CERTIFICATE OF ANALYSIS

Product Batch no Best Before End Description	: Turmeric Root Oil : 4531510 : January 2027 : The product is obtain dried tubers of <i>Curcum</i>		illation
Parameter	Specification	Result	Method
Physirnl and Analytical Par	arnerers		
Appearance	Free flowing liquid	Complies	Visual
Colour	Dark Yellow	Complies	Visual
Odour	A warrn note of Turmeric	Complies	Organoleptic
Specific g(avity@ 25°c	0.871 to 0.960	0.9285	FCC
Refractive Index@ 20°c	1.475 to 1.52	1.5080	FCC
Qptical rotation <u>Heavy Metal Analysis</u>	022° to +45	8	FCC.
Total Heavy Metals	< 10 pprn	Complies	ICP - MS
Arsenic	< 1 pprn	Complies	ICP - MS
Lead	< 3 ppm	Complies	ICP- MS
Mercury	<0.1ppm_	Complies	ICP- MS
Cadmium	<1 ppm	Cornpiies	ICP - MS

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.

COSMETIC ALLERGENS DECLARATION			
Product Name	Product Name TURMERIC ROOT OIL		
	mentioned above, manufactured and supp ne Cosmetics Directive EC No.1223/2009, t		
	MAJOR ALLERGENS CHECKLIST		
СОМІ	PONENT	CAS NUMBER	PRESENCE (%)
2-METHYL-3-(4-(1,1-DIMETHYL E	THYL) PHENYL)PROPANAL (LILIAL)	80-54-6	Nil
ALPHA ISO-METHYL IONON	IE (METHYL IONONE GAMMA)	127-51-5	Nil
AMYL CINNA	MYL ALCOHOL	101-85-9	Nil
AMYL CINN/	AMALDEHYDE	122-40-7	Nil
ANISYL	ALCOHOL	105-13-5	Nil
BENZYL	ALCOHOL	100-51-6	Nil
BENZYL	BENZOATE	120-51-4	Nil
BENZYL CINNAMATE		103-41-3	Nil
BENZYL SALICYLATE		118-58-1	Nil
CINNAMY	LACETATE	103-548	Nil
CINNAMI	CALCOHOL	104-54-1	Nil
CINNAMIC	ALDEHYDE	104-55-2	Nil
CI	IRAL	5392-40-5	Nil
CITRC	NELLOL	106-22-9	Nil
COUMARIN		91-64-5	Nil
DIBROMO BENZENE		106-37-6	Nil
EUGENOL		97-53-0	Nil
ESTRAGOLE		140-67-0	Nil
FAR	NESOL	4602-84-0	Nil
GER	ANIOL	106-24-1	Nil
HEXYLCINNA	MIC ALDEHYDE	101-86-0	Nil
HYDROXYCITRONELLAL		107-75-5	Nil
HYDROXYMETHYLPENTTYLCYCLOHEXENE CARBOXALDEHYDE (LIRAL)		31906-04-4	Nil
ISOEL	JGENOL	97-54-1	Nil
	LAL	80-54-6	Nil
LIMO	DNENE	5989-27-5	Nil
I INA	ALOOL	78-70-6	Nil

LYRAL	31906-04-5	Nil
METHYL EUGENOL	93-15-2	Nil
METHYL OCTINE CARBONATE	111-80-8	Nil
PHENYL ACETALDEHYDE	122-78-1	Nil
OAKMOSS	90028-68-5	Nil
TREEMOSS	90028-67-4	Nil

PREVENTION OF CROSS	

Method	Working spaces and the equipments are cleaned and the goods are stored under standard conditions
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The above is based on the main allergens referred to in the following: -

Cosmetics Directive EC No.1223/2009

FDA: The Food Allergen Labelling and Consumer Protection Act of 2004(August 2004) (Title II of Public Law 108-282) effective from 1st Jan 2006.

Annex IIIa, of the Corncil Directive (EC) No 2003/89 of the 10th November 2003, amending Directive 2000/13/EC as regards indication of the ingredients present in foodstuffs. Further amended by Corncil Directive 2007/68/EC of the 27th November 2007

Codex Alimentarius: General Standard for the labelling of pre-packaged foods, Codex Standard 1-1985 (Rev 1-1991)

We hereby Declare that the information provided above is True to the best of orr knowledge and hence the aforementioned Product does not Contain elements that cause Adverse reactions in Susceptible Individuals as per the references provided in the respective Columns.

16.08.2023

16.08.2023

Non CMR Declaration

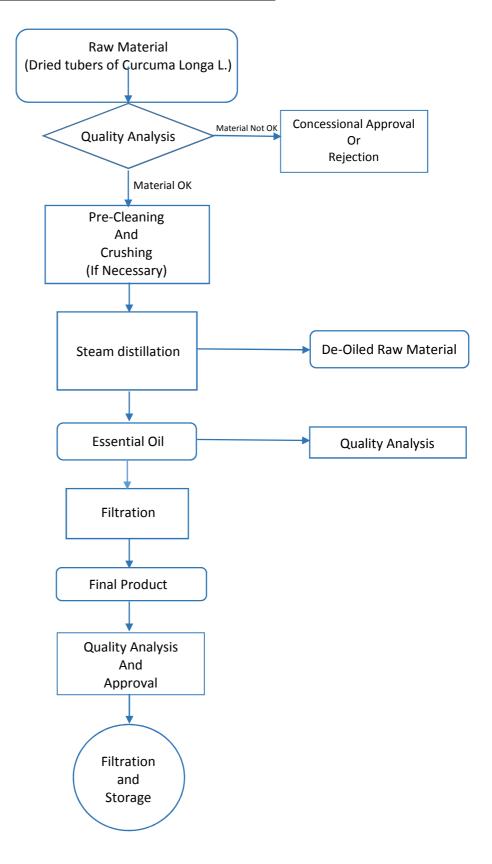
To whom it may concern,

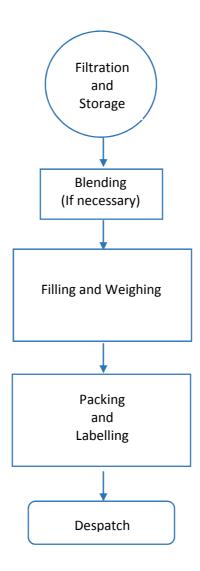
Our below products are used as a raw material for the food and fragrance industry. It does not contain any substances classified as carcinogenic, mutagenic or toxic in the reproduction of CMR substances, categories 1A, 1B and 2, as mentioned in European Cosmetics Directive 1272/2008 (EC).

This declaration is referring to our product:

1. Turmeric Root Oil

PROCESS FLOWCHART FOR TURMERIC ROOT OIL





16.08.2023

GENETICALLY MODIFIED ORGANISMS – STATEMENT

This is to certify that the below mentioned product supplied

Product:- TURMERIC ROOT OIL

- a) Does not contain or derived from species which have been approved and released as GMO according to European Union Directive 90/220/EEC.
- **b)** Does not contain any genetically modified protein or DNA
- c) Not produced from possible genetically modified material. Also no genetically modified organisms like enzymes, micro-organisms, growing substrates, additives, processing aids etc. are used in connection with the production of this product or any of its ingredients or components.

IFRA 50ST AMENDMENT CONFIRMATION

16.08.2023

PRODUCT NAME	:	TURMERIC I	ROOT OIL		
CHEMICAL NAME	:	Curcuma lo	nga L		
CAS NUMBER	:	8024-37-1	FEMA NUMBER	:	3085

We certify that the above-named material conforms to the IFRA 50 code of practice and contains the following restricted components that are listed in the 50st amendment of the IFRA code of practice, and the concentration levels listed below are the maximum dosage allowed in each IFRA class:

IFRA Class	Max Level of use (%)
1	Not restricted
2	Not restricted
3	Not restricted
4	Not restricted
5A, 5B, 5C, 5D	Not restricted
6	Not restricted
7A, 7B	Not restricted
8	Not restricted
9	Not restricted
10A, 10B	Not restricted
11A, 11B	Not restricted
12	Not restricted

IFRA Restricted ingredients and substance:

Ingredient name	CAS	Concentration	IFRA Std
Limonene	5989-27-5	0 – 3%	Specification Std

- The product is manufactured as per IFRA code of practices.
- Product is manufactured in keeping intention of the fragrance use.
- The product confirms to IFRA 50st amendment.

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION		
Product Name	:TURMERIC ROOT OIL	
Category of product	: Essential oil	
CAS #	: 8024-37-1	
Fema No	: 3085	
CUSTOMS TARRIF CODE	: 3301 2949	
Relevant identified uses		
Main use category	: Concentrated aromatic and flavour ir	ngredient which may be used in
	flavour and fragrance compounds acco	rding to legal and IFRA or FEMA
	GRAS/FDA guidelines.	
Industrial/Professional use	spec: Industrial	
Company	: Madar Corporation Limited	
	19 - 20 Sandleheath Industrial Estate	
	Fordingbridge	
	SP6 1PA	
	Phone: +44 (0)1425 655 555	
	Email: <u>technical@madarcorporation.co</u>	<u>o.uk</u>
Emergency number	:Phone: +44 (0)1425 655 555	
2. HAZARDS IDENTIFICATIO		
Physical hazards	Flammable liquids	Category 4
Health hazards	Skin corrosion/irritation	Category 2

	I I I I I I I I I I I I I I I I I I I	0,
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Sensitization, skin	Category 1
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

Label elements Pictogram



Signal word Hazard statement Warning H226 Flammable liquid and vapour. H304 May be fatal if swallowed and enters airways. H317 May cause an allergic skin reaction. H411 Toxic to aquatic life with long lasting effects. P210 Keep away from heat/sparks/open flames/hot surfaces. — No

Precautionary statement Prevention

smoking. P273 Avoid release to the environment.

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	P280Wearprotectivegloves/protectiveclothing/eyeprotection/faceprot
	ection.
Response	P301 + P310 – IF SWALLOWED: Immediately call a POISON
	CENTER/doctor/physician.
	P331 – Do NOT induce vomiting.
	P264 –Wash hands thoroughly after handling.
	P302 + P352 – IF ON SKIN: Wash with plenty of water/soap.
	P362 + P364 – Take off contaminated clothing and wash it before
	reuse.
	P370 + P378 – In case of fire: Use dry sand, dry chemical, or alcohol-resistant
	foam for extinction.
Storage	P405 – Store locked up,
	P403 + P235 – Store in well-ventilated place.
Disposal	P501 – Dispose of contents/container to an approved waste disposal
	plant in accordance with local/regional/national/international
	regulations.
Hazard(s) not otherwise	none known.
Classified (HNOC)	
Supplementary precautiona	ary
Statements	100% of the mixture consists of component(s) of unknown acute
	inhalation toxicity.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Chemical name	Common name and sync	CAS number	%
TURMERIC ROOT OIL		8024-37-1	100

4. FIRST AID MEASURES

4.1. Description of First Aid Measures

General	: Take phrases in sections 2 and 15 into account. Consult a Physician. Move out of
	Dangerous Area
Inhalation	: Remove from the exposure area to fresh air. Give artificial Respiration if necessary
Ingestion	: Rinse mouth with plenty of water. Seek medical advice immediately.
Skin Contact	: Remove contaminated clothing. Wash thoroughly with soap and water. Seek
	Medical advice if irritation persists or there is any sign of tissue damage.
Eye Contact	: Flush with plenty of water, seek medical advice if necessary.

4.2. Indication of Any immediate medical Attention and Special Treatments needed

No data Available

5. FIRE-FIGHTING MEASURES			
Extinguishing Media	: Carbon dioxide, foam or dry powder		
	Use water Spray, DO NOT USE A DIRECT WATER JET		
	In case of overheating, cool containers to avoid a pressure increase		
Special Hazard Arising	: No data available		
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Page 10 of 17

Combustion Products: Carbon dioxide and unidentified organic compounds.Special Protective Equipment: Wear protective clothing and avoid inhalation of vapoursFor Fire fighters only: Wear Self-Contained Breathing apparatus for if necessary

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Remove all sources of ignition. Avoid inhalation, skin and eye contact. Ensure proper ventilation.

6.2. Environmental precautions:

Do not discharge directly into drains or the soil. Keep away from surface and ground water

6.3. Methods and material for containment and cleaning up

Soak up spillage with sand or other inert absorbent material such as earth or vermiculite; transfer used material to a suitable waste container and dispose in accordance with regulations.

6.4. Reference to other sections:

Take Risk, Safety and Precautionary phrases (section 16) into account

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Maintain good occupational and personal hygiene. Avoid inhalation and contact with skin and eyes.

7.2. Handling

Wear safety glasses, rubber gloves and apron when handling.

7.3. 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.

7.4. Conditions for safe storage, including any incompatibilities

Store in tightly sealed original containers away from ignition sources and in a cool place.

7.5. Specific End Use(s)

Apart from the uses mentioned in this Documents, no other specific uses are stipulated at this time. **7.6. Shelf life**

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

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

EXPOSURE CONTROLS:



Wear protective Equipments – Protective Gloves, Goggles and Coat

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.

8.1 Personal Protection

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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	:	87 ⁰ C
Oxidising properties	:	Not determined
Flammability limits	:	Not determined
Solubility in water	:	Insoluble

10. STABILITY AND REACTIVITY

Reactivity

No data available

Conditions to Avoid

Heat, open flame, sunlight.

Materials to avoid

Contact with Chemicals may decompose the ingredients present in it. If possible avoid contact with all kinds of Chemical. Avoid Light and Extreme temperatures to avoid ignition

Possibility of Hazardous Reactions

No data Available

Incompatible materials

Alkali metals, ammonia, oxidizing agents, peroxide inorganic acids

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Hazardous Decomposition Products

Formed under Fire Conditions	: Not Determined
Other Decomposition Products	: Not determined

11. TOXICOLOGY INFORMATION

Information on likely routes of exposure			
Inhalation	Breathing high concentrations of vapor may cause anaesthetic effects.		
Skin contact	Causes mild skin irritation. May cause an allergic skin reaction.		
Eye contact	Causes serious eye irritation.		
Ingestion	May be harmful if swallowed. Droplets of the product		
	aspirated into the lungs through ingestion orvomiting may		
	cause a serious chemical pneumonia.		
Symptoms related to the	Aspiration may cause pulmonary Edema and pneumonitis.		
physical, chemical and	Severe eye irritation. Symptoms mayinclude stinging,		
toxicological characteristics	tearing, redness, swelling, and blurred vision. May cause an		
	allergic skin reaction. Dermatitis. Rash.		
Information on texteelesteel offer	h-		

Information on toxicological effects

Acute toxicity	
Oral (Rat): LD50>5000mg/kg	
Skin corrosion/irritation	May cause skin irritation.
Serious eye damage/eye	May be irritating to eyes
irritation	
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% aremutagenic or genotoxic.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not available.

Reproductive toxicityThis product is not expected to cause reproductive or
developmental effects.Specific target organ toxicity -
single exposureNot classifiedSpecific target organ toxicity -
repeated exposureNot classified.Aspiration hazardNot classified

12. ECOLOGICAL INFORMATION

Ecotoxicity	No data available.
Persistence and degradability	No data is available on the degradability of this substance.
Bio accumulative potential	No data available.
Mobility in soil	No data available
Other adverse effects No other adverse environmental effects (e.g. ozor	
	photochemical ozone creation potential, endocrine disruption,
	global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATION

Dispose in accordance with the law and local regulations. Treat as trade effluent. In the event of a 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 fully sealed containers, keep cool and protect from light to preserve quality, preferred container for long term storage - stainless steel or glass

ADR	IMDG	ΙΑΤΑ	ADN	RID
14.1 UN Number	14.1 UN Number			
Not Available				
14.2 UN Proper Shipping Name / Description				
Not Available				
14.3 Transport Hazard Class				
Not Available				
14.4 Packing Group				
Not Available				

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16December 2008 on classification, labelling and packaging of substances and mixtures.

Chemical safety assessment

No data available at this time <u>REGULATORY STATUS</u> CAS# 8024-37-1 FEMA# 3085 H.S.CODE(CUSTOMS TARRIF CODE) # 3301 2949

16. OTHER INFORMATION

16.1. Further Information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge

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and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

Computer edited Certificate - valid without signature UPDATED ON 01/01/2023

TECHNICAL DATA SHEET

Product: Turmeric Root Oil

CAS NO : 8024-37-1

FEMA NO: 3085

HS CODE: 3301 2949

Description:

Turmeric Root Oil is obtained by steam distillation of dried tubers of Curcuma Longa L.

Organoleptic characteristics:

Pale yellow to Orange yellow free flowing clear liquid with a warm note of turmeric.

ANALYTICAL QUALITY			
Parameters	Specifications	Test Method	
Specific gravity @ 25 [°] C	0.871 to 0.950	GLE/QC/108 (ref:FCC)	
Refractive Index @ 20 ⁰ C	1.475 to 1.520	GLE/QC/107 (ref:FCC)	
Optical Rotation	-22° to $+45^{\circ}$	GLE/QC/109 (ref:FCC)	
Turmerone (by GC)	28% to 40%	GLE/QC/112	

HEAVY METALS

HEAVIMETALS		
Arsenic	Less than 1 ppm	ICP-MS
Lead	Less than 3 ppm	ICP-MS
Cadmium	Less than 1 ppm	ICP-MS
Mercury	Less than 0.1 ppm	ICP-MS

Halal & Kosher:

Certified by Halal Certification Services India Pvt Ltd and Star-K Kosher (USA).

Additives:

No additives

GMO Status:

The product is free from Genetically Modified Organisms.

Flavouring Status according to US (21 CFR 101-22) and EC(1334/2008) :

Natural Flavouring Preparation

Packaging

18 kg/20 Kg/ 180 Kgs HDPE pails/barrels or as per customer requirement.

Storage:

Keep in full & tight containers away from direct heat and light at ambient temperature (24-25°c).

Shelf Life:

Not more than 3 years from the date of manufacture when stored under specified storage conditions

Date: 16.08.2023

VEGAN & VEGETARIAN STATEMENT

To Whom It May Concern,

Product - Turmeric Root Oil

The above-mentioned product manufactured and supplied complies with a vegan or vegetarian diet. They contain no animal ingredients or animal by-products, use no animal ingredients or by-products in the manufacturing process, and are not tested on animals.

Therefore, it is suitable for vegan and vegetarians.