

### CERTIFICATE OF ANALYSIS

<b>SAMPLE NAME</b>		Melaleuca Alternifolia	
<b>FORM</b>		Essential oil	
<b>CUSTOMER NAME</b>		Sacred Soul Holistics	
<b>CERTIFICATION DATE</b>		21 May 2019	
<b>CUSTOMER REFERENCE</b>			
<b>ARL JOB #</b>	A190980	<b>LAB REF. #</b>	ARL1902534
<b>ANALYSIS</b>	GCMS - Compositional (LEVEL 1)	<b>METHOD</b>	ARL-TM101

TEST	RESULTS	TEST METHOD
	Area %	
$\alpha$ -thujone	1.02	ARL-TM101-3*
$\alpha$ -pinene	2.36	
sabinene	0.48	
$\beta$ -pinene	0.69	
myrcene	0.77	
$\alpha$ -phellandrene	0.55	
$\alpha$ -terpinene	11.08	
p-cymene	2.20	
$\beta$ -phellandrene	1.72	
1,8-cineole	2.02	
$\gamma$ -terpinene	19.25	
terpinolene	3.87	
cis-sabinene hydrate	0.17	
trans-p-menth-2-en-1-ol	0.44	
cis-p-menth-2-en-1-ol	0.31	
terpinen-4-ol	35.66	
$\alpha$ -terpineol	4.04	
$\alpha$ -cubebene	0.06	
$\alpha$ -copaene	0.22	
$\alpha$ -gurjunene	0.45	
caryophyllene	0.38	
$\gamma$ -maaliene	0.07	
$\alpha$ -maaliene	0.09	
aromadendrene	1.31	
selina 5, 11 diene	0.16	
cadina 3,5 diene	0.18	
humulene	0.15	
allo-aromadendrene	0.59	
ledene	1.25	
bicyclogermacrene	1.40	
$\delta$ -cadinene	1.75	
zonarene	0.52	
trans-cadina-1, 4-diene	0.32	
globulol	0.58	
cubeban-11-ol	0.53	
guaia-5-en-11-ol	0.20	
epi-1-cubenol	0.41	
cubenol	0.29	

\* Assay by GC (FID detection –area percent report)

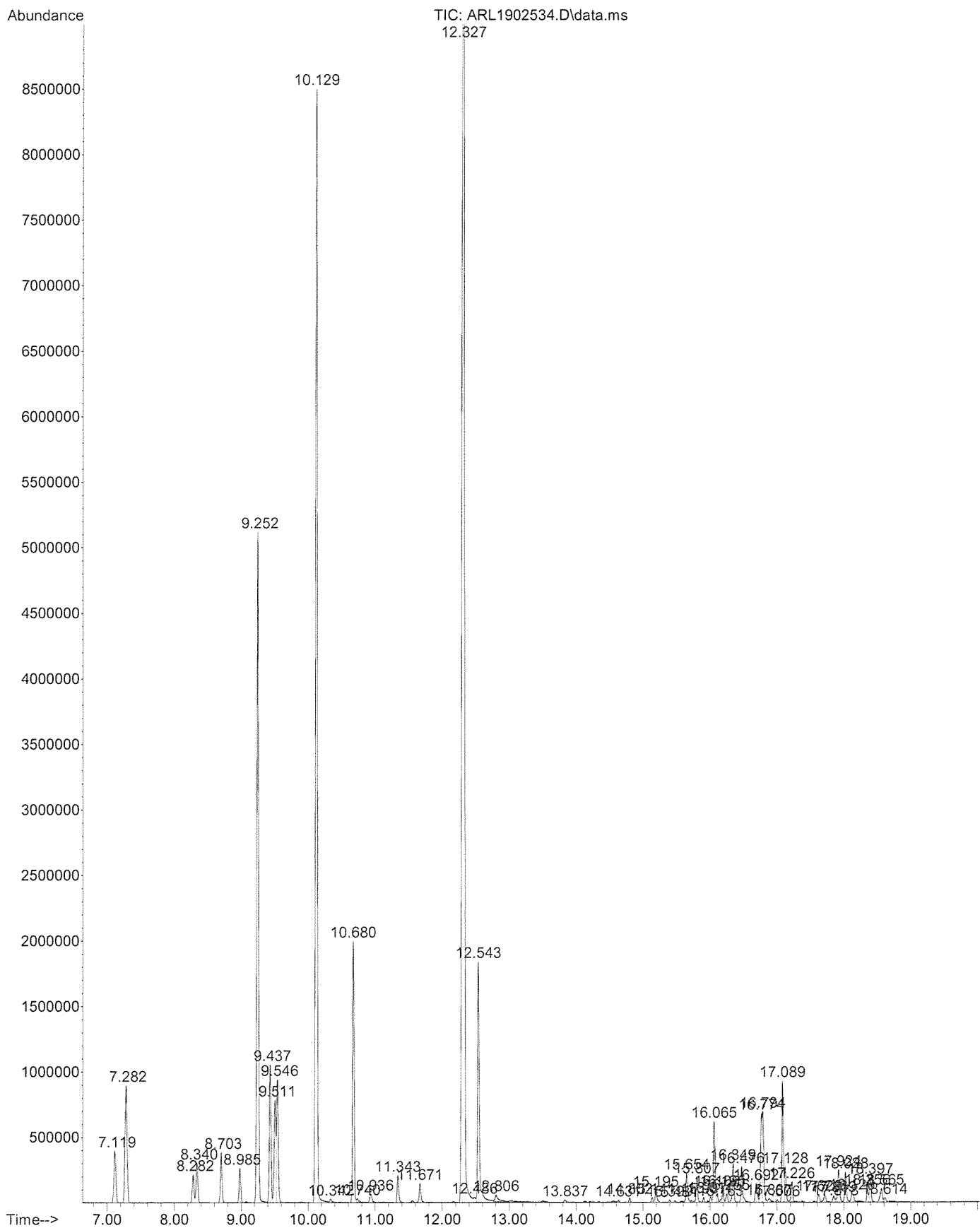


Ms Anastasia Whitehall  
LABORATORY ASSISTANT



Ashley Dowell  
MANAGER - ARL

File :W:\SCPS\Analytical\LabDATA\GCMS-3\Data\190506\ARL1902534.D  
Operator : Anastasia Whitehall  
Acquired : 6 May 2019 16:20 using AcqMethod GCMS-COMPOSITIONAL.M  
Instrument : Instrument #1  
Sample Name: Melaleuca Alternifolia  
Misc Info :  
Vial Number: 5



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20/5/19

Library Search Report

Data Path : W:\SCPS\Analytical\LabDATA\GCMS-3\Data\190506\  
 Data File : ARL1902534.D  
 Acq On : 6 May 2019 16:20  
 Operator : Anastasia Whitehall  
 Sample : Melaleuca Alternifolia  
 Misc :  
 ALS Vial : 5 Sample Multiplier: 1

Search Libraries: C:\Database\ESSOILS.L Minimum Quality: 60  
 C:\Database\ADAMS.L Minimum Quality: 60  
 C:\Database\NIST14.L

Unknown Spectrum: Apex  
 Integration Events: Chemstation Integrator - AUTOINT1.E

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
1	7.118	1.02	C:\Database\ESSOILS.L THUJENE-A	1	002867-05-2	97
2	7.282	2.36	C:\Database\ESSOILS.L PINENE-A	2	000080-56-8	96
3	8.281	0.48	C:\Database\ESSOILS.L SABINENE	3	003387-41-5	70
4	8.341	0.69	C:\Database\ESSOILS.L PINENE-B	4	000127-91-3	96
5	8.704	0.77	C:\Database\ESSOILS.L MYRCENE	5	000123-35-3	96
6	8.985	0.55	C:\Database\ESSOILS.L PHELLANDRENE-A	6	000099-83-2	91
7	9.251	11.08	C:\Database\ESSOILS.L TERPINENE-A	7	000099-86-5	98
8	9.438	2.20	C:\Database\ESSOILS.L CYMENE-P	8	000099-87-6	97
9	9.512	1.72	C:\Database\ESSOILS.L PHELLANDRENE - BETA	374	000555-10-2	93
10	9.546	2.02	C:\Database\ESSOILS.L CINEOLE-1,8	11	000470-82-6	99
11	10.130	19.25	C:\Database\ESSOILS.L TERPINENE-G	12	000099-85-4	97
13	10.680	3.87	C:\Database\ESSOILS.L TERPINOLENE	13	000586-62-9	95
15	10.934	0.17	C:\Database\ESSOILS.L SABINENE - HYDRATE CIS	205	015826-82-1	91
16	11.342	0.44	C:\Database\ESSOILS.L P-MENTH-2-EN-1-OL - TRANS	376	029803-81-4	99
17	11.672	0.31	C:\Database\ESSOILS.L P-MENTH-2-EN-1-OL - CIS	375	029803-82-5	99
18	12.327	35.66	C:\Database\ESSOILS.L TERPINEN-4-OL	18	000562-74-3	97
20	12.544	4.04	C:\Database\ESSOILS.L TERPINEOL - A	19	1000157-89-9	95
24	14.804	0.06	C:\Database\ESSOILS.L CUBEBENE-ALPHA	31	017699-14-8	96

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26	15.193	0.22	C:\Database\ESSOILS.L COPAENE - ALPHA	257	003856-25-5	94
29	15.653	0.45	C:\Database\ESSOILS.L GURJUNENE - A	187	000489-40-7	99
30	15.807	0.38	C:\Database\ESSOILS.L CARYOPHYLLENE	27	000087-44-5	99
31	15.908	0.07	C:\Database\ESSOILS.L MAALIENE - GAMMA	493	000643-29-8	96
32	16.013	0.09	C:\Database\ESSOILS.L MAALIENE - ALPHA	408	000489-28-1	91
33	16.065	1.31	C:\Database\ESSOILS.L AROMADENDRENE	26	025246-27-9	99
34	16.106	0.16	C:\Database\ESSOILS.L SELINA 5,11 DIENE	407	000045-45-1	99
36	16.196	0.18	C:\Database\ESSOILS.L CADINA 3,5 DIENE	406	004726-51-1	97
37	16.256	0.15	C:\Database\ESSOILS.L HUMULENE	29	006753-98-6	96
38	16.349	0.59	C:\Database\ESSOILS.L AROMADENDRENE-ALLO	28	025246-27-9	99
41	16.772	1.25	C:\Database\ESSOILS.L LEDENE	216	021747-46-6	99
42	16.795	1.40	C:\Database\ESSOILS.L BICYCLOGERMACRENE	215	024703-35-3	98
45	17.090	1.75	C:\Database\ESSOILS.L CADINENE-D	25	000483-76-1	91
46	17.128	0.52	C:\Database\ESSOILS.L ZONARENE	409	149115-45-7	98
47	17.225	0.32	C:\Database\ESSOILS.L CADINA-1,4-DIENE, TRANS	121	016728-99-7	81
52	17.925	0.58	C:\Database\ESSOILS.L GLOBULOL	23	000489-41-8	99
53	18.030	0.53	C:\Database\ESSOILS.L CUBEBAN - 11 - OL	973	000082-82-2	97
55	18.355	0.20	C:\Database\ESSOILS.L GUAIA - 5 - EN - 11 - OL	940	000081-81-3	95
56	18.396	0.41	C:\Database\ESSOILS.L CUBENOL 1 EPI	604	019912-67-5	95
57	18.565	0.29	C:\Database\ESSOILS.L CUBENOL	632	021284-22-0	93

GCMS-COMPOSITIONAL.M Tue May 21 14:39:06 2019

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## Library Search Report

Data Path : W:\SCPS\Analytical\LabDATA\GCMS-3\Data\190506\  
Data File : ARL1902534.D  
Acq On : 6 May 2019 16:20  
Operator : Anastasia Whitehall  
Sample : Melaleuca Alternifolia  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Search Libraries: C:\Database\ESSOILS.L Minimum Quality: 60  
C:\Database\ADAMS.L Minimum Quality: 60  
C:\Database\NIST14.L

Unknown Spectrum: Apex  
Integration Events: Chemstation Integrator - AUTOINT1.E

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
1	7.118	1.02	C:\Database\ESSOILS.L			
			THUJENE-A	1	002867-05-2	97
			PELLANDRENE-A	6	000099-83-2	90
			PINENE-A	2	000080-56-8	56
2	7.282	2.36	C:\Database\ESSOILS.L			
			PINENE-A	2	000080-56-8	96
			TRICYCLEN	56	000508-32-7	91
			PELLANDRENE - BETA	374	000555-10-2	74
3	8.281	0.48	C:\Database\ESSOILS.L			
			PELLANDRENE - BETA	374	000555-10-2	95
			CARENE - DELTA-3	303	013466-78-9	72
			SABINENE	3	003387-41-5	70
4	8.341	0.69	C:\Database\ESSOILS.L			
			PINENE-B	4	000127-91-3	96
			TRICYCLEN	56	000508-32-7	83
			MYRCENE	5	000123-35-3	83
5	8.704	0.77	C:\Database\ESSOILS.L			
			MYRCENE	5	000123-35-3	96
			SABINENE	3	003387-41-5	80
			PELLANDRENE - BETA	374	000555-10-2	47
6	8.985	0.55	C:\Database\ESSOILS.L			
			PELLANDRENE-A	6	000099-83-2	91
			THUJENE-A	1	002867-05-2	83
			TRICYCLEN	56	000508-32-7	64
7	9.251	11.08	C:\Database\ESSOILS.L			
			TERPINENE-A	7	000099-86-5	98
			P - MENTHA 2,4 DIENE (ISOTERPINOLE NE)	505	000586-63-0	93
			IRONE, ALPHA	1272	000079-69-6	78
8	9.438	2.20	C:\Database\ESSOILS.L			
			CYMENE-P	8	000099-87-6	97
			M-CYMENE	519	000535-77-3	95
			CYCLOHEPTA 1,3,5 TRIENE, 3,7,7 TRI MEHTYL	1459	003479-89-8	91
9	9.512	1.72	C:\Database\ESSOILS.L			
			PELLANDRENE - BETA	374	000555-10-2	93
			PINENE-B	4	000127-91-3	72
			SABINENE	3	003387-41-5	64
10	9.546	2.02	C:\Database\ESSOILS.L			
			CINEOLE-1,8	11	000470-82-6	99
			6-METHYL 5- HEPTEN-2-ONE	58	000110-93-0	25
			TERPINEN-4-OL	18	000562-74-3	12
11	10.130	19.25	C:\Database\ESSOILS.L			
			TERPINENE-G	12	000099-85-4	97

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			TRICYCLENE	56	000508-32-7	94
			PHELLANDRENE-A	6	000099-83-2	90
12	10.343	0.07	C:\Database\ESSOILS.L			
			SABINENE - HYDRATE CIS	205	015826-82-1	90
			P-MENTH-2-EN-1-OL - CIS	375	029803-82-5	89
			SABINENE HYDRATE - TRANS	14	017699-16-0	74
13	10.680	3.87	C:\Database\ESSOILS.L			
			P - MENTHA 2,4 DIENE (ISOTERPINOLE NE)	505	000586-63-0	97
			TERPINOLENE	13	000586-62-9	95
			TERPINENE-A	7	000099-86-5	93
14	10.740	0.06	C:\Database\ESSOILS.L			
			META CYMENENE	1303	001124-20-5	68
			CYMENENE-PARA	235	001195-32-0	64
			HYDROCINNAMIC ALCOHOL	609	000122-97-4	27
15	10.934	0.17	C:\Database\ESSOILS.L			
			SABINENE - HYDRATE CIS	205	015826-82-1	91
			CYCLOPROPANE, 1,1 DIMETHYL, 2 (3-M EHTYL 1,3 BUTADIENYL)	1362	068998-21-0	83
			SABINENE HYDRATE - TRANS	14	017699-16-0	83
16	11.342	0.44	C:\Database\ESSOILS.L			
			P-MENTH-2-EN-1-OL - TRANS	376	029803-81-4	99
			SABINENE - HYDRATE CIS	205	015826-82-1	60
			SABINENE HYDRATE - TRANS	14	017699-16-0	50
17	11.672	0.31	C:\Database\ESSOILS.L			
			P-MENTH-2-EN-1-OL - CIS	375	029803-82-5	99
			P-MENTH-2-EN-1-OL - TRANS	376	029803-81-4	83
			SABINENE - HYDRATE CIS	205	015826-82-1	58
18	12.327	35.66	C:\Database\ESSOILS.L			
			TERPINEN-4-OL	18	000562-74-3	97
			ARBUSCULONE - CIS	1014	056469-37-5	25
			DAVANONE - ALLO	1024	000098-98-2	12
19	12.487	0.09	C:\Database\ESSOILS.L			
			TERPINEN-4-OL	18	000562-74-3	91
			DELTA TERPINYL ACETATE	1485	093836-50-1	14
			SABINENE HYDRATE - TRANS	14	017699-16-0	12
20	12.544	4.04	C:\Database\ESSOILS.L			
			TERPINEOL - A	19	1000157-89-9	95
			PINENE-A	2	000080-56-8	58
			TERPINENE-A	7	000099-86-5	53
21	12.806	0.24	C:\Database\ESSOILS.L			
			PIPERITOL - TRANS	203	016721-39-4	97
			PIPERITOL -CIS	204	016721-38-3	90
			METHYL PYROGLUTAMATE	1492	004931-66-2	9
22	13.838	0.05	C:\Database\ESSOILS.L			
			ASCARIDOL, TRANS GLYCOL	1251	000060-60-3	90
			ASCARIDOLE ACETATE	1278	000070-70-3	86
			HEPTA3,5DIEN -2-ONE, 6-METHYL	910	000063-63-2	23
23	14.632	0.03	C:\Database\ESSOILS.L			
			BICYCLOGERMACRENE	215	024703-35-3	74
			ELEMENE - DELTA	360	020307-84-0	64
			CAMPHENE	57	000079-92-5	49
24	14.804	0.06	C:\Database\ESSOILS.L			
			CUBEBENE-ALPHA	31	017699-14-8	96
			CADINA 3,5 DIENE	406	004726-51-1	78
			COPAENE - ALPHA	257	003856-25-5	78
25	15.141	0.07	C:\Database\ESSOILS.L			
			AMORPHENE - DELTA	929	189165-79-5	95
			ISO - LEDENE(2)	198	1000156-10-8	95

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20/5/1

		CAROTA 5,8 DIENE	1085	000027-27-3	93
26	15.193	0.22 C:\Database\ESSOILS.L COPAENE - ALPHA CUBEBENE-ALPHA CADINA-1,4-DIENE, TRANS	257 31 121	003856-25-5 017699-14-8 016728-99-7	94 91 83
27	15.399	0.04 C:\Database\ADAMS.L 24.15 Elemene<beta-> 12.46 Campholenal<alpha-> 29.18 Germacrene A	309 903 744	000515-13-9 004501-58-0 028387-44-2	72 43 35
28	15.481	0.02 C:\Database\ESSOILS.L GURJUNENE - GAMMA 7 - EPI ALPHA SELINENE FARNESENE Z,E ALPHA	1050 476 496	022567-17-5 123123-37-5 026560-14-5	86 60 53
29	15.653	0.45 C:\Database\ESSOILS.L GURJUNENE - A GUAIENE-GAMMA GUAIADIENE,6,9	187 637 69	000489-40-7 072704-03-1 036577-33-0	99 99 95
30	15.807	0.38 C:\Database\ESSOILS.L CARYOPHYLLENE CARYOPHYLLENE - GAMMA CARYOPHYLLENE, 2-EPI BETA	27 188 1270	000087-44-5 000118-65-0 182368-70-3	99 97 91
31	15.908	0.07 C:\Database\ESSOILS.L MAALIENE - GAMMA VALENCENE SELINENE - A	493 1259 149	000643-29-8 004630-07-3 1000193-57-0	96 86 86
32	16.013	0.09 C:\Database\ESSOILS.L SELINA 3,7(11) DIENE MAALIENE - ALPHA 7 - EPI ALPHA SELINENE	1442 408 476	006813-21-4 000489-28-1 123123-37-5	94 91 87
33	16.065	1.31 C:\Database\ESSOILS.L AROMADENDRENE AROMADENDRENE-ALLO BETA ACORADIENE	26 28 498	025246-27-9 025246-27-9 043219-80-3	99 97 90
34	16.106	0.16 C:\Database\ESSOILS.L SELINA 5,11 DIENE EUESMA 6,11 DIENE - TRANS GURJUNENE-A	407 608 120	000045-45-1 027104-12-7 000489-40-7	99 95 70
35	16.162	0.03 C:\Database\ESSOILS.L AROMADENDRENE VI ISO - LEDENE(2) AMORPHENE - DELTA	444 198 929	000489-39-4 1000156-10-8 189165-79-5	96 96 95
36	16.196	0.18 C:\Database\ESSOILS.L CADINA 3,5 DIENE CAROTA 5,8 DIENE CADINENE-D	406 1085 25	004726-51-1 000027-27-3 000483-76-1	97 87 68
37	16.256	0.15 C:\Database\ESSOILS.L HUMULENE TRANS - ALPHA BISABOLENE SANTOLINA TRIENE	29 489 1112	006753-98-6 017627-44-0 002153-66-4	96 72 64
38	16.349	0.59 C:\Database\ESSOILS.L AROMADENDRENE-ALLO HIMACHALENE, GAMMA GUAIENE -CIS - BETA	28 1045 935	025246-27-9 053111-25-4 000088-84-6	99 92 91
39	16.477	0.59 C:\Database\ESSOILS.L 7-ALPHA-H, 10-BETA-H CADINA1(6),4 DIENE CAROTA 5,8 DIENE CADINENE-D	405 1085 25	016729-00-3 000027-27-3 000483-76-1	97 93 90

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40	16.694	0.38	C:\Database\ESSOILS.L			
			GUAIENE -CIS - BETA	935	000088-84-6	97
			GUAIENE-GAMMA	637	072704-03-1	93
			AROMADENDRENE - ALLO - 9	993	000088-88-2	93
41	16.772	1.25	C:\Database\ESSOILS.L			
			LEDENE	216	021747-46-6	99
			GUAIADIENE, 6, 9	69	036577-33-0	89
			AMORPHA 4, 7(11) DIENE	1413	000012-12-4	86
42	16.795	1.40	C:\Database\ESSOILS.L			
			BICYCLOGERMACRENE	215	024703-35-3	98
			ELEMENE - DELTA	360	020307-84-0	74
			FARNESENE Z, E ALPHA	496	026560-14-5	60
43	16.888	0.07	C:\Database\ESSOILS.L			
			GUAIADIENE, 6, 9	69	036577-33-0	90
			GUAIENE-GAMMA	637	072704-03-1	83
			AROMADENDRENE-ALLO	28	025246-27-9	70
44	17.004	0.03	C:\Database\ESSOILS.L			
			CADINENE-G	68	039029-41-9	96
			MUUROLENE - GAMMA	395	030021-74-0	96
			BETA YLANGENE	1288	020479-06-5	90
45	17.090	1.75	C:\Database\ESSOILS.L			
			CADINENE-D	25	000483-76-1	91
			AMORPHENE - DELTA	929	189165-79-5	90
			CAROTA 5, 8 DIENE	1085	000027-27-3	70
46	17.128	0.52	C:\Database\ESSOILS.L			
			ZONARENE	409	149115-45-7	98
			EPIZONARENE	392	041702-63-0	90
			7-ALPHA-H, 10-BETA-H CADINA1(6), 4	405	016729-00-3	90
			DIENE			
47	17.225	0.32	C:\Database\ESSOILS.L			
			CADINA-1, 4-DIENE, TRANS	121	016728-99-7	81
			CEDRENE - ALPHA	166	000469-61-4	59
			ALPHA - DUPREZIANENE	792	000040-40-2	53
48	17.629	0.14	C:\Database\ESSOILS.L			
			EPI-GLOBULOL	361	000552-02-3	99
			DUPREZIANENE, BETA	1286	000071-71-3	64
			VALENCENE	1259	004630-07-3	64
49	17.715	0.15	C:\Database\ESSOILS.L			
			SELINA 3, 7(11) DIENE	1442	006813-21-4	87
			HIMACHALA 3(12), 4 DIENE	1443	060909-28-6	66
			CIS ALPHA BISABOLENE	500	029837-07-8	60
50	17.850	0.11	C:\Database\ESSOILS.L			
			SPATHULENOL	34	1000153-10-5	87
			AROMADENDRENE EPOXIDE(II)	1334	085710-39-0	43
			COPAENE - 8 - OL , ALPHA	606	058569-25-8	41
51	17.880	0.03	C:\Database\ESSOILS.L			
			GLEENOL	603	072203-99-7	81
			ALASKENE - ALPHA	322	028400-12-6	45
			GAMMA - TERPINEOL	483	000586-81-2	38
52	17.925	0.58	C:\Database\ESSOILS.L			
			GLOBULOL	23	000489-41-8	99
			LEDOL ISOMER	255	000577-27-5	95
			LEDENE	216	021747-46-6	95
53	18.030	0.53	C:\Database\ESSOILS.L			
			CUBEBAN - 11 - OL	973	000082-82-2	97
			VIRIDIFLOROL	281	000552-02-3	27
			BULNESOL	155	022451-73-6	18
54	18.127	0.22	C:\Database\ESSOILS.L			
			ROSIFOLIOL	33	063891-61-2	91

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			GUAIA - 5 - EN - 11 - OL	940	000081-81-3	40
			CRYPTOMERIDIOL - EPI	941	000071-71-2	39
55	18.355	0.20	C:\Database\ESSOILS.L			
			GUAIA - 5 - EN - 11 - OL	940	000081-81-3	95
			CRYPTOMERIDIOL	752	004666-84-6	40
			ROSIFOLIOL	33	063891-61-2	38
56	18.396	0.41	C:\Database\ESSOILS.L			
			CUBENOL 1 EPI	604	019912-67-5	95
			DUPREZIANENOL, BETA	1294	000074-74-3	50
			ZONARENE	409	149115-45-7	45
57	18.565	0.29	C:\Database\ESSOILS.L			
			CUBENOL	632	021284-22-0	93
			AROMADENDRENE VI	444	000489-39-4	58
			ISO - LEDENE(2)	198	1000156-10-8	53
58	18.613	0.07	C:\Database\ESSOILS.L			
			COPAENE - ALPHA	257	003856-25-5	89
			MUUROLA 4(14),5 DIENE	1439	000010-10-4	62
			PATCHOULENE - BETA	196	000514-51-2	53

GCMS-COMPOSITIONAL.M Mon May 20 15:17:53 2019

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20/5/19