



CERTIFICATE OF ANALYSIS

Product	: Turmeric Root Oil
Batch no	: 4336906
Best Before End	: September 2021
Description	: The product is obtained by the Steam distillation dried tubers of <i>Curcuma Longa L</i>
Colour & Appearance	: Orange yellow clear liquid
Odour	: Characteristic odour of Turmeric
Optical Rotation	: +6°
Specific gravity @ 25°C	: 0.9239
Refractive Index @ 20°C	: 1.504

Storage

Do not store in close proximity to heat, sparks, open flames, strong acids, and strong bases. To minimise product degradation, avoid prolonged exposure of the material to air. Keep container tightly closed when not in use. Mix well before use.



17-11-2017

IFRA 48TH AMENDMENT CONFIRMATION

PRODUCT NAME : **TURMERIC ROOT OIL**
CAS NUMBER : **8024-37-1**
FEMA NUMBER : **3085**
CHEMICAL NAME : **Curcuma Longa L**

We hereby declare that the above material supplied by MADAR CORPORATION LIMITED confirms to the following requirements:

- The product is manufactured as per IFRA code of practices.
- The product is neither restricted nor prohibited by IFRA for use in Fragrances.
- Product is manufactured in keeping intention of the fragrance use.
- The product confirms to IFRA 48th amendment.



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Product Name : Turmeric Root oil
Category of product : Essential oil
Description : The product is obtained by the Steam distillation dried tubers of Curcuma Longa L
Cas Number : 8024-37-1
Physical state : Liquid
Colour : Pale yellow to Orange yellow
Odour : A warm note of Turmeric

Company : MADAR Corporation Limited
19-20 Sandleheath Industrial Estate,
Fordingbridge,
Hampshire,
SP6 1PA
Phone: 01425 655555
Email: sales@madarcorporation.co.uk

2. COMPOSITION

CAS NO : MAJOR
532-65-0 : INGREDIENTS
Turmerone

----- EC Classifications -----

SYMBOL(S)

Xi > Irritant

RISK PHRASES

R10 > Flammable
R36 > Irritating to eyes
R38 > Irritating to skin
R22 > Harmful if swallowed

SAFETY PHRASES

S16 > Keep away from sources of ignition - No smoking
S24 > Avoid contact with skin
S25 > Avoid contact with eyes



3. HAZARDS IDENTIFICATION

Risk Summary

Flammable, Harmful if swallowed.
It is irritating to eyes and skin.

4. FIRST AID MEASURES

Eye Contact

Flush with water for at least 15 minutes. If irritation develops, get medical attention

Skin contact

Remove contaminated clothing. Wash affected area with plenty of soap water. If irritation develops, get medical attention.

Inhalation

Seek fresh air immediately. If breathing is difficult, get medical attention.

Ingestion

Drink lot of water to dilute substance. Get medical attention.

5. FIRE FIGHTING MEASURES

Means to Extinguish

Carbon dioxide, dry chemical, foam. If water must be used, use as a spray only.

Unusual Fire/ Explosion Hazards

Flammable liquid. Avoid heat, sparks and open flames. Non explosive.

6. ACCIDENTAL RELEASE MEASURES

Personal precaution

Specifically given in section 8.

Environmental precautions

Do not discharge into streams, ponds or Public waters.

Cleanup Procedures

Small spills should be adsorbed by dirt, sand or other adsorbent. Large spills may be diked and pumped into closed containers for recovery or disposal.



7. HANDLING AND STORAGE

Handling

Wear safety glasses, rubber gloves and apron when handling.

Storage

Do not store in close proximity to heat, sparks, open flames, strong acids, and strong bases. To minimise product degradation, avoid prolonged exposure of the material to air. Keep container tightly closed when not in use.

Shelf life

Not more than 3 years, when stored as recommended above.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

EXPOSURE CONTROLS:

Ventilation

Mechanical exhaust may be needed in confined and warm areas.

Safety Station

An eyewash and safety shower should be readily available.

Contaminated Equipment

Clean contaminated equipment with soap and water.

PERSONAL PROTECTION EQUIPMENT:

Eye Protection

As a precaution, wear safety glasses or goggles.

Hand protection

Wear standard industrial type rubber gloves.

Skin Protection

A rubber apron is recommended when handling large quantities of this material.

Respiratory protection

A respirator is not normally required. If vapor concentration is high use a organic vapour respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Free flowing clear liquid
Colour	: Pale yellow to Orange yellow :
Odour	A warm note of Turmeric
Boiling point	: Not determined
Vapour pressure	: Not determined
Flash point	: 208°C
Oxidising properties	: Not determined
Explosive properties	: Not explosive
Flammability limits	: Not determined
Solubility in water (Weight %)	: < 0.5

10. STABILITY AND REACTIVITY

Conditions to Avoid

Prolonged or excessive heat and/or exposure to air may cause decomposition or oxidation of the material.

Materials to avoid

Contact with Chemicals may decompose the ingredients present in it. If possible avoid contact with all kinds of Chemical.

11. TOXICOLOGICAL INFORMATION

Not Available

12. ECOLOGICAL INFORMATION

Not Available

13. DISPOSAL CONSIDERATION

In event of spillage, the oil can be contained by sand or soil and absorbed by paper from which the oil will evaporate.



14. TRANSPORT INFORMATION

The oil can be safely stored or transported in sound metal drums or bottles at ambient temperatures. Store in full sealed containers, keep cool and protect from light to preserve quality, preferred container for long term storage - stainless steel or glass.

AIR FREIGHTS:

Air freights are done in conformance to latest IATA/ICAO regulations with the name and address of the notifying party on the cartons

15. REGULATORY INFORMATION

REGULATORY STATUS

The product is listed in CAS

CAS# 8024-37-1

The product is registered in FDA, Fema, FCC and in the council of Europe.

FDA NO # 182.10

Fema NO # 3085

Council of Europe NO# 163n

HS Code #3301 2949

16. OTHER INFORMATION

REFERENCES

1. The Essential oils by Gunther Volume IV
2. Wealth Asia disk 2.2(Publication of CSIR, India)
3. Essential oils 1976- 1978 by Dr. Brain M Lawrence
4. Food Chemical codex
5. Source Book of Flavours by Gary Reineccius
6. Flavour Technology by Heath.

USES: The oil widely used as flavoring of spicy food products and to lesser extent, in perfumes of heavy oriental character

UPDATED ON 01/01/2017



SPECIFICATION SHEET / MATERIAL SAFETY DATA SHEET

SPECIFICATION SHEET

Product : **TURMERIC ROOT OIL**
Product Code : OETURM
CAS # : 8024-37-1

TEST	REQUIREMENT	RESULTS
Appearance	Free flowing transparent liquid	Conforms
Colour	Pale yellow to orange yellow	Conforms
Odour	A warm note of Turmeric	Conforms
Specific gravity @ 25 ^o C	Between 0.900 and 0.940	Conforms
Refractive Index at 20 ^o C	Between 1.480 and 1.510	Conforms
Optical rotation	Between -22 and +30 ^o	Conforms
Heavy Metal	Less than 5ppm	Conforms
Microbial	Not Applicable	NA

QUALITY CONTROL:

1. The product is subjected to all the required analysis to conform the internal specification (As detailed above).
2. The product is subjected gas chromatographic analysis to find out the percentage of Specific components, GC profile and impurities.
3. The product is subjected to careful organoleptic examination.

STANDARDS:

Oil confirms to internal specifications (As detailed above).
Specific purpose blends can also be supplied on request.



CIN: U01133KL2010PTC025744

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Product Name : Turmeric Root oil
Category of product : Essential oil
Description : The product is Natural and is obtained by the Steam Distillation dried tubers of *Curcuma Longa L*
Cas Number : 8024-37-1
Physical state : Liquid
Colour : Pale yellow to Orange yellow
Odour : A warm note of Turmeric
Company : Greenleaf Extractions Pvt Ltd,
Plot No: 22, KINFRA Hi Tech Park,
Opp. Co-operative Medical College, HMT Colony
P.O., Kalamassery, Cochin 683503 Kerala, India
Phone: +91 484 3230040, 3191240
Email: mail@greenleafextractions.com

2. COMPOSITION

<u>CAS NO</u>	<u>MAJOR INGREDIENTS</u>
99-83-2	Phellandrene
532-65-0	Turmerone

----- EC Classifications-----

SYMBOL(S)

Xi > Irritant

RISK PHRASES

R10 > Flammable
R36 > Irritating to eyes
R38 > Irritating to skin
R22 > Harmful if swallowed

SAFETY PHRASES

S16 > Keep away from sources of ignition - No smoking
S24 > Avoid contact with skin
S25 > Avoid contact with eyes



CIN: U01133KL2010PTC025744

3. HAZARDS IDENTIFICATION

Risk Summary

Flammable, Harmful if swallowed.
It is irritating to eyes and skin.

4. FIRST AID MEASURES

Eye Contact

Flush with water for at least 15 minutes. If irritation develops, get medical attention

Skin contact

Remove contaminated clothing. Wash affected area with plenty of soap water. If irritation develops, get medical attention.

Inhalation

Seek fresh air immediately. If breathing is difficult, get medical attention.

Ingestion

Drink lot of water to dilute substance. Get medical attention.

5. FIRE FIGHTING MEASURES

Means to Extinguish

Carbon dioxide, dry chemical, foam. If water must be used, use as a spray only.

Unusual Fire/ Explosion Hazards

Flammable liquid. Avoid heat, sparks and open flames. Non explosive.

6. ACCIDENTAL RELEASE MEASURES

Personal precaution

Specifically given in section 8.

Environmental precautions

Do not discharge into streams, ponds or Public waters.

Cleanup Procedures

Small spills should be adsorbed by dirt, sand or other adsorbent. Large spills may be diked and pumped into closed containers for recovery or disposal.



CIN: U01133KL2010PTC025744

7. HANDLING AND STORAGE

Handling

Wear safety glasses, rubber gloves and apron when handling.

Storage

Do not store in close proximity to heat, sparks, open flames, strong acids, and strong bases. To minimise product degradation, avoid prolonged exposure of the material to air. Keep container tightly closed when not in use.

Shelf life

Not more than 3 years, when stored as recommended above.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

EXPOSURE CONTROLS:

Ventilation

Mechanical exhaust may be needed in confined and warm areas.

Safety Station

An eyewash and safety shower should be readily available.

Contaminated Equipment

Clean contaminated equipment with soap and water.

PERSONAL PROTECTION EQUIPMENT:

Eye Protection

As a precaution, wear safety glasses or goggles.

Hand protection

Wear standard industrial type rubber gloves.

Skin Protection

A rubber apron is recommended when handling large quantities of this material.

Respiratory protection

A respirator is not normally required. If vapor concentration is high use a organic vapour respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Volatile clear mobile liquid
Colour	: Pale yellow to Orange yellow
Odour	: A warm note of Turmeric
Boiling point	: Not determined
Vapour pressure	: Not determined
Flash point	: 208°C
Oxidising properties	: Not determined
Explosive properties	: Not explosive
Flammability limits	: Not determined
Specific gravity @ 25 ⁰ C	: Between 0.900 and 0.940
Refractive Index at 20°C	: Between 1.480 and 1.510
Optical rotation	: Between -22 ⁰ and +30 ⁰
Solubility in water (Weight %)	: < 0.5

10. STABILITY AND REACTIVITY

Conditions to Avoid

Prolonged or excessive heat and/or exposure to air may cause decomposition or oxidation of the material.

Materials to avoid

Contact with Chemicals may decompose the ingredients present in it. If possible avoid contact with all kinds of Chemical.

11. TOXICOLOGICAL INFORMATION

Not Available

12. ECOLOGICAL INFORMATION

Not Available

13. DISPOSAL CONSIDERATION

In event of spillage, the oil can be contained by sand or soil and absorbed by paper from which the oil will evaporate.



CIN: U01133KL2010PTC025744

14. TRANSPORT INFORMATION

The oil can be safely stored or transported in sound metal drums or bottles at ambient temperatures. Store in full sealed containers, keep cool and protect from light to preserve quality, preferred container for long term storage - stainless steel or glass.

AIR FREIGHTS:

Air freights are done in conformance to latest IATA/ICAO regulations with the name and address of the notifying party on the cartons

15. REGULATORY INFORMATION

REGULATORY STATUS

The product is listed in CAS

CAS# 8024-37-1

The product is registered in FDA, Fema, FCC and in the council of Europe.

FDA NO # 182.10

Fema NO # 3085

Council of Europe NO# 163n

16. OTHER INFORMATION

REFERENCES

1. The Essential oils by Gunther Volume IV
2. Wealth Asia disk 2.2(Publication of CSIR, India)
3. Essential oils 1976- 1978 by Dr. Brain M Lawrence
4. Food Chemical codex
5. Source Book of Flavours by Gary Reineccius
6. Flavour Technology by Heath.

USES: The oil widely used as flavoring of spicy food products and to lesser extent, in perfumes of heavy oriental character

Tested for and on Behalf of: **GREENLEAF EXTRACTIONS PVT LTD**

MANAGER - Q.A.

Computer edited Certificate - valid without signature

UPDATED ON 01/01/2017



Date: 24.09.2018

VEGAN & VEGETARIAN STATEMENT

We confirm that the TURMERIC ESSENTIAL OIL we sell, complies with a vegan or vegetarian diet. It contains no animal ingredients or animal by-products, uses no animal ingredients or by-products in the manufacturing process, and is not tested on animals.

Therefore it is suitable for vegans and vegetarians.