



**CERTIFICATE OF ANALYSIS**

Product Name       **DILL SEED OIL**  
Batch Number       **4339005**  
Best Before End     **OCTOBER 2021**  
  
Product Code         OEDILLSEED  
Botanical Name       *Anethum sowa DC*  
Production Method :   Steam Distillation  
Country of Origin     India

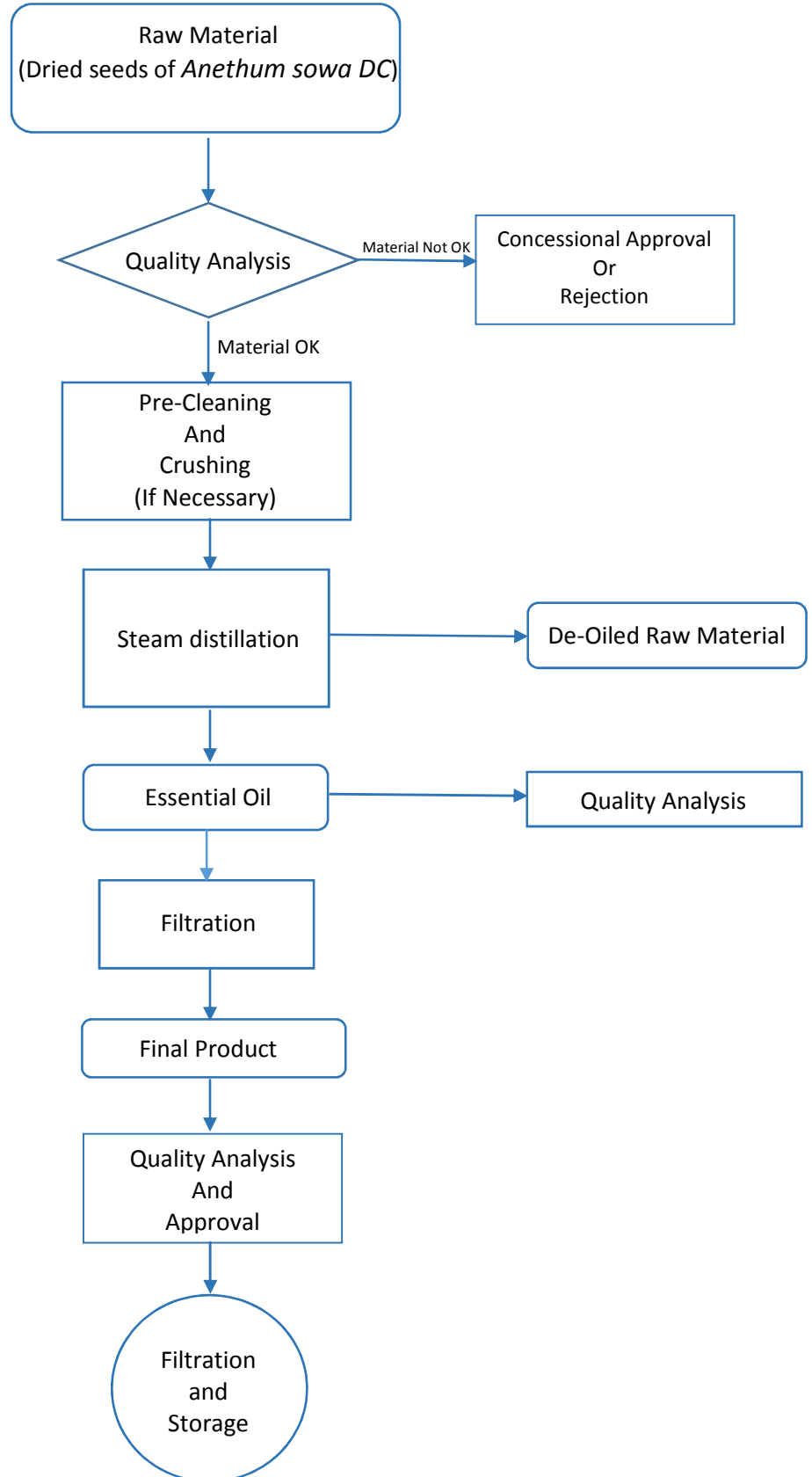
<b>Parameter</b>	<b>Specification</b>	<b>Result</b>	<b>Method</b>
<b><u>Physical and Analytical</u></b>			
Appearance	Free flowing transparent liquid	Complies	Visual
Colour	Pale Yellow Brownish Yellow	Complies	Visual
Odour	Sweet herbaceous, some what woody-spicy odour	Complies	Organoleptic
Specific gravity @25 °C	0.895 - 1.1500	0.940	FCC
Refractive Index @ 20°C	1.4750 - 1.5200	1.4,9	FCC
Optical rotation	+15° - +80°	+71 <sup>0</sup>	FCC
<b><u>Heavy Metal Analysis</u></b>			
Total Heavy Metals	< 5 ppm	Complies	ICP- MS
Arsenic	< 1 ppm	Complies	ICP-MS
Lead	< 3 ppm	Complies	ICP-MS
Mercury	< 0.1 ppm	Complies	ICP-MS
Cadmium	< 1 ppm	Complies	ICP - MS

Warning : The product is irritant, avoid contact with skin and eyes.

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

Shelf life: Not more than 3 Years, when stored as recommended above.

## PROCESS FLOWCHART FOR DILL SEED OIL





05.03.2019

**GENETICALLY MODIFIED ORGANISMS – STATEMENT**

This is to certify that the below mentioned product supplied by MADAR CORPORATION LTD:

Product:- **Dill Seed 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.



05-03-2019

## IFRA 48<sup>TH</sup> AMENDMENT CONFIRMATION

**PRODUCT NAME** : **DILL SEED OIL**  
**CAS NUMBER** : **8016-06-6**  
**FEMA NUMBER** : **2383**  
**CHEMICAL NAME** : **Anethum sowa DC**

We hereby declare that the above material supplied by **MADAR CORPORATION LTD** 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 48<sup>th</sup> amendment.



## MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION:

Product Name : Dill Seed Oil  
Category of product : Essential oil  
Description : The product is obtained by the Steam distillation of seeds of Anethum sowa DC  
CAS Number : 8016 - 06- 6  
Physical state : Liquid  
Colour : Pale Yellow Brownish Yellow  
Odour : Sweet herbaceous, some what woody-spicy odour  
Company : MADAR Corporation Ltd,  
19-20 Sandleheath Industrial Estate  
Fordingbridge  
Hampshire  
SP6 1PA  
Phone: +44 1475 655555  
Email: [sales@madarcorporation.co.uk](mailto:sales@madarcorporation.co.uk)

### 2. COMPOSITION

#### CAS NO

8016-06-6

#### MAJOR INGREDIENTS

D-Carvone

----- 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 transparent liquid
Colour	Pale Yellow Brownish Yellow
Odour	Sweet herbaceous, some what woody-spicy
Boiling point	odour Not determined
Vapour pressure	Not determined.
Flash point	66°C
Oxidizing properties	Not determined
Explosive properties	Not explosive.
Flammability limits	Not determined.
Solubility in water (Weight %):	< 0.1
Solubility in 80% Alcohol	soluble in 10 vol.



## 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# 8016- 06-6

Fema#2383

FDA NO # 172.510

H no. # 3301.29.23



## **16. OTHER INFORMATION**

### REFERENCES

1. The Essential oils by Gunther Volume V
2. Wealth Asia disk 2.2(Publication of CSIR, India)
3. Essential oils by Dr. Brain M Lawrence
4. Food Chemical codex
5. Source Book of Flavours by Gary Reineccius

*UPDATED ON 04/01/2017*



## TECHNICAL DATA SHEET

**Product: Dill Seed Oil**

Product Code: EO-1030

CAS NO : 8016-06-6

FEMA NO: 2383

HS CODE: 3301 2923

**Description:**Dill Seed Oil is obtained by the steam distillation of the seeds of *Anethum sowa DC***Organoleptic characteristics:**

Pale yellow to brownish yellow free flowing clear liquid with a characteristic odour.

**ANALYTICAL QUALITY**

Parameters	Specifications	Test Method
Specific gravity @ 25 <sup>o</sup> C	0.895 to 1.150	GLE/QC/108 (ref:FCC)
Refractive Index @ 20 <sup>o</sup> C	1.475 to 1.520	GLE/QC/107 (ref:FCC)
Optical Rotation	+15 <sup>o</sup> to +80 <sup>o</sup>	GLE/QC/109 (ref:FCC)

**HEAVY METALS**

Arsenic	Less than 3 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

**Additives:**

No additives

**GMO Status:**

The product is free from Genetically Modified Organisms.

**Storage:**

Keep in full &amp; 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: 05.03.2019

## **VEGAN & VEGETARIAN STATEMENT**

### **Product - Dill Seed Oil**

The above mentioned product supplied by MADAR Corporation LTD, 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.