

SAFETY DATA SHEET (SDS)

Version 2.0

Revision Date : April 22,2022

Print Date : March 19, 2023

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Lemongrass Essential Oil - Verified By ECOCERT /Cosmos Approved
Botanical name	:	Cymbopogon flexuosus
INCI name	:	Cymbopogon Flexuosus Herb Oil
CAS #	:	8007-02-1 /91844-92-7
Country of Origin	:	India
EINECS #	:	281-161-9
Product use	:	Domestic and Industrial

2. HAZARDS IDENTIFICATION

Emergency Overview

GHS Classification

Flammable liquids - Category 4

Skin corrosion/irritation - Category 2

Skin Sensitization - Category 1

Serious eye damage/eye irritation - Category 2A

Hazardous to the aquatic environment — Chronic Hazard - Category 3

GHS Label elements, including precautionary statements



Signal: Warning

Hazard statement(s)

H227	Combustible liquid.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long-lasting effects.

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fumes/gas/mist/vapours/spray.
P264	Wash skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P321	Specific treatment (see section 4 on the SDS).
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P362	Take off contaminated clothing.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use appropriate fire extinguisher to extinguish.
P391	Collect spillage.
P403+P235	Store in a well ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container according to local regulations.

3. COMPOSITION / INFORMATION INGREDIENTS

Product Name	CAS NO	EC NO	Concentration
Cymbopogon Flexuosus Herb Oil	91844-92-7	289-754-1	100 %

4. FIRST AID MEASURES

Eye contact

Immediately flush eyes with plenty of cool water for at least 15 minutes. Get medical attention if irritation occurs.

Skin contact

Remove contaminated clothing. Wash area with soap and water. If irritation occurs, get medical attention.

Inhalation

If inhaled, removed to fresh air. Get medical attention if symptoms appear.

Ingestion

Seek medical attention or contact local poison control center.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Foam. Dry Powder. Carbon dioxide.

Unsuitable extinguishing media

Water spray, water jet.

Special protective equipment and precautions for fire-fighters

Wear proper protective equipment. Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

Special hazards arising from the substance or its combustible products

Hazardous decomposition products may be formed at extreme heat or if burned.

Resulting gases

Carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures.

Equip clean crew with proper protection. Respiratory protection equipment may be necessary.

Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

Methods and materials for containment and cleaning up

Clean up any spills as soon as possible, using an absorbent material to collect it. Use suitable disposal containers.

7. HANDLING AND STORAGE

Precautions for safe handling

No direct lighting. No smoking. Ensure prompt removal from eyes, skin and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety procedures.

Conditions for safe storage, including any incompatibilities

Provide local exhaust or general room ventilation to minimize dust and/or vapour concentrations. Keep container closed when not in use.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Eyes

Use tightly sealed goggles.

Skin

If skin contact or contamination of clothing is likely, protective clothing should be worn. Use protective gloves.

Respiratory

In case of insufficient ventilation, wear suitable respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Pale yellow to pale green liquid.
Odor	:	Characteristic citral odor.
Flash point	:	71°C
Relative density	:	0.8900 to 0.904 0 @ 25 °C
Solubility (ies)	:	Insoluble in water.
Refractive index	:	1.480 to 1.489 @ 25 °C
Optical rotation	:	-5.0° to +1.0° @ 25 °C

10. STABILITY AND REACTIVITY

Reactivity

This material presents no significant reactivity hazard.

Chemical stability

Chemically stable.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to avoid

Avoid sparks, flame and other heat sources.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Carbon Oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Lemongrass Oil:
LD50 Oral - 2885 mg/kg.

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Signs & symptoms of exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Inhalation

May cause respiratory irritation.

Skin contact

Adverse skin effects should be prevented by normal care and personal hygiene.

Eye contact

Possible irritation should be prevented by wearing safety glasses.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Avoid any pollution of ground, surface or underground water.

Persistence and degradability

Not available.

Bio - accumulative potential

Not available.

Mobility in soil

Not available.

13. DISPOSAL CONSIDERATION

Dispose of product in accordance with local, state or provincial and federal regulations. Check with local municipal authority to ensure compliance.

14. TRANSPORT INFORMATION

UN Number

3082

UN proper shipping name

Environmentally hazardous substance, liquid, n.o.s. (Lemongrass oil)

Transport hazard class

9

Packing group

III

US DOT Shipping Description (Land)

3082

Proper shipping name

Environmentally hazardous substance, liquid, n.o.s. (Lemongrass oil)

Class

9

Packaging group

III

IMO-IMDG Shipping Description (Sea)

3082

Class

9

Packaging group

III

IMDG-Marine pollution

Yes.

IATA Shipping Description (Air)

3082

Proper shipping name

Environmentally hazardous substance, liquid, n.o.s. (Lemongrass oil)

Class

9

Packaging group

III

15. REGULATORY INFORMATION

California Proposition 65

This Product can expose you to beta myrcene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

GHS Hazard Statements

See section 2.

GHS Precautionary Statements

See section 2.

16. OTHER INFORMATION

Revision date : April 22,2022

CERTIFICATE OF ANALYSIS

Product : Lemongrass Essential Oil - Verified by ECOCERT / Cosmos Approved

Lot No : 11080A21022

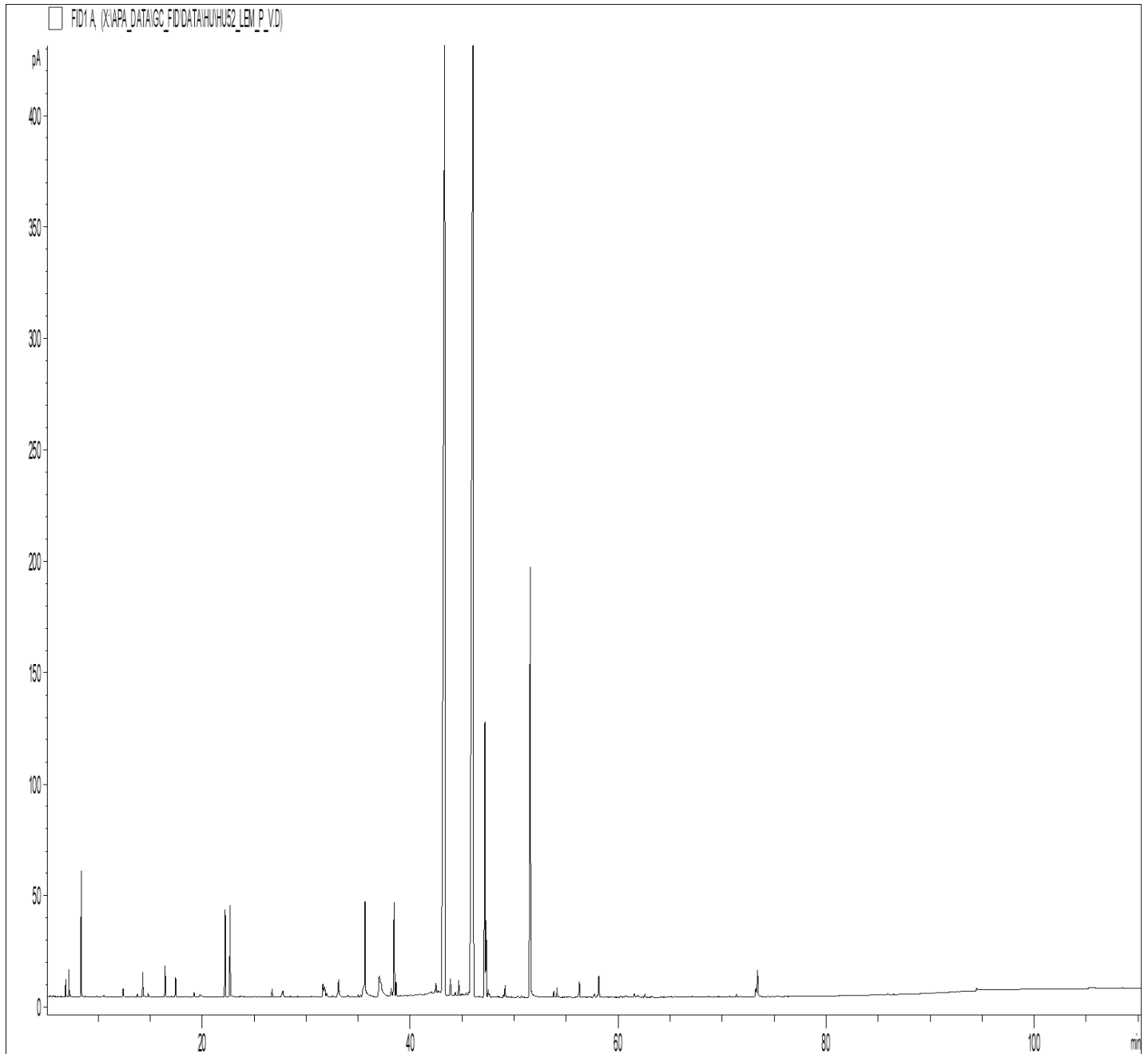
Best Before : October, 2024

<u>Properties</u>	<u>Specifications</u>	<u>Results</u>
Appearance	: Pale yellow to yellowish brown liquid.	Complies
Odor	: Characteristic citral odor.	Complies
Solubility	: Insoluble in water.	Complies
Specific Gravity	: 0.8850 to 0.9040 @ 25°C	0.8911
Optical Rotation	: -3.0° to +2.0° @ 25°C	-2.23
Refractive Index	: 1.4790 to 1.4890 @ 25°C	1.4847
Citral Content	: 65 to 75 %	74.13
Geraniol	: 3 to 9.5 %	6.37
Geranyl Acetate	: 2.0 to 5.5 %	3.71

GCMS ANALYSIS

PRODUCT NAME: LEMONGRASS ESSENTIAL OIL – VERIFIED BY ECOCERT – 11080

DATE: July 5, 2022



Due to volume turnover, this report is not lot specific, It is representative of the quality of this oil produced by the manufacturer of this product, Specific lots may vary slightly as is the case in natural products,

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: LEMONGRASS ESSENTIAL OIL – VERIFIED BY ECOCERT – 11080

Peak	RT (min)	Compound name	%
1	5.39	ISOVALERALDEHYDE	0.01
2	6.87	TRICYCLENE	0.13
3	7.18	α -PINENE	0.21
4	7.28	PRENOL	0.02
5	8.37	CAMPHENE	1.14
6	10.39	SABINENE	0.01
7	10.56	4-HEPTANONE	0.02
8	12.41	β -MYRCENE	0.09
9	13.79	1,8-CINEOLE, 2,3-DEHYDRO-	0.03
10	14.30	LIMONENE	0.29
11	14.49	1-BUTANOL, 2-METHYL-	0.01
12	14.81	β -PHELLANDRENE	0.04
13	16.45	cis- β -OCIMENE	0.36
14	17.45	trans- β -OCIMENE	0.22
15	19.23	TERPINOLENE	0.05
16	19.80	OCTANAL	0.07
17	22.22	4-NONANONE	1.05
18	22.69	5-HEPTEN-2-ONE, 6-METHYL-	1.10
19	23.75	ALIPHATIC ESTER	0.02
20	25.11	3-HEXEN-1-OL	0.01
21	25.46	ALCOHOL COMPOUND	0.01
22	26.74	ROSEFURAN	0.10
23	27.69	PERILLENE	0.06
24	27.78	PHOTOCITRAL ISOMER	0.10
25	28.49	COMPOUND Mw=152	0.01
26	30.53	α -CUBEBENE	0.02
27	30.93	LINALOOL trans-OXIDE	0.01
28	31.63	CITRONELLAL	0.24
29	31.79	ISOLEDENE	0.22
30		ISOGERANIAL	

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: LEMONGRASS ESSENTIAL OIL – VERIFIED BY ECOCERT – 11080

Peak	RT (min)	Compound name	%
31	31.98	YLANGENE	0.06
32	32.55	α -COPAENE	0.02
33	32.83	DECANAL	0.20
34	33.13	EXO-ISOCITRAL	0.21
35	34.04	β -BOURBONENE	0.05
36	34.43	SATIVENE	0.02
37	35.01	4-UNDECANONE	0.03
38	35.28	β 1-CUBEBENE	0.03
39	35.33	Z-ISOCITRAL	0.79
40	35.67	LINALOOL	1.04
41	36.22	LINALYL ACETATE	0.01
42	37.05	E-ISOCITRAL	1.26
43		epsilon-CADINENE	
44	38.20	β -ELEMENE	0.13
45	38.47	β -CARYOPHYLLENE	1.38
46	38.66	TERPINENE-4-OL	0.18
47	39.12	SESQUITERPENE	0.01
48	39.66	SESQUITERPENE	0.01
49	40.51	CADINA-3,5-DIENE	0.01
50	40.91	GERMACRENE A	0.02
51	41.87	ALIPHATIC COMPOUND	0.03
52	42.06	ZONARENE	0.04
53	42.34	SESQUITERPENE	0.01
54	42.48	α -HUMULENE	0.16
55	42.69	trans-VERBENOL	0.03
56	42.83	cis-4,5-MUUROLADIENE	0.02
57	43.34	NERAL	31.95
58	43.68	γ -MUUROLENE	0.01
59	43.88	α -TERPINEOL	0.31
60		BORNEOL	

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: LEMONGRASS ESSENTIAL OIL – VERIFIED BY ECOCERT – 11080

Peak	RT (min)	Compound name	%
61	44.35	GERANYL FORMATE	0.05
62	44.68	GERMACRENE D	0.22
63	44.98	MUUROLADIENE ISOMER	0.02
64	45.10	SESQUITERPENE	0.01
65	45.38	PIPERITONE	0.04
66	45.66	α -MUUROLENE	0.04
67	46.09	GERANIAL	40.66
68	46.45	cis-ISOPIPERITENOL	0.03
69	46.70	trans-ISOPIPERITENOL	0.03
70	47.20	GERANYL ACETATE	4.23
71	47.32	γ -CADINENE	1.00
72	47.50	δ -CADINENE	0.10
73	47.62	CITRONELLOL	0.06
74	47.95	SESQUITERPENE	0.01
75	48.13	SESQUITERPENE	0.01
76	48.34	SESQUITERPENE	0.01
77	48.47	SESQUITERPENE	0.03
78	48.99	α -AMORPHENE	0.03
79	49.14	NEROL	0.16
80	49.72	trans-ISOGERANIOL	0.01
81	50.33	CUPARENE	0.02
82	50.71	GERMACRENE B	0.02
83	51.56	GERANIOL	7.37
84	53.83	Epi-CUBEBOL	0.08
85	54.13	GERANYL BUTYRATE	0.13
86	56.18	ISOPHYTYL ACETATE	0.03
87	56.28	CUBEBOL	0.22
88	57.74	ISOCARYOPHYLLENE OXIDE	0.07
89	58.01	SESQUITERPENIC OXIDE	0.04
90	58.15	CARYOPHYLLENE OXIDE	0.33

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: LEMONGRASS ESSENTIAL OIL – VERIFIED BY ECOCERT – 11080

Peak	RT (min)	Compound name	%
91	58.35	SESQUITERPENIC OXIDE	0.01
92	59.32	SESQUITERPENIC OXIDE	0.01
93	60.29	ALCOHOL COMPOUND	0.02
94	60.60	SESQUITERPENIC OXIDE	0.01
95	60.75	EPOXY-6,7-HUMULENE	0.05
96	61.57	Epi-CUBENOL	0.06
97	61.83	CUBENOL	0.02
98	61.92	CAPRYLIC ACID	0.03
99	62.36	SESQUITERPENOL	0.01
100	62.58	ELEMOL	0.05
101	63.23	ALIPHATIC ESTER	0.01
102	65.14	PENTADECANONE, TRIMETHYL-	0.01
103	65.43	SESQUITERPENOL	0.02
104	67.19	4-VINYL-GUAIACOL	0.02
105	68.63	SESQUITERPENOL	0.02
106	69.66	EUGENOL	0.01
107	70.72	CAPRIC ACID	0.02
108	71.38	NERIC ACID	0.04
109	73.24	GERANIC ACID	0.15
110	73.40	ISOEUGENOL	0.48
111	85.91	AROMATIC COMPOUND	0.03
112	94.49	PALMITIC ACID	0.05
113	105.36	OLEIC ACID	0.07
114	108.44	LINOLEIC ACID	0.04
		TOTAL	100.00

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