सुगन्ध एवं सुरस विकास केन्द्र, कन्नौज
FRAGRANCE & FLAVOUR DEVELOPMENT CENTRE, KANNAUJ
भारत सरकार की एक स्वायत्तशासी संस्था
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
A Govt. of India Autonomous Body
Ministry of Micro, Small & Medium Enterprises
An ISO 9001:2015, ISO 14001:2015 & ISO 29990:2010 Certified Organisation
T-0155

Quality Assessment Laboratory

TEST-REPORT

Serial No.61	Ref. No. FFDC/KNJ/QAL/2022-23/	Date: 10.05.2022

A. SAMPLE DETAILS

Customer's Name & Address	KRAMA AGRO, Kukde village,Boisar E Dist.Palghar,401501 Maharashtra state.
Customer's Code	
Item Name	Palmarosa Oil
Specification	QAL-SOPM 201
Job Order No.	56, XXXI-56
Date of receipt	05.05.2022
Date of Analysis	10.05.2022
Cash receipt No. & Date	12/1158 dt- 12/5/22

S. No.	Name Of Testing	Test Value	Test Method & Remark
1	Colour, Odour & Appearance	Light yellow & Rosaceous, grassy background	
2	Optical rotation	+00.00°	IS 326 (Part 4): 2005 (RA 2015)
3	Specific Gravity at 27 °C	0.8864	IS 326 (Part 3): 2006 (RA 2012)
4	Refractive Index at 27 °C	1.4696	IS 326 (Part 5): 2006 (RA 2012)
5	Solubility	Soluble upto 2 Vol.	IS 326 (Part 6): 2005 (RA 2015)
6	**GLC**		IS 326 (Part 19): 1998 (RA 2014)
a	Geranyl acetate	06.99%	
b	Geraniol	79.88%	
7	**GC-MS**	Chromatograph Enclosed.	IS: 236 (Part 19) 1998
	The identification of compounds in said report is based upon library search software of GC-MS using NIST (USA)/Adam/ Flavour library. The Institute holds no responsibility legal or otherwise towards authenticity of identification accomplished by GC-MS.		

GLC

Disclaimer:

1-This report pertains only to the sample submitted for the test.
2-This report shall not be reproduced except in full, without the written approval of the Centre.
3-The results are valid at the time of test and under stated conditions.
4- The results are not valid for legal implications in the court of law.

10/05/2022

Head
Customer Service Cell

Auth. Signatory
Quality Manager/Dy. Quality Manager

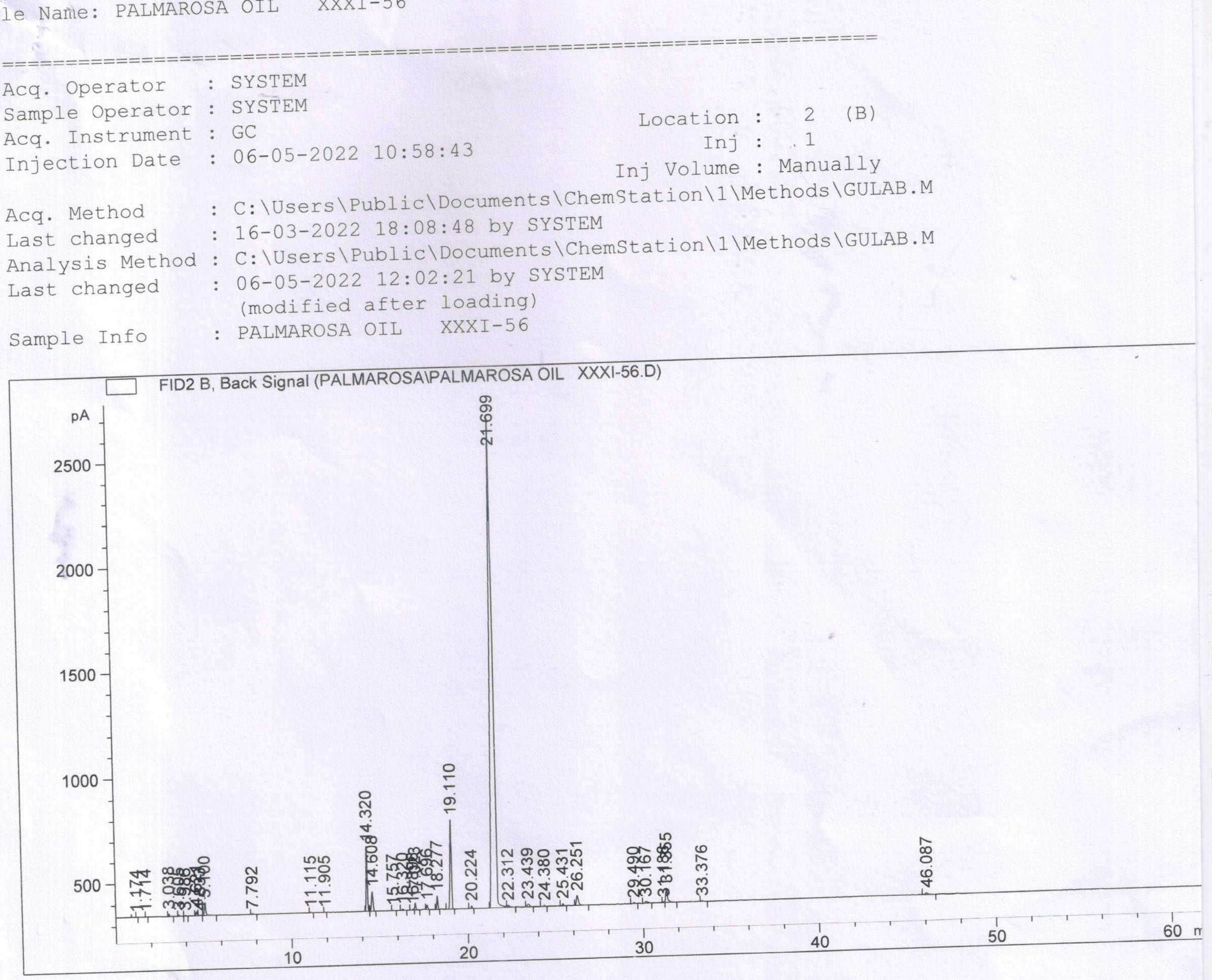
Data File C:\Users\Public\Documents\ChemStation\1\Data\PALMAROSA\PALMAROSA OIL XXXI-56.D
Sample Name: PALMAROSA OIL XXXI-56

==========

Acq. Operator : SYSTEM
Sample Operator : SYSTEM
Acq. Instrument : GC
Injection Date : 06-05-2022 10:58:43

Location : 2 (B)
Inj : 1
Inj Volume : Manually

Acq. Method : C:\Users\Public\Documents\ChemStation\1\Methods\GULAB.M
Last changed : 16-03-2022 18:08:48 by SYSTEM
Analysis Method : C:\Users\Public\Documents\ChemStation\1\Methods\GULAB.M
Last changed : 06-05-2022 12:02:21 by SYSTEM
(modified after loading)
Sample Info : PALMAROSA OIL XXXI-56



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Area Percent Report

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Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

Signal 1: FID2 B, Back Signal

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	1.174	BB	0.0209	2.05052	1.33628	0.00581
2	1.714	BB	0.0256	5.90701	3.52378	0.01675
3	3.038	BB	0.0541	49.84239	13.50607	0.14131
4	3.605	BB	0.0643	28.64268	6.64038	0.08120
5	3.986	BB	0.0632	13.87050	3.22095	0.03932
6	4.621	BV R	0.0814	101.96870	19.37555	0.28909

GC 06-05-2022 12:02:24 SYSTEM

Sample Name: PALMAROSA OIL XXXI-56

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
7	4.833	VB E	0.0882	14.29161	2.34212	0.04052
8	5.100	BB	0.0931	368.54956	59.67035	1.04486
9	7.792	BB	0.0827	21.01507	3.62360	0.05958
10	11.115	BB	0.0712	13.92946	2.79202	0.03949
11	11.905	BB	0.0624	7.25311	1.71260	0.02056
12	14.320	BV	0.0673	1343.24390	305.73840	3.80817
13	14.608	VB	0.0909	556.56134	90.31107	1.57788
14	15.757	BB	0.0664	7.71555	1.56755	0.02187
15	16.320	BB	0.0876	35.93388	6.20048	0.10187
16	16.896	BV E	0.0776	25.56801	5.00483	0.07249
17	17.023	VB R	0.0757	164.87177	33.32481	0.46742
18	17.696	BB	0.0754	104.66721	20.89735	0.29674
19	18.277	BB	0.0705	274.30862	60.94763	0.77768
20	19.110	BB	0.0829	2466.47681	423.70169	6.99259
21	20.224	BB	0.0808	65.55476	12.58016	0.18585
22	21.699	BV R	0.1495	2.81776e4	2322.82202	79.88512
23	22.312	VB E	0.1217	66.56049	7.56156	0.18870
24	23.439	BB	0.1499	110.84589	11.76978	0.31425
25	24.380	BB	0.1091	30.03137	4.02037	0.08514
26	25.431	BB	0.0832	55.07491	9.85124	0.15614
27	26.251	BB	0.1270	400.01514	45.77085	1.13406
28	29.490	BB	0.1201	38.97326	4.63377	0.11049
29	30.167	BB	0.1577	86.96970	7.21173	0.24656
30	31.188	BV E	0.0672	18.24441	4.15679	0.05172
31	31.355	VB R	0.1102	513.04871	66.36316	1.45452
32	33.376	BB	0.0967	20.17550	3.07015	0.05720
33	46.087	BB	0.1381	82.90185	7.85996	0.23503
Totals :				3.52727e4	3573.10906	

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*** End of Report ***

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T-0155

Quality Assessment Laboratory

TEST-REPORT

Serial No.61	Ref. No. FFDC/KNJ/QAL/2022-23/	Date: 10.05.2022

A. SAMPLE DETAILS

Customer's Name & Address	KRAMA AGRO, Kukde village,Boisar E Dist.Palghar,401501 Maharashtra state.
Customer's Code	
Item Name	Palmarosa Oil
Specification	QAL-SOPM 201
Job Order No.	56, XXXI-56
Date of receipt	05.05.2022
Date of Analysis	10.05.2022
Cash receipt No. & Date	14/1188 dt- 12/05/22

S. No.	Name Of Testing	Test Value	Test Method & Remark
1	Colour, Odour & Appearance	Light yellow & Rosaceous, grassy background	
2	Optical rotation	+00.00°	IS 326 (Part 4): 2005 (RA 2015)
3	Specific Gravity at 27 °C	0.8864	IS 326 (Part 3): 2006 (RA 2012)
4	Refractive Index at 27 °C	1.4696	IS 326 (Part 5): 2006 (RA 2012)
5	Solubility	Soluble upto 2 Vol.	IS 326 (Part 6): 2005 (RA 2015)
6	**GLC**		IS 326 (Part 19): 1998 (RA 2014)
a	Geranyl acetate	06.99%	
b	Geraniol	79.88%	
7	**GC-MS**	Chromatograph Enclosed.	IS: 236 (Part 19) 1998
	The identification of compounds in said report is based upon library search software of GC-MS using NIST (USA)/Adam/ Flavour library. The Institute holds no responsibility legal or otherwise towards authenticity of identification accomplished by GC-MS.		

GCMS

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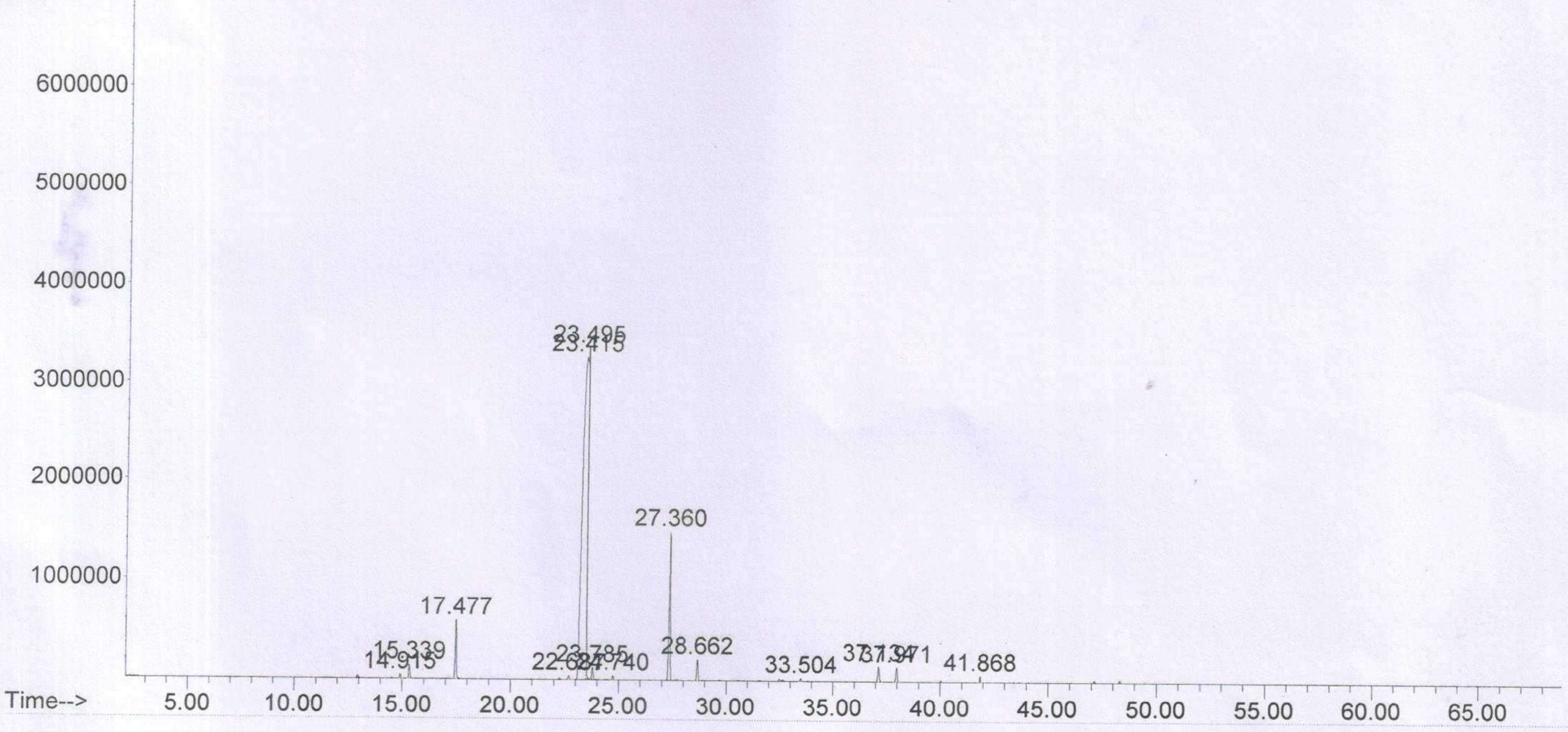
3-The results are valid at the time of test and under stated conditions.

Head
Customer Service Cell

10/5/2022
Auth. Signatory
Quality Manager/Dy. Quality Manager

File :D:\data\New Folder\QAL feb.2016\PALMAROSA OIL XXXI-56.D
Operator :
Acquired : 9 May 2022 12:51 using AcqMethod PERFUME---.M
Instrument : GCMS
Sample Name: PALMAROSA OIL XXXI-56
Misc Info :
Vial Number: 1



Library Search Report

Data Path : D:\data\New Folder\QAL feb.2016\
Data File : PALMAROSA OIL XXXI-56.D
Acq On : 9 May 2022 12:51
Operator :
Sample : PALMAROSA OIL XXXI-56
Misc :
ALS Vial : 1 Sample Multiplier: 1

Search Libraries: C:\Database\DEMO1.L\Adam.L Minimum Quality: 0

Unknown Spectrum: Apex
Integration Events: ChemStation Integrator - autoint1.e

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
1	14.913	0.20	C:\Database\DEMO1.L\Adam.L			
		8.96	OCIMENE<(Z)-BETA->	172	027400-71-1	96
		5.53	TRICYCLENE	942	000508-32-7	83
		5.85	PINENE<ALPHA->	941	000080-56-8	72
2	15.341	0.76	C:\Database\DEMO1.L\Adam.L			
		9.42	OCIMENE<(E)-BETA->	921	027400-72-2	97
		9.78	TERPINENE<GAMMA->	1025	000099-85-4	70
		7.85	PHELLANDRENE<ALPHA->	166	000099-83-2	53
3	17.475	3.30	C:\Database\DEMO1.L\Adam.L			
		9.42	OCIMENE<(E)-BETA->	921	027400-72-2	68
		7.89	MENTHA-1(7),8-DIENE <PARA-> (=PSEUDO LIMONENE)	823	000499-97-8	64
		16.42	LINALYL FORMATE (= VETIVEROL	1041	000115-99-1	58
4	22.685	0.22	C:\Database\DEMO1.L\Adam.L			
		17.32	NERAL	1022	000106-26-3	43
		13.07	VERBENOL<CIS->	1597	001845-30-3	27
		31.35	LONGIPINANOL<EPI->	1066	054275-23-9	10
5	23.417	73.76	C:\Database\DEMO1.L\Adam.L			
		7.43	MYRCENE	944	000123-35-3	72
		31.32	NEROLIDOL<E->	1178	040716-66-3	59
		7.89	MENTHA-1(7),8-DIENE <PARA-> (=PSEUDO LIMONENE)	823	000499-97-8	55
6	23.498	7.98	C:\Database\DEMO1.L\Adam.L			
		7.43	MYRCENE	944	000123-35-3	64
		17.95	GERANIOL	755	000106-24-1	49
		31.36	GERANYL N-BUTANOATE	763	000106-29-6	47
7	23.786	0.72	C:\Database\DEMO1.L\Adam.L			
		18.62	GERANIAL	1023	000141-27-5	95
		19.32	NERYL FORMATE	1183	002142-94-1	38
		22.64	DAMASCONE<(Z)-ALPHA->	576	057549-93-6	37
8	24.738	0.23	C:\Database\DEMO1.L\Adam.L			
		19.32	NERYL FORMATE	1183	002142-94-1	83
		20.11	GERANYL FORMATE	759	000105-86-2	72
		17.95	GERANIOL	755	000106-24-1	59
9	27.359	9.02	C:\Database\DEMO1.L\Adam.L			
		19.70	LAVANDULYL ACETATE	1188	020777-39-3	90
		28.43	NERYL ISOBUTANOATE	1184	002345-24-6	72
		7.89	MENTHA-1(7),8-DIENE <PARA-> (=PSEUDO LIMONENE)	823	000499-97-8	64
10	28.664	1.33	C:\Database\DEMO1.L\Adam.L			
		25.36	CARYOPHYLLENE<E->	857	000087-44-5	99
		24.95	CARYOPHYLLENE <Z-> (=ISO-CARYOPHYLLENE)	403	000118-65-0	91
		27.33	CARYOPHYLLENE<9-EPI-(E)->	1404	068832-35-9	64
11	33.505	0.20	C:\Database\DEMO1.L\Adam.L			

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                32.16 CARYOPHYLLENE OXIDE                 861 001139-30-6 53
                14.99 THUJ-3-EN-10-AL                     229 057129-54-1 43
                12.82 MYROXIDE<Z->                       1156 094607-48-4 38

12  37.137  1.08 C:\Database\DEMO1.L\Adam.L
                37.64 FARNESYL ACETATE<E,E->              736 004128-17-0 78
                34.10 SESQUILAVANDULOL<E->               1456 120707-27-9 72
                37.92 SESQUILAVANDULYL ACETATE<Z->       1454 141992-14-5 59

13  37.971  0.95 C:\Database\DEMO1.L\Adam.L
                25.51 LAVANDULYL ISOBUTANOATE            1189 000000-00-0 86
                26.83 NERYL PROPANOATE                   1186 000105-91-9 72
                7.89 MENTHA-1(7),8-DIENE <PARA->          823 000499-97-8 64
                (=PSEUDO LIMONENE)

14  41.870  0.25 C:\Database\DEMO1.L\Adam.L
                29.27 LAVANDULYL 2-METHYLBUTANOATE       1191 147044-46-0 83
                28.43 NERYL ISOBUTANOATE                 1184 002345-24-6 72
                27.82 GERANYL PROPANOATE                  768 000105-90-8 64

ROSE.M Mon May 09 16:46:29 2022
```

Library Search Report

Data Path : D:\data\New Folder\QAL feb.2016\
Data File : PALMAROSA OIL XXXI-56.D
Acq On : 9 May 2022 12:51
Operator :
Sample : PALMAROSA OIL XXXI-56
Misc :
ALS Vial : 1 Sample Multiplier: 1

Search Libraries: C:\Database\NIST05.L Minimum Quality: 0

Unknown Spectrum: Apex
Integration Events: ChemStation Integrator - autoint1.e

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
1	15.341	0.77	C:\Database\NIST05.L			
			1,3,6-Octatriene, 3,7-dimethyl-, (Z)-	15284	003338-55-4	97
			1,3,7-Octatriene, 3,7-dimethyl-	15243	000502-99-8	97
			1,3,6-Octatriene, 3,7-dimethyl-, (Z)-	15283	003338-55-4	94
2	17.475	3.33	C:\Database\NIST05.L			
			1,3,6-Octatriene, 3,7-dimethyl-, (Z)-	15284	003338-55-4	89
			3-Carene	15151	013466-78-9	87
			3-Carene	15156	013466-78-9	70
3	23.417	74.42	C:\Database\NIST05.L			
			3-Carene	15156	013466-78-9	90
			Bicyclo[4.1.0]hept-2-ene, 3,7,7-tr imethyl-	15317	000554-61-0	87
			.beta.-Myrcene	15180	000123-35-3	62
4	23.498	8.02	C:\Database\NIST05.L			
			.beta.-Myrcene	15180	000123-35-3	74
			.beta.-Myrcene	15179	000123-35-3	72
			3-Carene	15156	013466-78-9	46
5	23.786	0.72	C:\Database\NIST05.L			
			2,6-Octadienal, 3,7-dimethyl-	24102	005392-40-5	97
			2,6-Octadienal, 3,7-dimethyl-, (E)	24141	000141-27-5	95
			2,6-Octadienal, 3,7-dimethyl-, (E)	24151	000141-27-5	95
6	27.359	9.09	C:\Database\NIST05.L			
			Bicyclo[4.1.0]hept-3-ene, 3,7,7-tr imethyl-, (1S)-	15369	000498-15-7	86
			4-Hexen-1-ol, 5-methyl-2-(1-methyl ethenyl)-, acetate	54303	025905-14-0	86
			3-Carene	15157	013466-78-9	83
7	28.664	1.34	C:\Database\NIST05.L			
			Caryophyllene	59797	000087-44-5	99
			Caryophyllene	59800	000087-44-5	99
			Bicyclo[7.2.0]undec-4-ene, 4,11,11 -trimethyl-8-methylene-,[1R-(1R*,4 Z,9S*)]-	59971	000118-65-0	99
8	37.137	1.09	C:\Database\NIST05.L			
			1,6,10-Dodecatriene, 7,11-dimethyl -3-methylene-, (Z)-	59897	028973-97-9	72
			2,6,10-Dodecatrien-1-ol, 3,7,11-tr imethyl-, (Z,E)-	72945	003790-71-4	72
			2,6,10-Dodecatrien-1-ol, 3,7,11-tr imethyl-, (E,E)-	72946	000106-28-5	64
9	37.971	0.96	C:\Database\NIST05.L			
			4-Hexen-1-ol, 5-methyl-2-(1-methyl ethenyl)-, acetate	54303	025905-14-0	80
			Butanoic acid, 3-methyl-, 1-etheny	83880	001118-27-0	64

```
                    l-1,5-dimethyl-4-hexenyl ester
                    Butanoic acid, 3-methyl-, 1-etheny  83878 001118-27-0 64
                    l-1,5-dimethyl-4-hexenyl ester

 10   41.870  0.25 C:\Database\NIST05.L
                    2,6-Octadien-1-ol, 3,7-dimethyl-,   64241 000105-91-9 87
                    propanoate, (Z)-
                    Butanoic acid, 3-methyl-, 1-etheny  83880 001118-27-0 78
                    l-1,5-dimethyl-4-hexenyl ester
                    2,6-Octadien-1-ol, 3,7-dimethyl-,   54279 000141-12-8 64
                    acetate, (Z)-


ROSE.M Mon May 09 16:45:24 2022
```

Library Search Report

Data Path : D:\data\New Folder\QAL feb.2016\
Data File : PALMAROSA OIL XXXI-56.D
Acq On : 9 May 2022 12:51
Operator :
Sample : PALMAROSA OIL XXXI-56
Misc :
ALS Vial : 1 Sample Multiplier: 1

Search Libraries: C:\Database\Flavor2.L Minimum Quality: 0

Unknown Spectrum: Apex
Integration Events: ChemStation Integrator - autoint1.e

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
1	14.913	0.20	C:\Database\Flavor2.L			
			3,7-Dimethyl-1,3,6-octatriene; ocimene	182	003338-55-4	95
			delta-3-carene	417	013466-78-9	64
			gamma-Terpinene	210	000099-85-4	58
2	15.341	0.76	C:\Database\Flavor2.L			
			gamma-Terpinene	210	000099-85-4	53
			3,7-Dimethyl-1,3,6-octatriene; ocimene	182	003338-55-4	50
			alpha-phellandrene	416	000099-83-2	49
3	17.475	3.30	C:\Database\Flavor2.L			
			Linalyl formate	386	000115-99-1	74
			xxx	382	000000-00-0	74
			Linalol	271	000078-70-6	74
4	22.685	0.22	C:\Database\Flavor2.L			
			Citral	108	005392-40-5	9
			cis-4-Heptenal	151	006728-31-0	9
			Citronellol	223	000106-22-9	9
5	23.417	73.76	C:\Database\Flavor2.L			
			Nerol, cis-geraniol	253	000106-25-2	90
			Geranyl formate	329	000105-86-2	72
			Geranyl acetate	399	000105-87-3	64
6	23.498	7.98	C:\Database\Flavor2.L			
			Nerol, cis-geraniol	253	000106-25-2	90
			Geranyl formate	329	000105-86-2	64
			Myrcene	337	000123-35-3	52
7	23.786	0.72	C:\Database\Flavor2.L			
			Citral	108	005392-40-5	87
			Geraniol	283	000106-24-1	2
			4-Hexene-3-one	113	002497-21-4	2
8	24.738	0.23	C:\Database\Flavor2.L			
			Geraniol	283	000106-24-1	78
			Geranyl formate	329	000105-86-2	35
			Geranyl acetate	399	000105-87-3	35
9	27.359	9.02	C:\Database\Flavor2.L			
			Nerol, cis-geraniol	253	000106-25-2	91
			Geranyl formate	329	000105-86-2	90
			Geranyl acetate	399	000105-87-3	83
10	28.664	1.33	C:\Database\Flavor2.L			
			beta-Caryophyllene	110	000087-44-5	99
			Nerolidol, (E-); nerolidol, (trans-)	248	007212-44-4	40
			Nerolidol, (Z-); nerolidol, (cis-); Peruviol	247	000142-50-7	35
11	33.505	0.20	C:\Database\Flavor2.L			

			Farnesol (Z,E-)	387	003790-71-4	10
			Benzyl alcohol	75	000100-51-6	9
			cis-6-Nonenal	104	002277-19-2	9
12	37.137	1.08	C:\Database\Flavor2.L			
			Geranyl butyrate	305	000106-29-6	50
			Farnesol (Z,E-)	387	003790-71-4	46
			Farnesol (E,E-)	388	000106-28-5	38
13	37.971	0.95	C:\Database\Flavor2.L			
			Geranyl butyrate	305	000106-29-6	90
			Geranyl propionate	295	027751-90-2	83
			Nerol, cis-geraniol	253	000106-25-2	74
14	41.870	0.25	C:\Database\Flavor2.L			
			Neryl acetate	245	000141-12-8	90
			Geranyl butyrate	305	000106-29-6	87
			Nerol, cis-geraniol	253	000106-25-2	83

ROSE.M Mon May 09 16:46:11 2022