



IFRA 49TH AMENDMENT CONFIRMATION

29.10.2021

PRODUCT NAME : NUTMEG OIL
CHEMICAL NAME : *Myristica Fragrans Houltt.*
CAS NUMBER : 8008-45-5 FEMA NUMBER : 2793

We certify that the above named material conforms to the IFRA 49 code of practice and contains the following restricted components that are listed in the 49th 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	0.044
2	0.044
3	0.879
4	0.440
5A, 5B, 5C, 5D	0.044
6	0.110
7A, 7B	0.044
8	0.110
9	1.099
10A, 10B	1.099
11A, 11B	1.099
12	Not Restricted

IFRA Restricted ingredients and substance:

Ingredient name	CAS	Concentration (mg/kg)	IFRA Std
Limonene	5989-27-5	0 – 9.0%	Specification Std
safrole	94-59-7	1.2 – 1.6%	Restriction 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 49th amendment.



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Product Name : **NUTMEG OIL**
Category of product : Essential oil
CAS Number : 8008-45-5
EC-No : 282-013-3
Fema NO : 2793
CUSTOMS TARRIF CODE : 3301 2932

Relevant identified uses

Main use category : Concentrated aromatic and flavour ingredient which may be used in flavour and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA guidelines.

Industrial/Professional use spec: Industrial

Company : Naturally Balmy Limited
8 Bensons Road
Nuffield Industrial Estate, Poole
BH17 0GB
Phone:01425 655 555
Email: sales@naturallybalmy.co.uk

2. HAZARDS IDENTIFICATION

Physical hazards	Flammable liquids	Category 3
Health hazards	Skin corrosion/irritation	Category 2
	Sensitization, skin	Category 1
	Eye irritation	Category 2
	Germ cell mutagenicity	Category 2
	Carcinogenicity	Category 1B
Environmental hazards	Aspiration hazard	Category 1
	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard (chronic)	Category 1

Label elements

Pictogram



Signal word

Danger

Hazard statement

H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes skin irritation.
H341 Suspected of causing genetic defects.
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects.



Precautionary statement

Prevention

P201 Obtain special instructions before use.
 P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P262 Do not get in eyes, ON skin or ON clothing
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P281 Use personal protection equipment as required.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P331 Do NOT induce vomiting.
 P302+P352 IF ON SKIN wash with plenty of soap and water

Response

P362+P364 Take off contaminated clothing and wash it before reuse.
 P370+P378 In case of fire: Use appropriate media to extinguish.
 P391 Collect Spillage

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/ regional/national/international regulations.

Hazard(s) not otherwise

None known.

Classified (HNOC)

Supplementary precautionary

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 synonyms	Identifier	Concentration (% w/w)
NUTMEG OIL		8008-45-5	100

Additional components

Chemical name	Common name and synonyms	Hazard Class and Category Code; Hazard statement codes	CAS number / EC Number	%
Sabinene	4-methylene-1-(1-methylethyl)bicyclo[3.1.0]hexane	Flam. Liq. 3; H226 Asp. Tox. 1; H304	3387-41-5 222-212-4	20-35%
Alpha-pinene	(1S,5S)-2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene ((-)- α -Pinene)	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1; H317 Asp. Tox. 1; H304 Aqua acute 1;H400 Aqua Chronic 1;H410	80-56-8 201-291-9	8 - 18%
Beta-pinene	6,6-Dimethyl-2-methylidenebicyclo[3.1.1]heptane Pin-2(10)-ene	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1; H317 Asp. Tox. 1; H304 Aqua acute 1;H400 Aqua Chronic 1;H410	127-91-3 204-872-5	8 - 15%



Terpine-4-ol	4-Methyl-1-(propan-2-yl)cyclohex-3-en-1-ol	Flam. Liq. 3; H226 Acut 4; H302 Acut 5; H313 Skin Irrit. 3; H315 Eye irrit. 2A; H319 Aqua acute 1;H402	562-74-3 209-235-5	5 - 8%
D-limonene	1-Methyl-4-(prop-1-en-2-yl)cyclohex-1-ene	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1; H317 Asp. Tox. 1; H304 Aqua acute 1;H400 Aqua Chronic 1;H410	5989-27-5 227-813-5	5 - 10%
Safrole	5-(Prop-2-en-1-yl)-2H-1,3-benzodioxole	Acut 4; H302 Gercel muta. 2; H341	94-59-7 202-345-4	0 – 0.1%
Myristicin	3-methoxy-4,5-methylenedioxyallylbenzene; 5-methoxy-3,4-methylenedioxyallylbenzene	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1; H317 Asp. Tox. 1; H304 Aqua Chronic 1;H410	607-91-0 210-146-9	0 - 3%
Elimicin	1,2,3-Trimethoxy-5-(prop-2-en-1-yl)benzene	Eye Irrit. 2; H319 Skin Sens. 1; H317	487-11-6 207-649-0	0 - 4%

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** : Remove any contact lenses and open eyelids wide apart. 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
- Combustion Products** : Carbon dioxide and unidentified organic compounds.
- Special Protective Equipment:** Wear protective clothing and avoid inhalation of vapours
- For Fire fighters only** : Wear Self-Contained Breathing apparatus for if necessary

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Naturally Balmy Ltd, 8 Benson Road, Nuffield Industrial Estate, Poole BH17 0GB
Tel: 01202 567046 | Email: sales@naturallybalmy.co.uk



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 document, 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.

8.3. 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	:	Colourless to pale yellow
Odour	:	Characteristic of nutmeg
Boiling point	:	Not determined
Vapour pressure	:	Not determined.
Flash point	:	48°C closed cup
Oxidising properties	:	Not determined
Explosive properties	:	Not explosive.
Flammability limits	:	Not determined.
Solubility in water (Weight %):	:	< 0.1
Solubility in 70% Alcohol	:	Soluble 10 to 15 volume.

10. STABILITY AND REACTIVITY

Reactivity



No data available

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. Avoid Light and Extreme temperatures to avoid ignition

Possibility of Hazardous Reactions

No data Available

Incompatible materials

Strong bases, Strong oxidizing agents, and highly reactive chemicals which may produce unknown reaction.

Hazardous Decomposition Products

Formed under Fire Conditions : Oxides of Carbon

Other Decomposition Products : Not determined

11. TOXICOLOGY INFORMATION

Information on likely routes of exposure

Inhalation

No adverse effects due to inhalation are expected.

Skin contact

May cause an allergic skin reaction.

Eye contact

Direct contact with eyes may cause temporary irritation. Causes mild eye irritation.

Ingestion

May be harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia

Symptoms related to the physical, chemical and toxicological characteristics

Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, edness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects

Acute toxicity

May be harmful if swallowed. May cause an allergic skin reaction.

Skin corrosion/irritation

May causes skin irritation.

Serious eye damage/eye irritation

May causes eye irritation.

Respiratory or skin sensitization

Respiratory sensitization

In high concentrations, vapours may irritate throat and respiratory system and cause coughing.

Skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

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 toxicity	Not classified
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Harmful to aquatic life with long lasting effects.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, 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 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

ADR	IMDG	IATA	ADN	RID
14.1 UN Number				
Road: 1169 Rail: 1169 Air: 1169	Road: 1169 Rail: 1169 Air: 1169	Road: 1169 Rail: 1169 Air: 1169	Road: 1169 Rail: 1169 Air: 1169	Road: 1169 Rail: 1169 Air: 1169
14.2 UN Proper Shipping Name / Description				
Environmentally hazardous substance, Flammable, N.O.S, liquid.	Environmentally hazardous substance, Flammable, N.O.S, liquid.	Environmentally hazardous substance, Flammable, N.O.S, liquid.	Environmentally hazardous substance, Flammable, N.O.S, liquid.	Environmentally hazardous substance, Flammable, N.O.S, liquid.
14.3 Transport Hazard Class				



14.4 Packing Group				
III	III	III	III	III

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 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Chemical safety assessment

No data available at this time

REGULATORY STATUS

CAS # 8008- 45- 5

FDA NO # 182.20

Fema NO # 2793

CoE NO# 296n

H.S. CODE # 3301 2932

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 and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Greenleaf Extractions Pvt. Ltd. Company and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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

MANAGER - Q.A.

Computer edited Certificate - valid without signature

UPDATED ON 15/03/2021



TECHNICAL DATA SHEET

Product: Nutmeg Oil

CAS NO : 8008-45-5

FEMA NO: 2793

HS CODE: 3301 2932

Description:

Nutmeg Oil is obtained by steam distillation of dried kennels of the ripe seed of *Myristica Fragrans* Houtt.

Organoleptic characteristics:

Colourless to Pale Yellow free flowing clear liquid with a refreshing aroma and flavour of Nutmeg.

ANALYTICAL QUALITY		
Parameters	Specifications	Test Method
Specific gravity @ 25 ⁰ C	0.860 to 0.910	GLE/QC/108 (ref:FCC)
Refractive Index @ 20 ⁰ C	1.470 to 1.489	GLE/QC/107 (ref:FCC)
Optical Rotation	+5 ⁰ to +33 ⁰	GLE/QC/109 (ref:FCC)
Myristicin (by GC)	NLT 2.0%	GLE/QC/112

HEAVY METALS		
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.