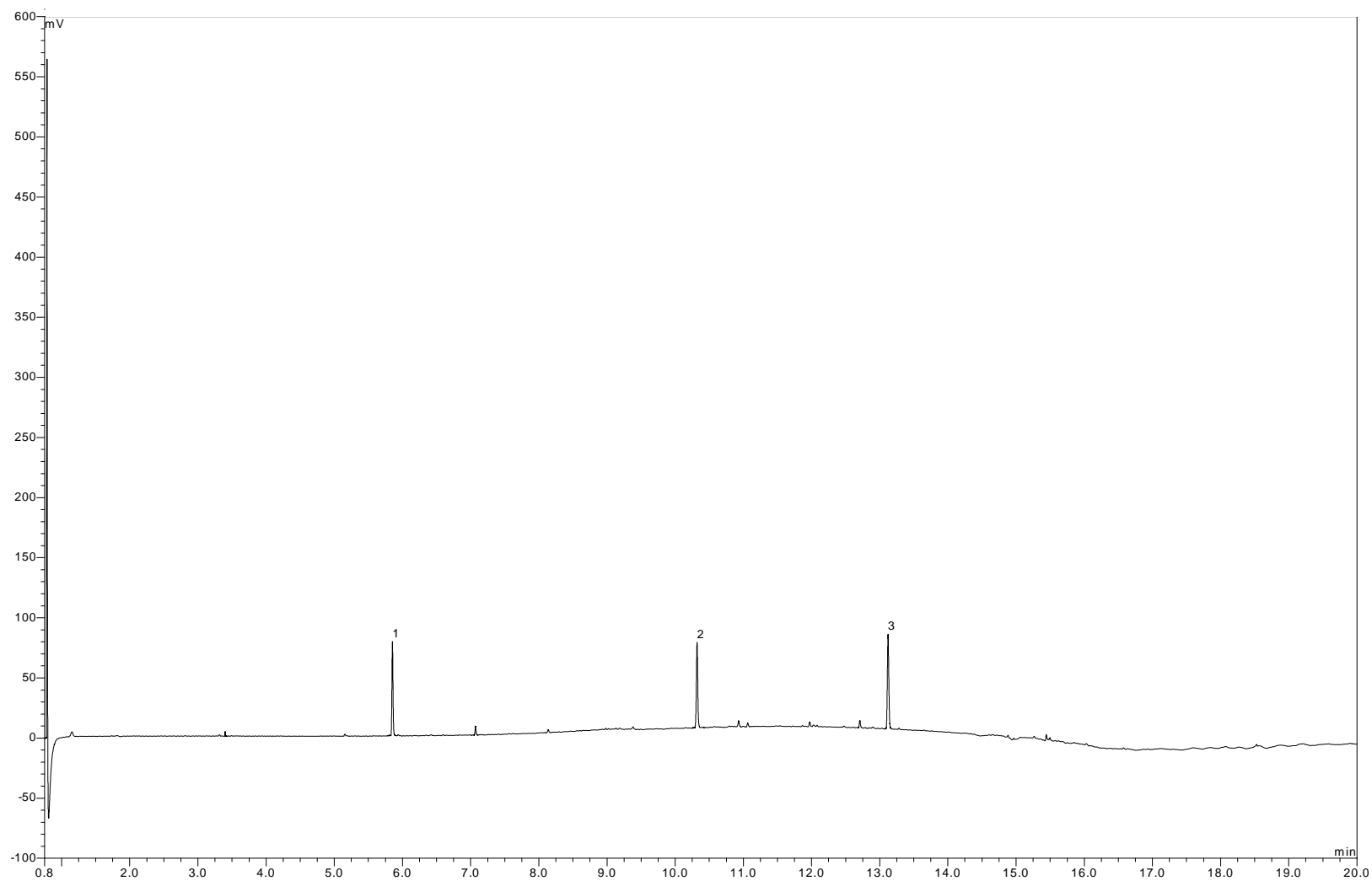
Lab Ref No. - S04008904
Sample Depth (m) - -
Sample No. - CH2MH BH 6
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



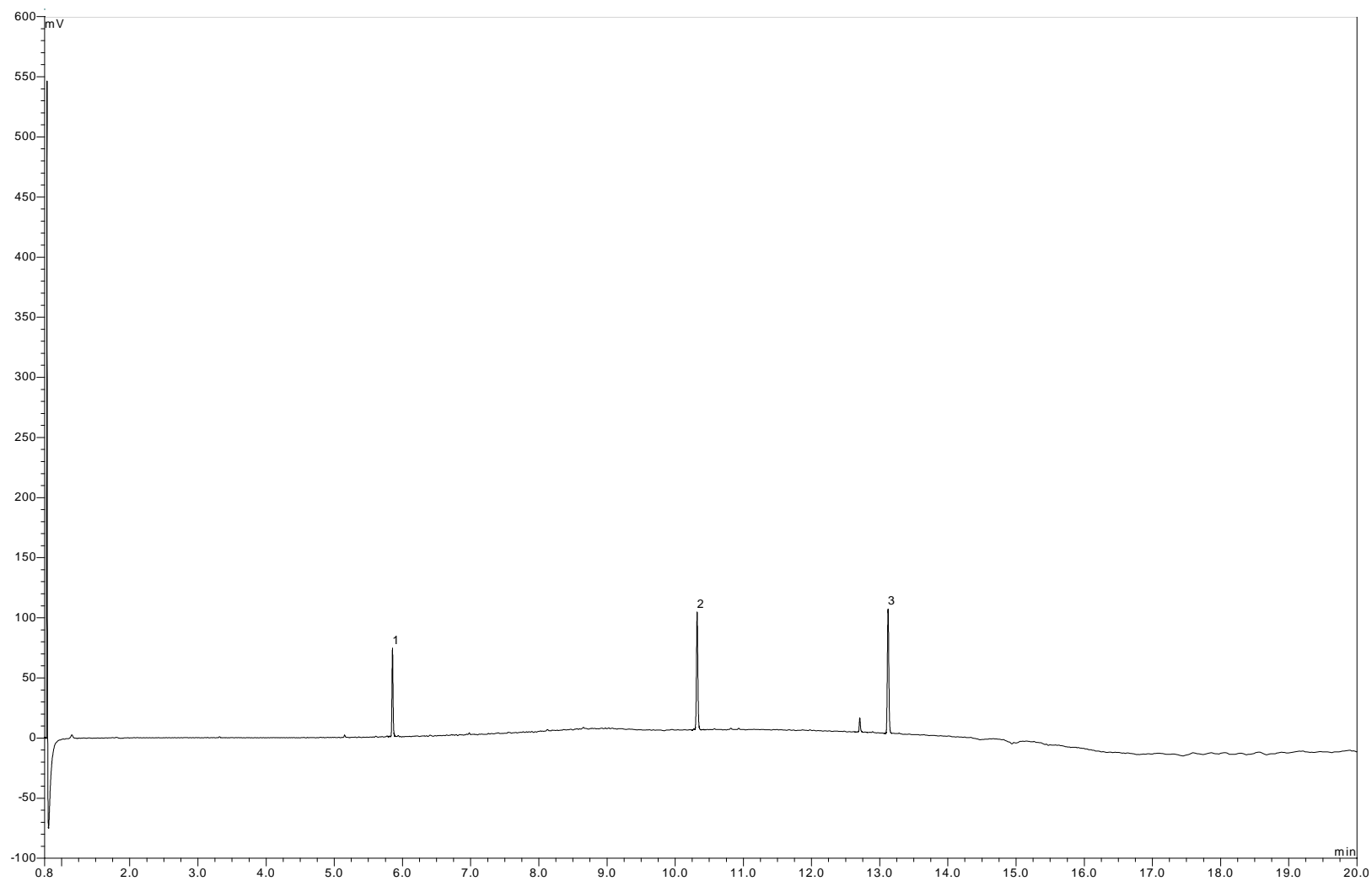
Lab Ref No. - S04008905
Sample Depth (m) - -
Sample No. - WS 11
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



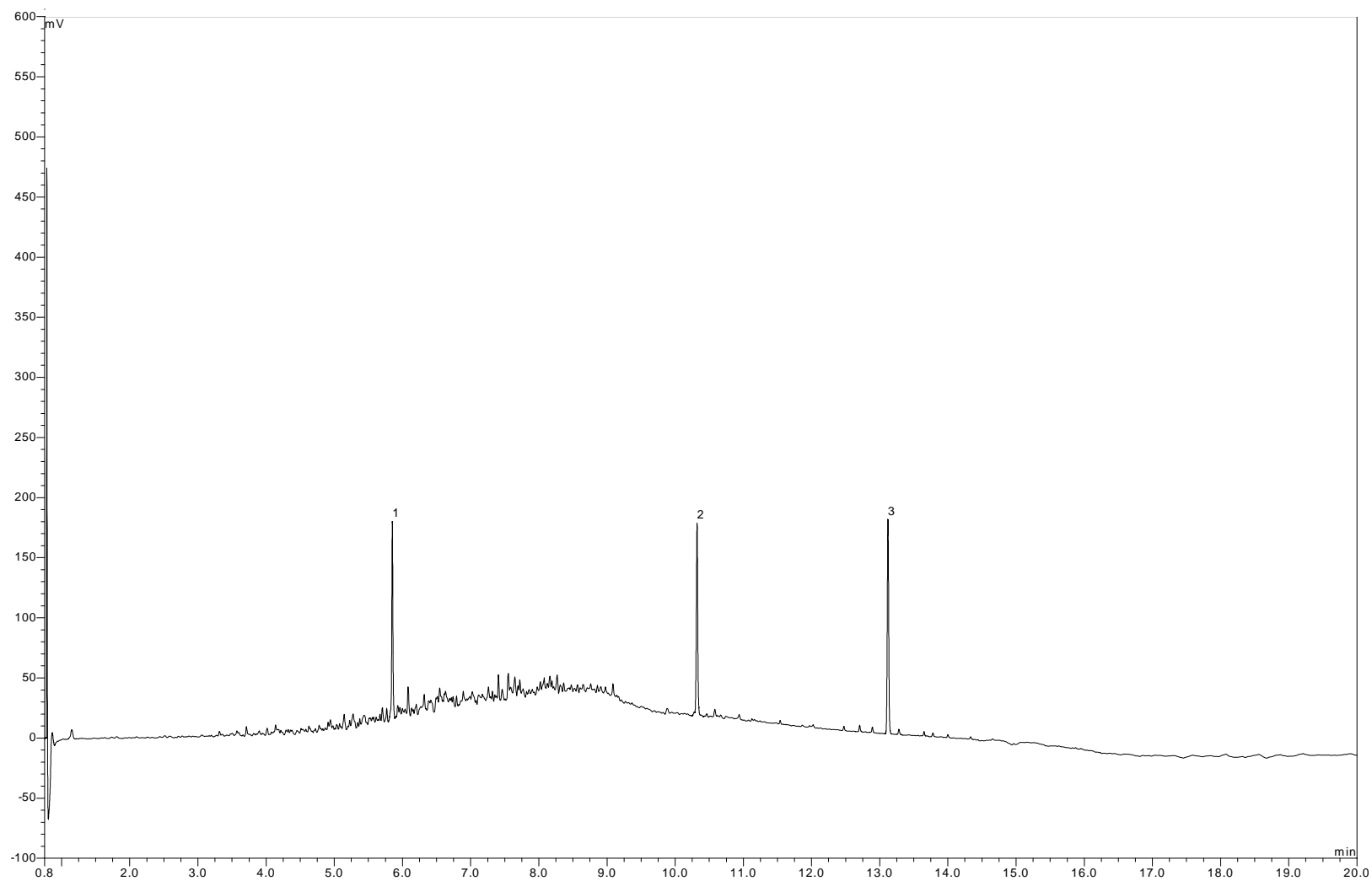
Lab Ref No. - S04008906
Sample Depth (m) - -
Sample No. - CH2MH BH7
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



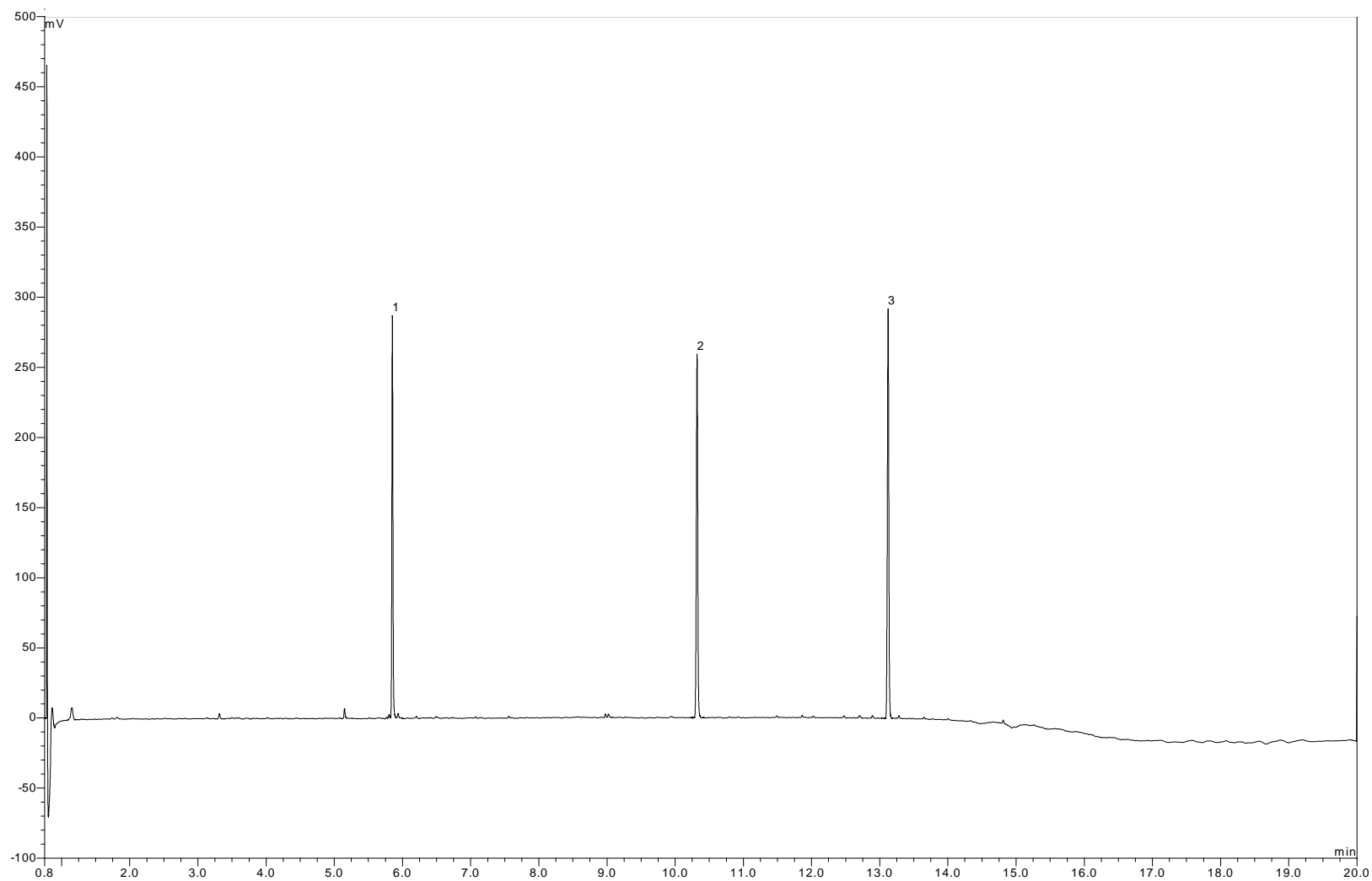
Lab Ref No. - S04008907
Sample Depth (m) - -
Sample No. - CH2MH BH5
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane

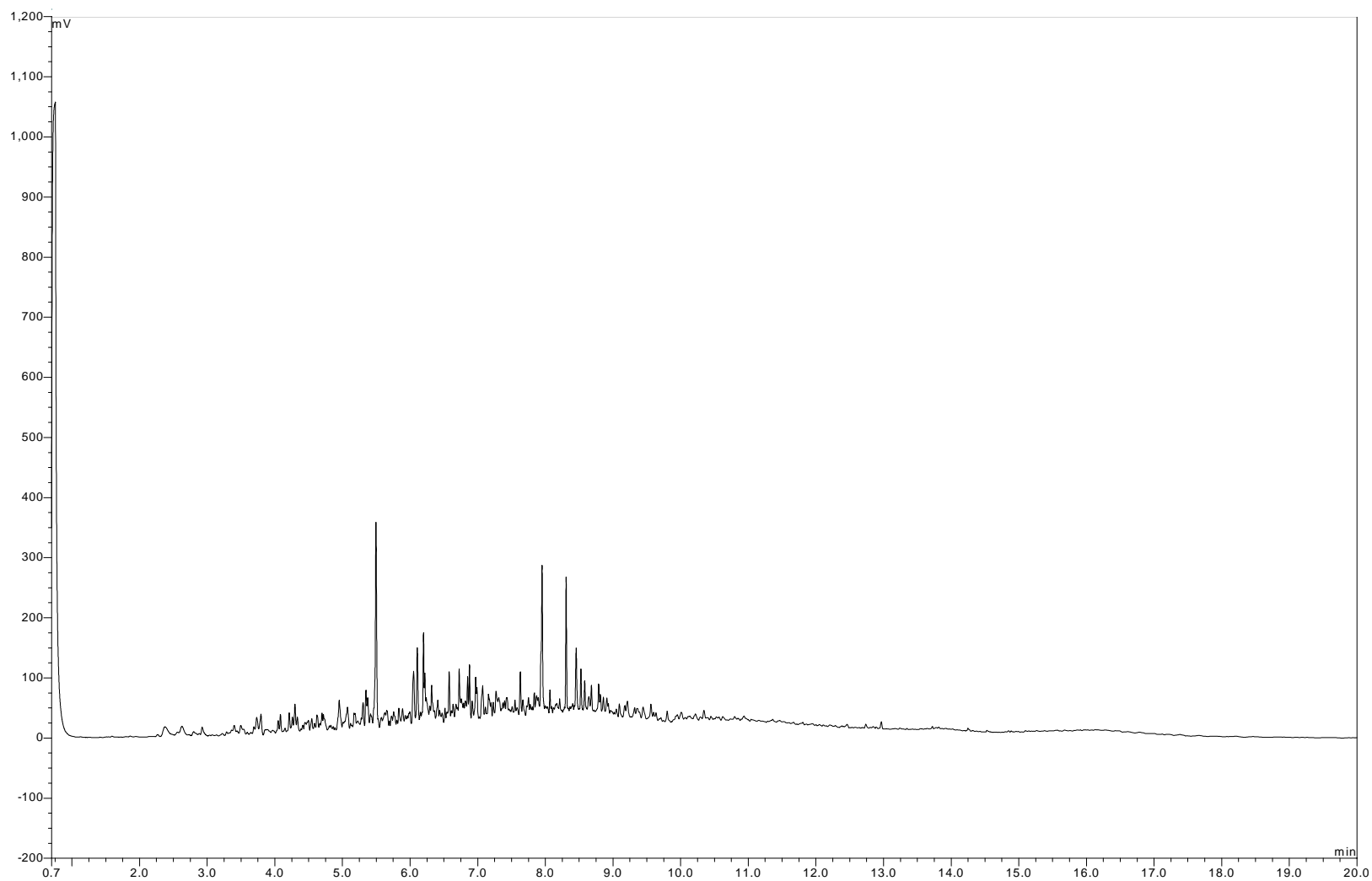


Lab Ref No. - S04008908
Sample Depth (m) - -
Sample No. - CH2MH BH1
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



Lab Ref No. - S04008902
Sample Depth (m) - -
Sample No. - BH 2
Sample Description - Product



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14th May 2004

TEST REPORT

Our Report No: B04002327

Your Order No: Instns. of 30.04.2004

5 no. soil samples submitted for analysis on 30.04.2004

Project Name: Morganite Stage 2

Project Code: 61-C7575

Results enclosed: Page 2

Laboratory analysis started on 30.04.2004
All laboratory analysis completed by 14th May 2004

Rexona Rahman
Project Co-ordinator
ALCONTROL TECHNICHEM

Leigh Burton
Project Co-ordinator
ALCONTROL TECHNICHEM

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TEST REPORT

Our Report No: B04002327

Page 2 of 2 pages

Your Order No: Instns. of 30.04.2004

CLIENT: ENVIRON UK Ltd

5 no. soil samples submitted for analysis on 30.04.2004

DATE OF ISSUE: 14th May 2004

Project Name: Morganite Stage 2

Project Code: 61-C7575

SOIL - RESULTS

Lab Ref No.	Sample Depth (m)	Sample No.	Sample Description	TPH by GC-FID (C ₈ -C ₄₀)	Description
S04015821	0.2-2.5	BHF	S	53	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₁₀ to C ₄₀ , overlain by a series of peaks consistent with PAHs.
S04015822	5-6	BHF	S	<5	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
S04015823	0.2-1.5	BHE	S	220	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₁₂ to beyond C ₄₀ , overlain by a series of peaks consistent with PAHs.
S04015824	0.2-3.0	BHD	S	250	The sample chromatogram exhibits a hump of unresolved complex material eluting predominantly from C ₂₂ to beyond C ₄₀ , overlain by a series of peaks consistent with PAHs and a series of n-alkane peaks.
S04015825	4-6	BHD	S	14	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₁₄ to C ₄₀ .

NOTE:

- (i) The method provides information only on Gas Chromatograph (GC) amenable material with elutions ranging between 40°C and 325°C.
- (ii) The results are expressed as mg/kg dry weight soil sample after correction for moisture content.

Our Report No: B04002327

Date of Issue: 14th May 2004

Project Name: Morganite Stage 2

Project Code: 61-C7575

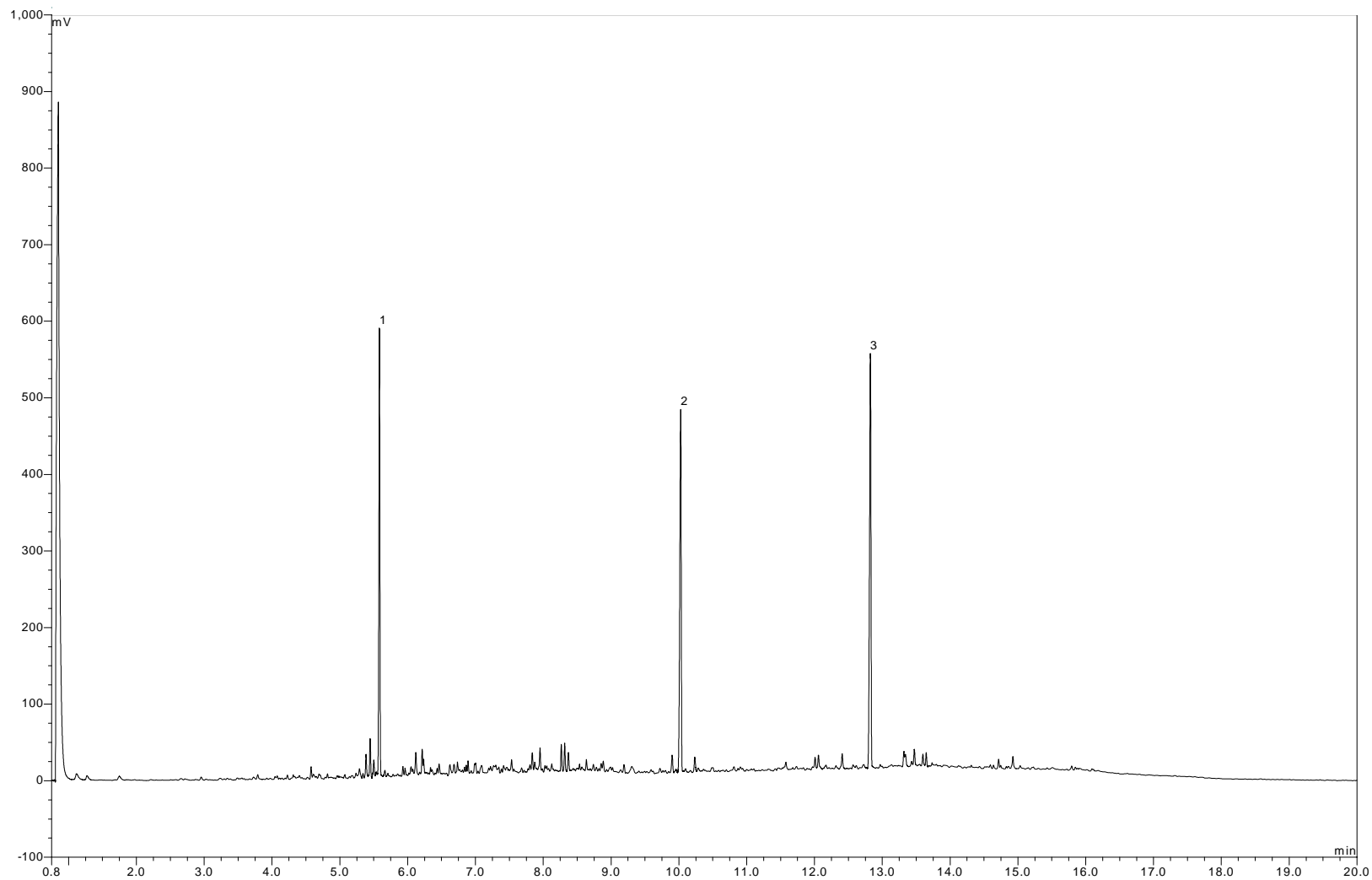
APPENDIX - Sample Statistics - Soils

<u>Test</u>	<u>Samples Analysed</u>
TPH by GC-FID (C ₈ -C ₄₀)	5

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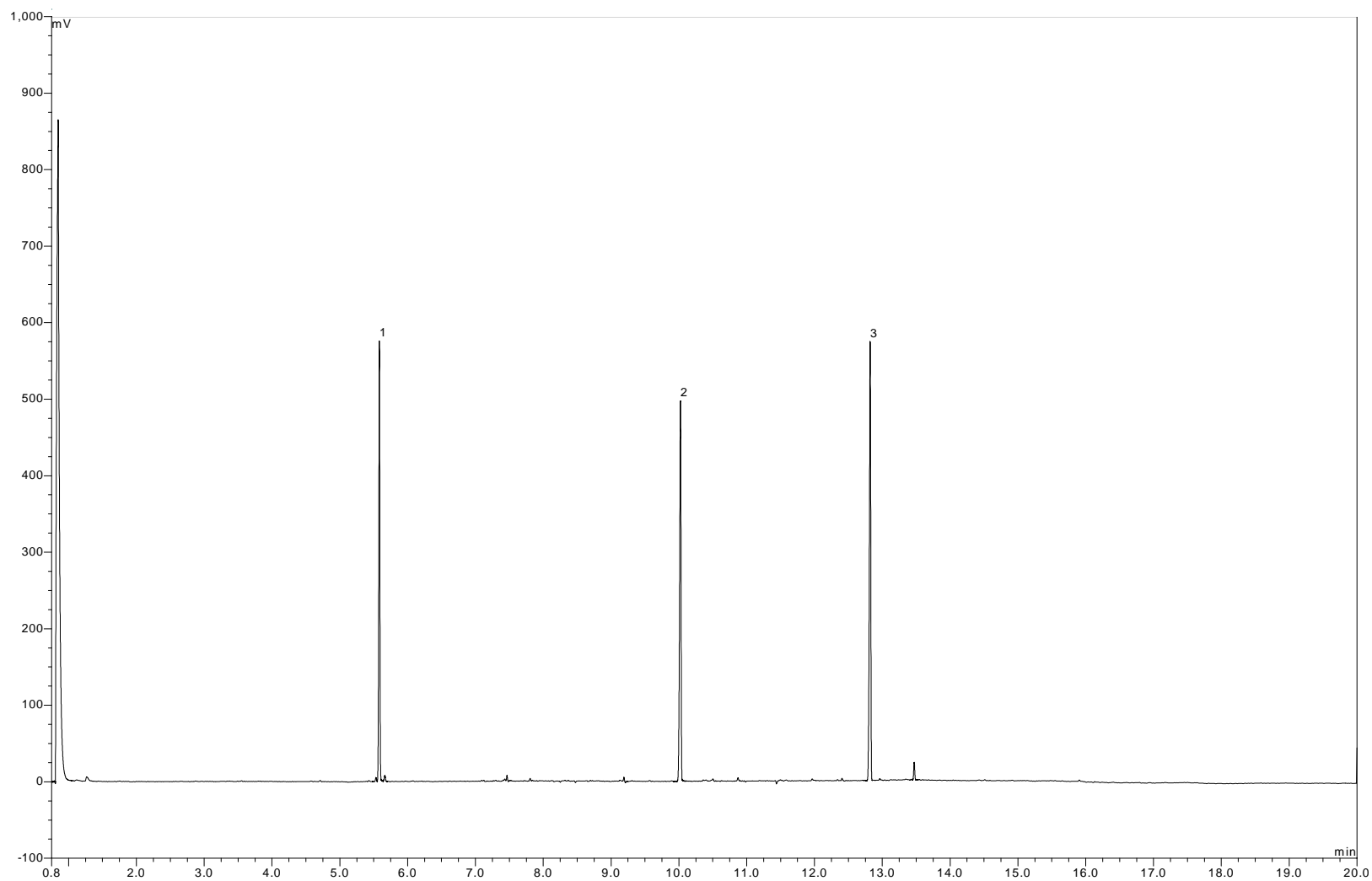
Lab Ref No. - S04015821
Sample Depth (m) - 0.2-2.5
Sample No. - BHF
Sample Description - S

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



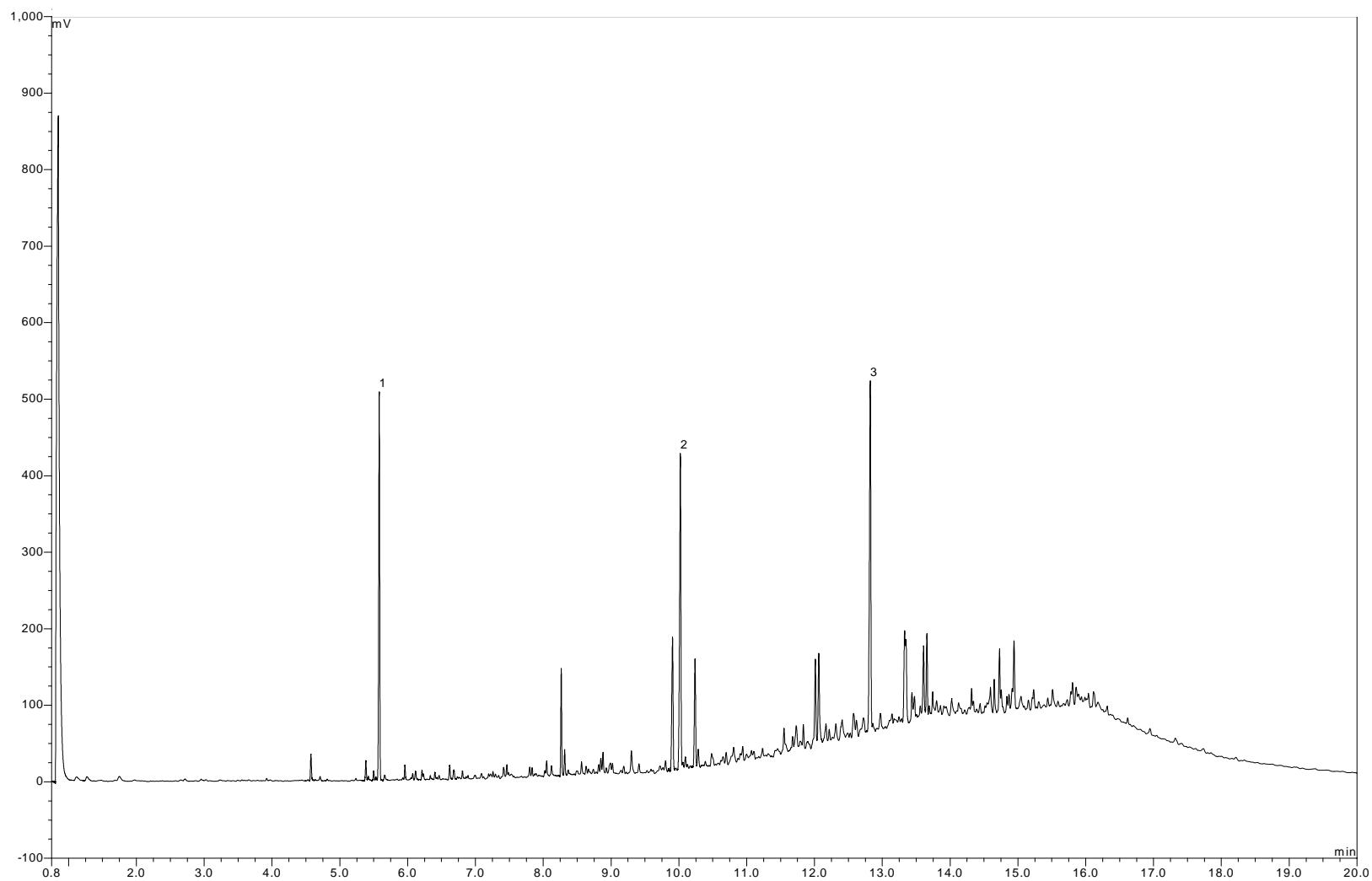
Lab Ref No. - S04015822
Sample Depth (m) - 5-6
Sample No. - BHF
Sample Description - S

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



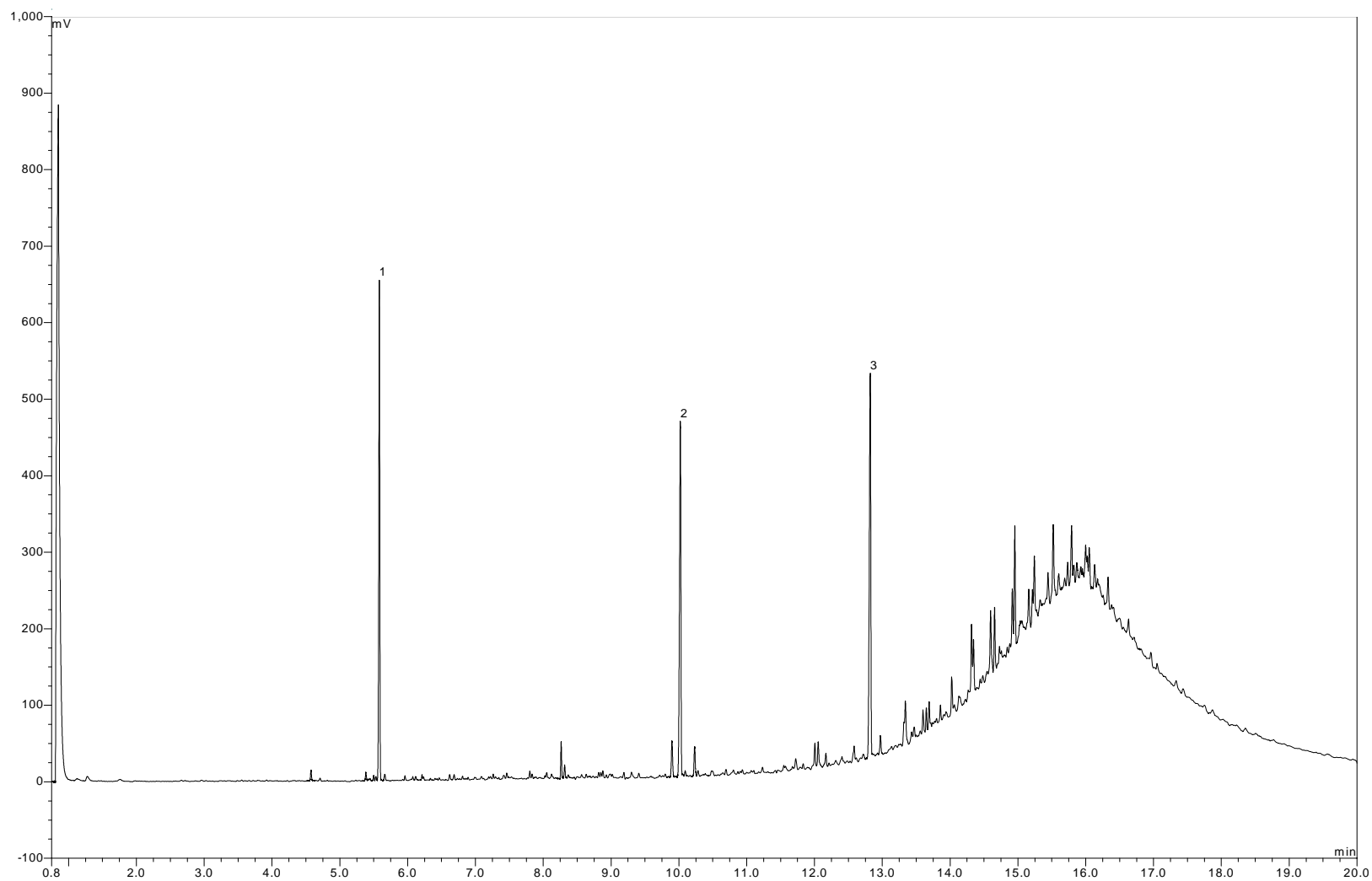
Lab Ref No. - S04015823
Sample Depth (m) - 0.2-1.5
Sample No. - BHE
Sample Description - S

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



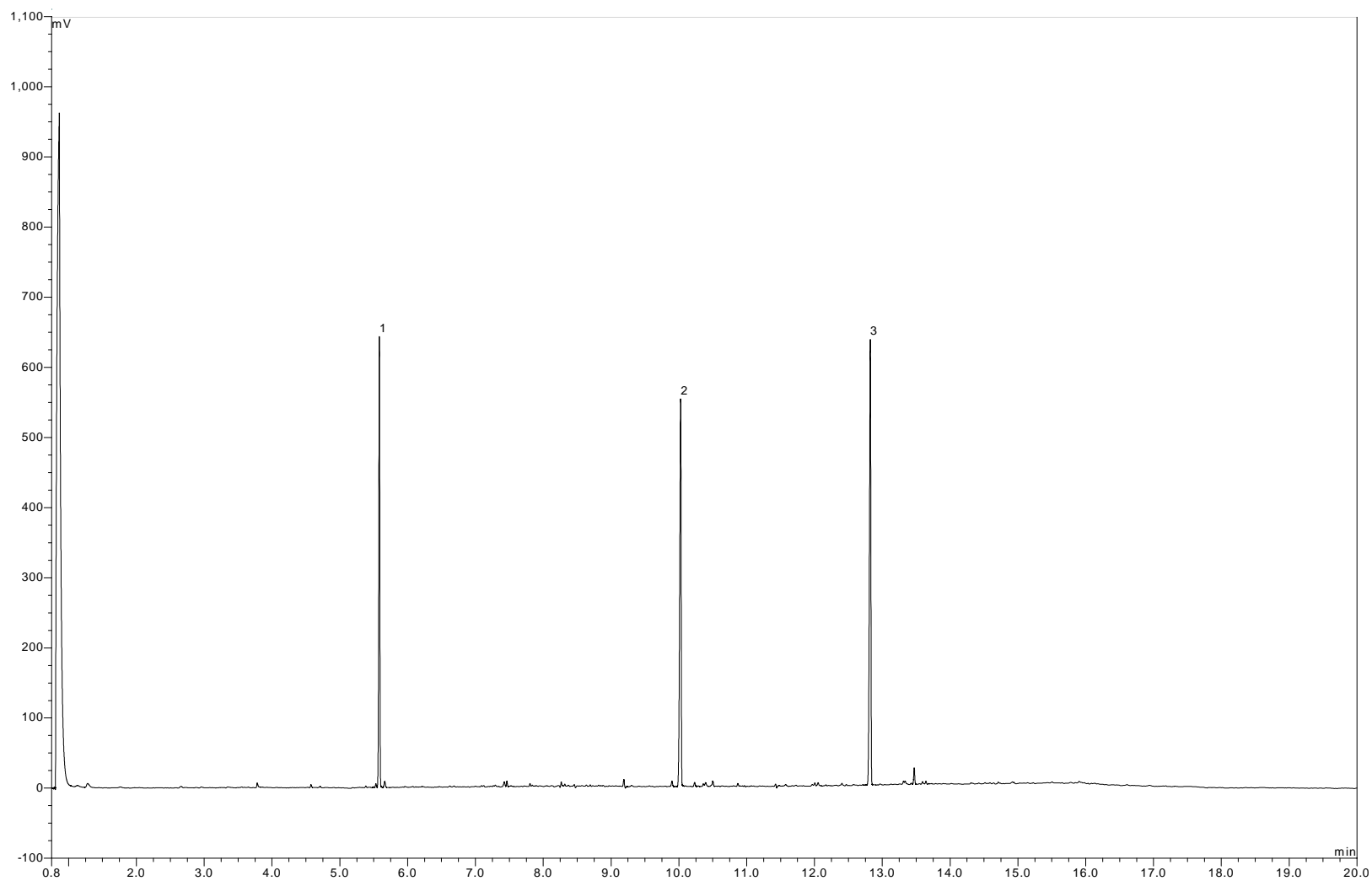
Lab Ref No. - S04015824
Sample Depth (m) - 0.2-3.0
Sample No. - BHD
Sample Description - S

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



Lab Ref No. - S04015825
Sample Depth (m) - 4-6
Sample No. - BHD
Sample Description - S

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



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7th June 2004

TEST REPORT

Our Report No: B04002861 Re Issue No. 1 (dated 15.06.04)

Your Order No: Instns. of 21.05.2004

5 no. water & 2 no. product samples submitted for analysis on 21.05.2004

Project Name: Morganite

Project Code: 61-C7575

Results enclosed: Pages 2-3

Laboratory analysis started on 21.05.2004

All laboratory analysis completed by 7th June 2004

Rexona Rahman
Project Co-ordinator
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TEST REPORT

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Page 2 of 3 pages

Your Order No: Instns. of 21.05.2004

CLIENT: ENVIRON UK Ltd

5 no. water & 2 no. product samples submitted for analysis on 21.05.2004

DATE OF ISSUE: 7th June 2004

Project Name: Morganite

Project Code: 61-C7575

WATER - RESULTS

Lab Ref No.	Sample Depth (m)	Sample No.	Sample Description	TPH by GC-FID (C ₈ -C ₄₀)	Description
S04018841	-	BH A	W	1.6	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₁₀ to C ₃₄ , overlain by a series of peaks unidentifiable by this analysis.
S04018842	-	BH B	Product	76	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₈ to C ₄₀ , overlain by a series of peaks unidentifiable by this analysis.
S04018843	-	BH C	W	6.0	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₈ to C ₄₀ , overlain by a series of peaks which require qualitative analysis by GC-MS for further identification.
S04018844	-	BH F	W	0.8	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₁₀ to C ₄₀ , overlain by several peaks unidentifiable by this analysis.
S04018845	-	WS 7	W	1.4	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₈ to C ₄₀ , overlain by a series of peaks unidentifiable by this analysis.

NOTE:

- (i) The method provides information only on Gas Chromatograph (GC) amenable material with elutions ranging between 40 °C and 325 °C.
- (ii) The results are expressed as mg/l.

TEST REPORT

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Your Order No: Instns. of 21.05.2004

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DATE OF ISSUE: 7th June 2004

Project Name: Morganite

Project Code: 61-C7575

WATER - RESULTS

Lab Ref No.	Sample Depth (m)	Sample No.	Sample Description	Density of Product (g/l)	TPH by GC-FID (C ₈ -C ₄₀)	Description
S04018846	-	BH 6 CH2M	W		<0.1	The sample chromatogram exhibits too little GC-FID amenable material to provide qualitative analysis.
S04018847	-	BH 2	Product	930	68	The sample chromatogram exhibits a hump of unresolved complex material eluting from C ₈ to C ₄₀ , overlain by a series of peaks unidentifiable by this analysis.

- NOTE:
- (i) The method provides information only on Gas Chromatograph (GC) amenable material with elutions ranging between 40 °C and 325 °C.
 - (ii) The results are expressed as mg/l, unless stated.

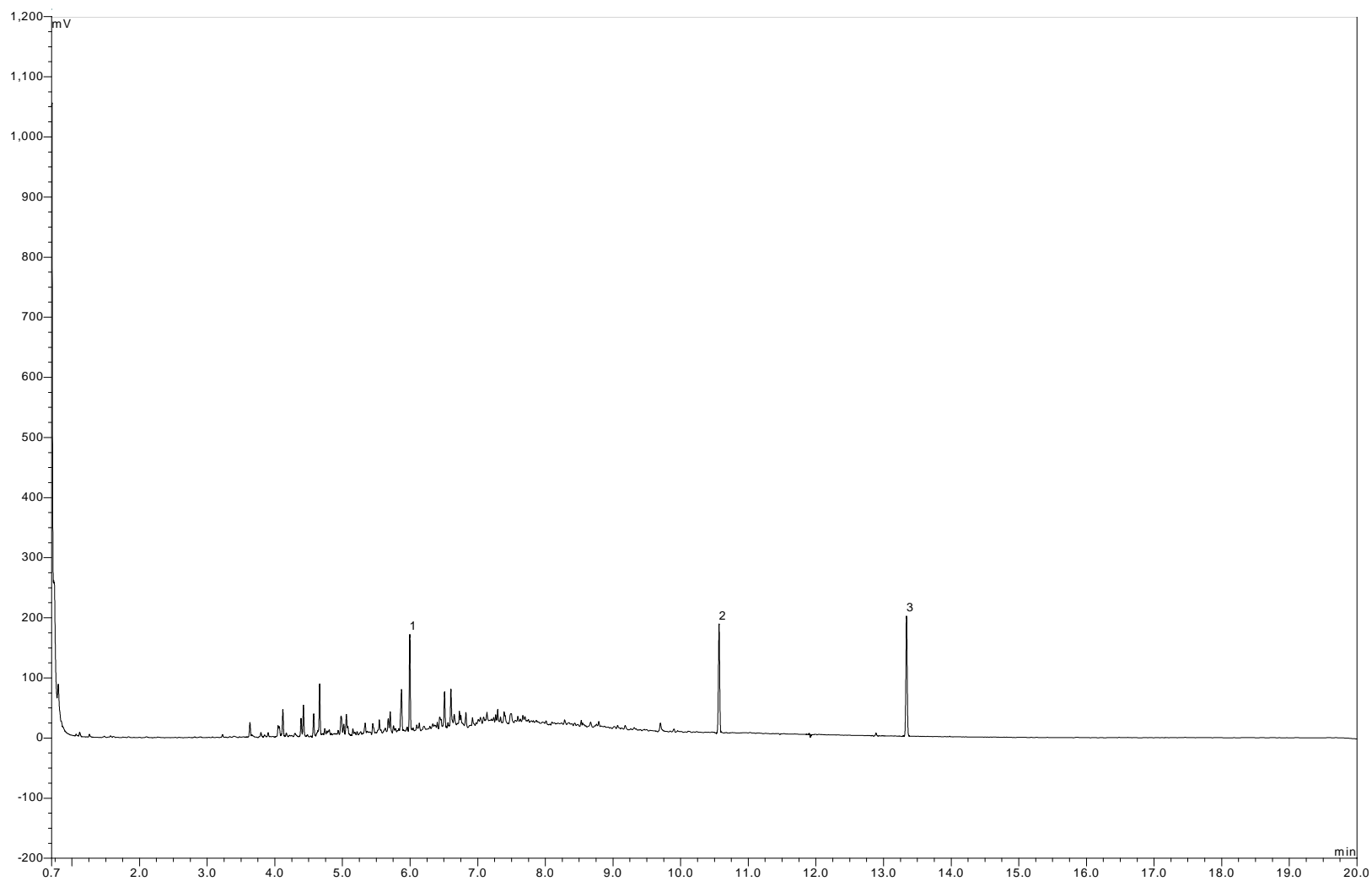
APPENDIX - Sample Statistics - Waters/Products

<u>Test</u>	<u>Samples Analysed</u>
TPH by GC-FID (C ₈ -C ₄₀)	7
Density of Product	1

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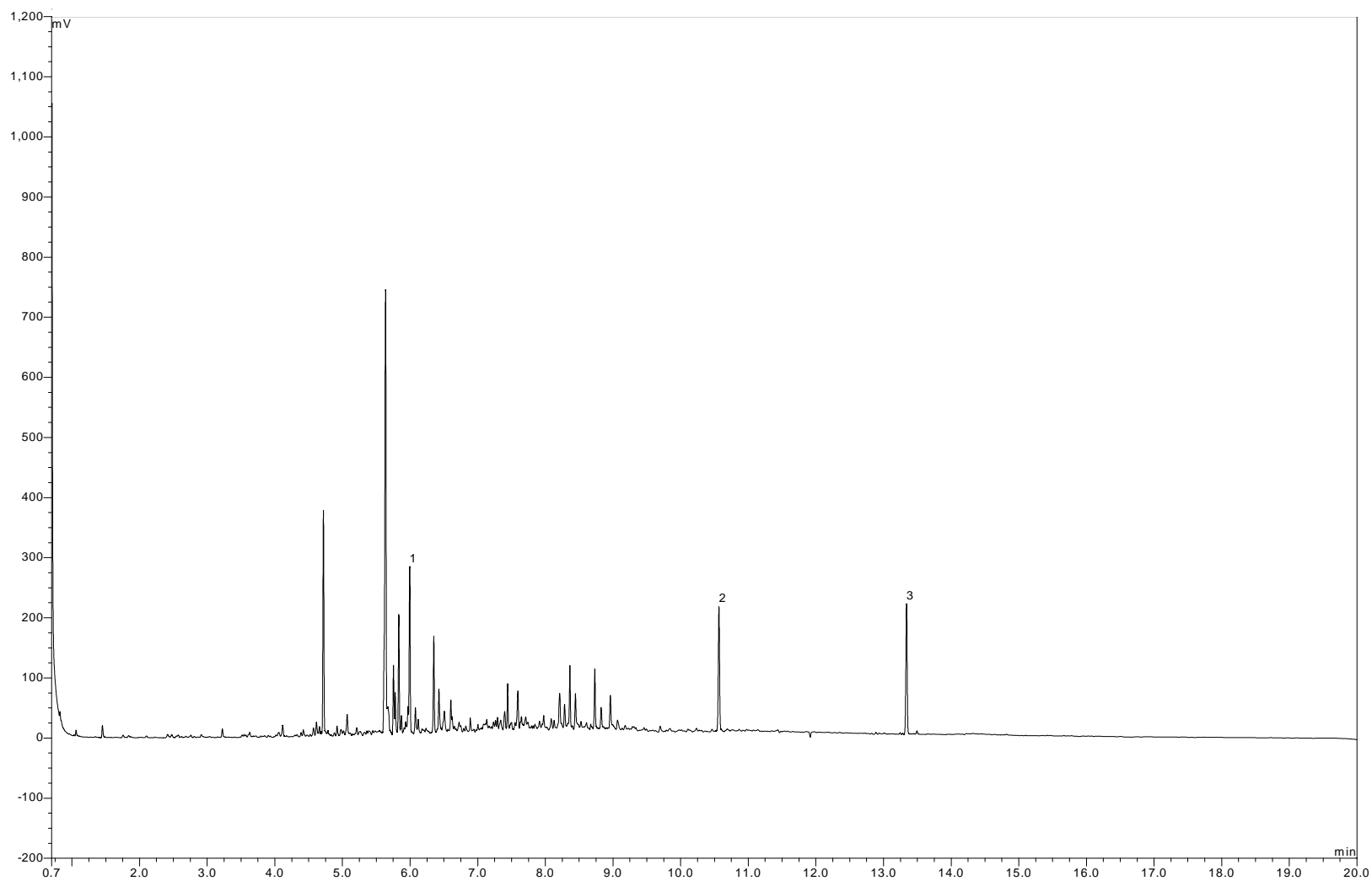
Lab Ref No. - S04018841
Sample Depth (m) - -
Sample No. - BH A
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



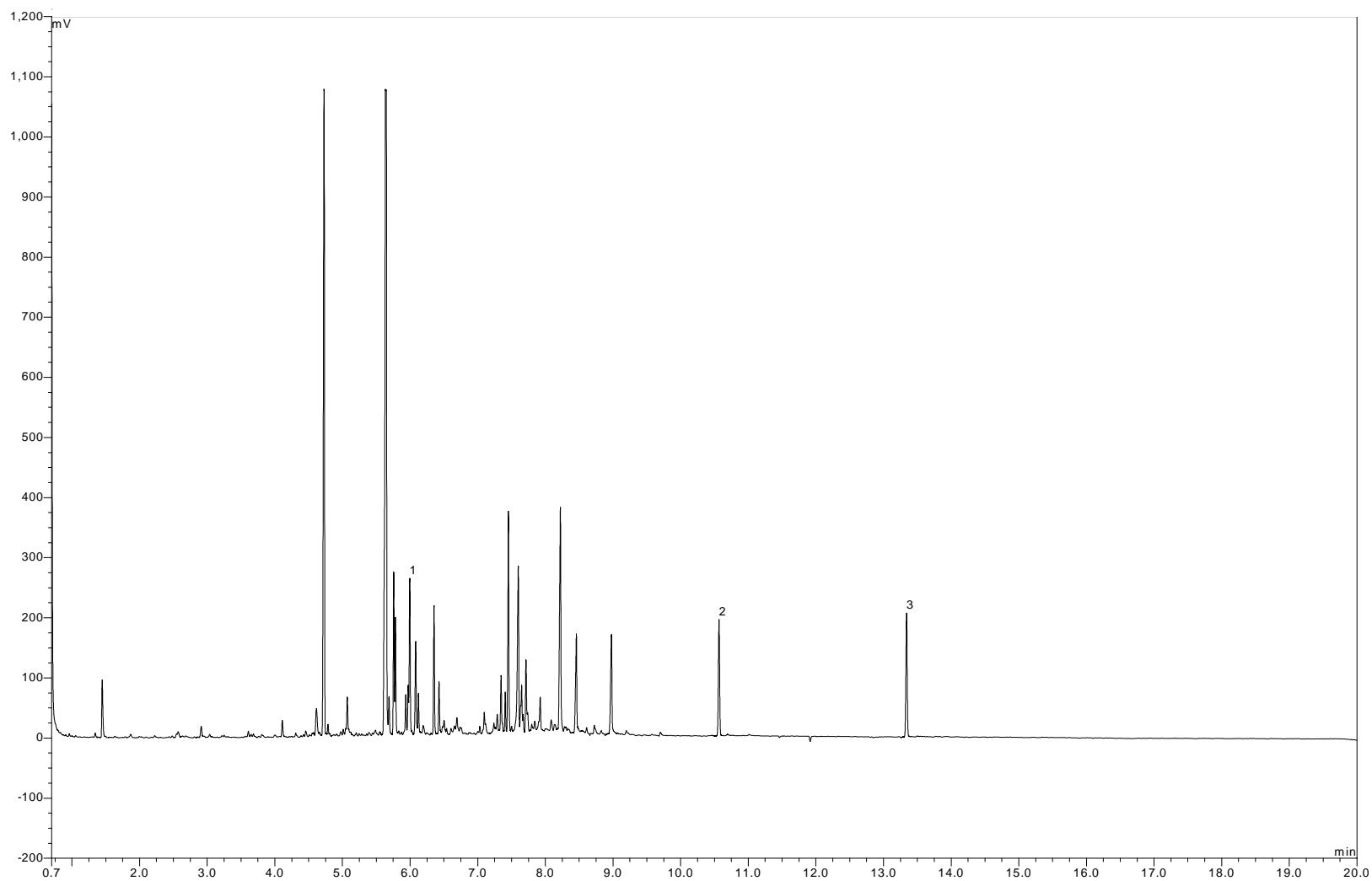
Lab Ref No. - S04018842
Sample Depth (m) - -
Sample No. - BH B
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



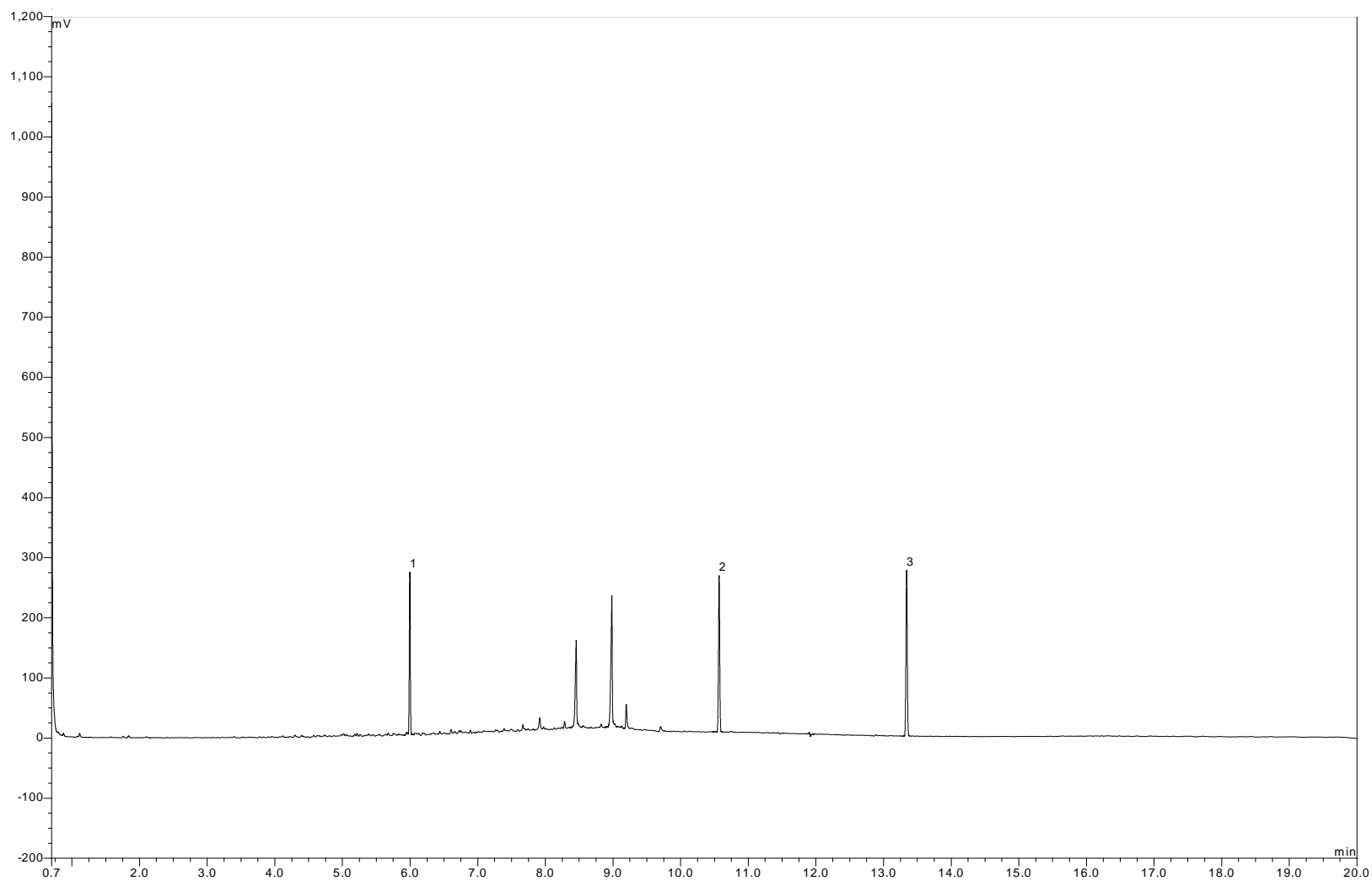
Lab Ref No. - S04018843
Sample Depth (m) - -
Sample No. - BH C
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



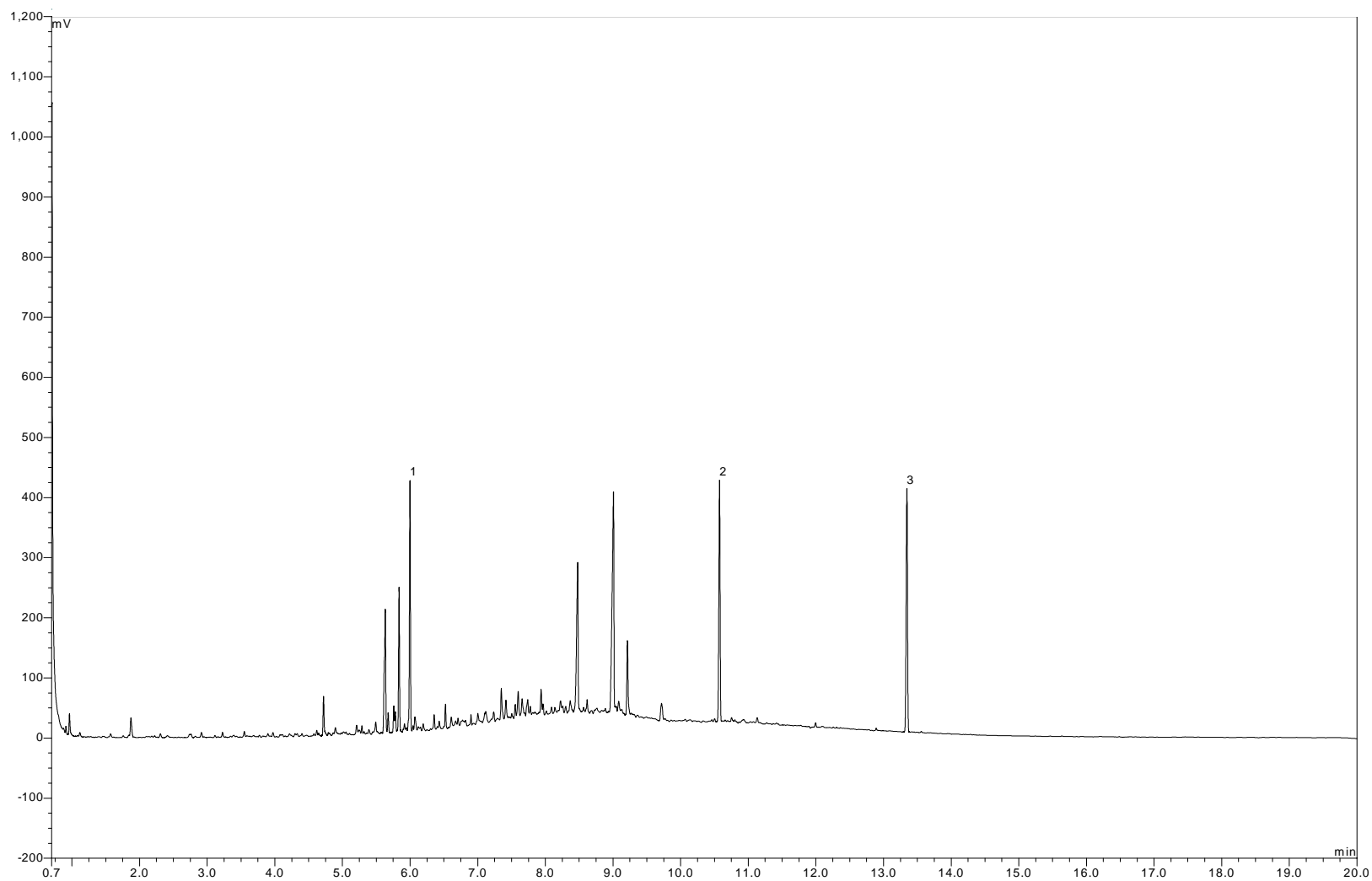
Lab Ref No. - S04018844
Sample Depth (m) - -
Sample No. - BH F
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



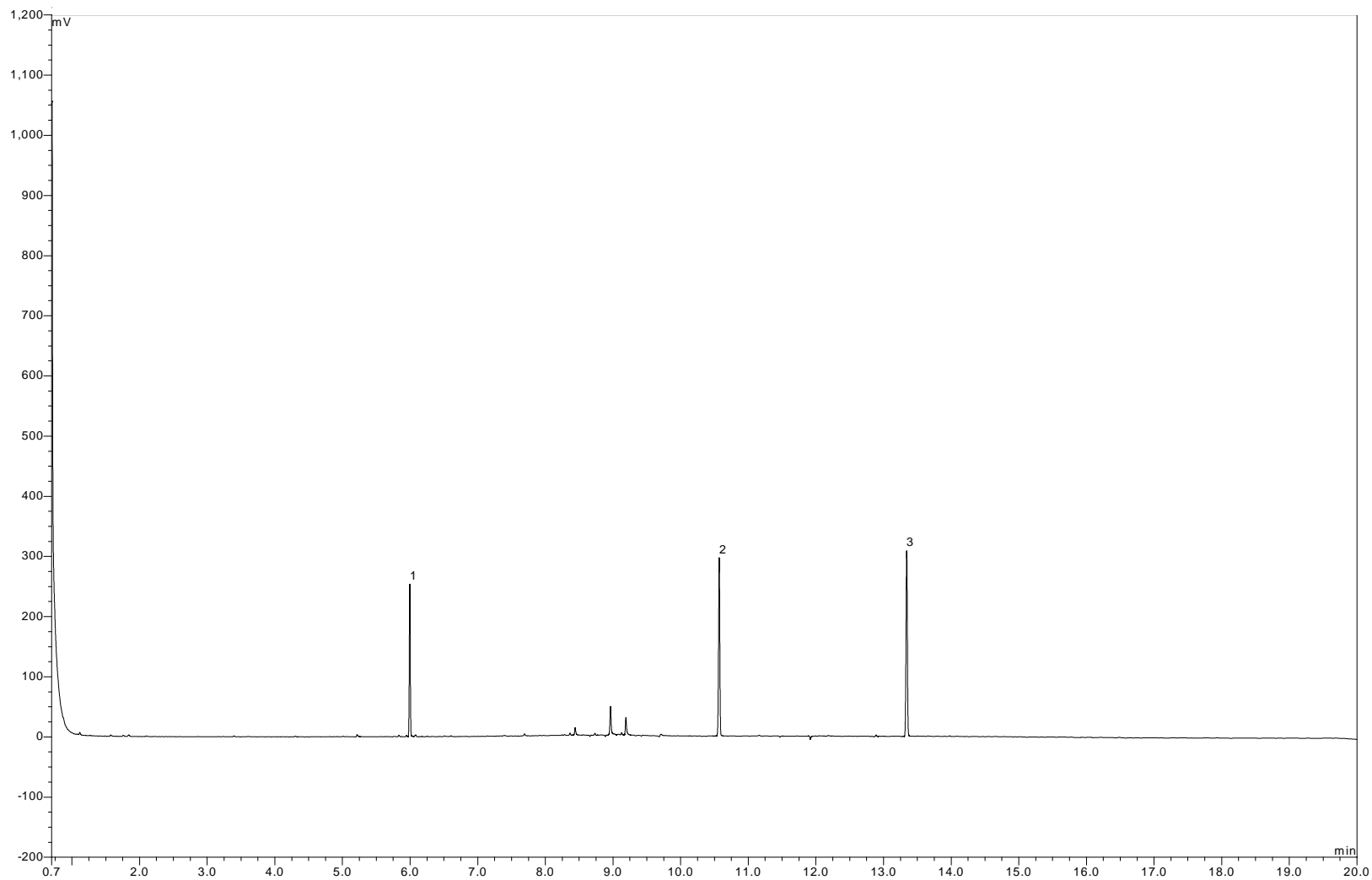
Lab Ref No. - S04018845
Sample Depth (m) - -
Sample No. - WS 7
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



Lab Ref No. - S04018846
Sample Depth (m) - -
Sample No. - BH 6 CH2M
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane



Lab Ref No. - S04018847
Sample Depth (m) - -
Sample No. - BH 9
Sample Description - W

Internal Standards
1 - Heptamethylnonane
2 - Chlorooctadecane
3 - Squalane

