#### **CERTIFICATE OF ANALYSIS**

PRODUCT NAME: STAR ANISE, ESSENTIAL OIL

BATCH NUMBER: 4495311

PRODUCT INCI: ILLICIUM VERUM FRUIT OIL

PRODUCT CODE: K0439

CAS NUMBER: 84650-59-9

EINECS NUMBER: 283-518-1

MANUFACTURING METHOD: STEAM DISTILLATION

**BEST BEFORE DATE: DECEMBER 2025** 

ANALYTICAL DETAILS	Range	RESULTS
Appearance	LIQUID	
COLOUR	CLEAR-PALE YELLOW	
Odour	CHARACTERISTIC	
SPECIFIC GRAVITY @ 20°C	0.975 – 0.994	
Refractive Index @ 20°C	1.5525 – 1.5610	
OPTICAL ROTATION (°C)	-2.0 то +2.0	
ANETHOLE CONTENT (%, GC)	≥87.0	

STORAGE CONDITIONS STORE IN A COOL DRY PLACE AWAY FROM HEAT & SUNLIGHT

### **ALLERGEN STATEMENT**

PRODUCT NAME: STAR ANISE, ESSENTIAL OIL

#### **COSMETIC ALLERGENS**

Annex Illa		CAS NUMBER:	TOTAL ALLERGEN	
Reference:		CAS NUIVIDER:	INCLUSION (%):	
67	AMYL CINNAMAL	122-40-7	0.000	
68	BENZYL ALCOHOL	100-51-6	0.000	
69	CINNAMYL ALCOHOL	104-54-1	0.000	
70	CITRAL	5392-40-5	0.000	
71	EUGENOL	97-53-0	0.000	
72	HYDROXY-CITRONELLAL	107-75-5	0.000	
73	ISO EUGENOL	97-54-1	0.000	
74	AMYLCIN-NAMYL ALCOHOL	101-85-9	0.000	
75	BENZYL SALICYLATE	118-58-1	0.000	
76	CINNAMAL	104-55-2	0.000	
77	COUMARIN	91-64-5	0.000	
78	GERANIOL	106-24-1	0.000	
70	HYDROXYISOHEXYL 3-CYCLOHEXENE		0.000	
79	CARBOXALDEHYDE	31906-04-4	0.000	
80	ANISE ALCOHOL	105-13-5	0.000	
81	BENZYL CINNAMATE	103-41-3	0.000	
82	FARNESOL	4602-84-0	0.000	
83	BUTYLPHENYL METHYLPROPIONAL	80-54-6	0.000	
84	LINALOOL	78-70-6	≤ 5.0	
85	BENZYL BENZOATE	120-51-4	0.000	
86	CITRONELLOL	106-22-9	0.000	
87	HEXYL CINNAM-ALDEHYDE	101-86-0	0.000	
88	LIMONENE	5989-27-5	≤ 1.0	
89	METHYL 2-OCTYNOATE	111-12-6	0.000	
90	ALPHA-ISOMETHYL IONONE	127-51-5	0.000	
91	EVERNIA PRUNASTRI EXTRACT	90028-68-5	0.000	
92	EVERNIA FURFURACEA EXTRACT	90028-67-4	0.000	

#### **FOOD ALLERGENS**

Annex Illa		PRESENT IN	CONTAMINATION	FACTORY
Reference:		PRODUCT:	PRESENCE:	PRESENCE:
1	CEREALS (CONTAINING GLUTEN)	NO	NO	YES
2	CRUSTACEANS	NO	NO	NO
3	EGGS	NO	NO	NO
4	FISH	NO	NO	NO
5	PEANUTS	NO	NO	YES
6	SOYA	NO	NO	YES
7	MILK	NO	NO	YES
8	NUTS	NO	NO	YES
9	CELERY & CELERIAC	NO	NO	YES
10	MUSTARD	NO	NO	YES
11	SESAME	NO	NO	YES
12	SULPHUR DIOXIDE & SULPHITES	NO	NO	NO
13	LUPIN	NO	NO	NO
14	MOLLUSC	NO	NO	NO

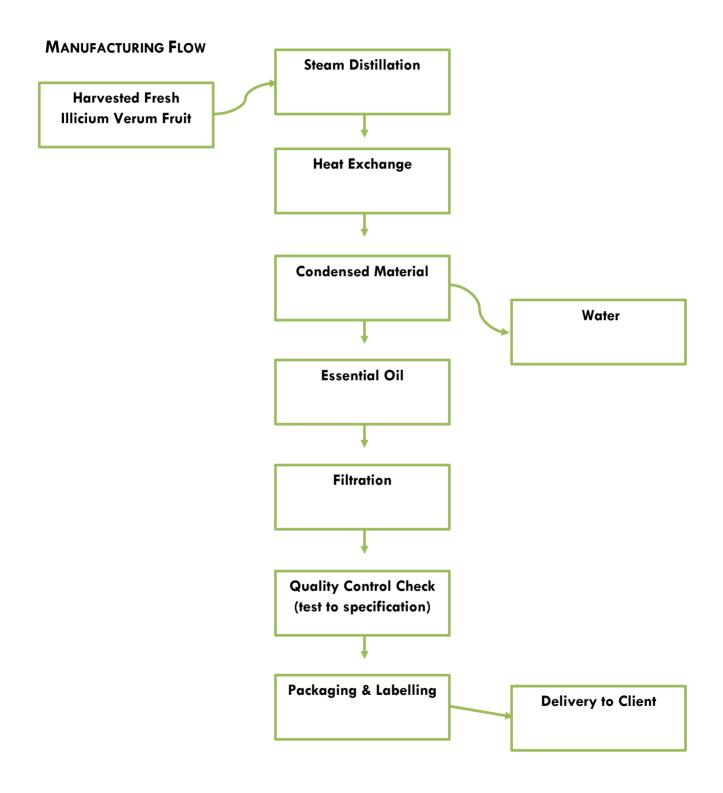
### **MANUFACTURING FLOW & INCI STATEMENT**

PRODUCT NAME: STAR ANISE, ESSENTIAL OIL

#### **INCI STATEMENT**

We can hereby confirm the following composition breakdown & manufacturing process flow.

INCI Name	% Inclusion	CAS Number
Illicium Verum Fruit Oil	100	84650-59-9



#### **GMO Statement**

PRODUCT NAME: Star Anise

MADAR Corporation Limited can confirm that the above listed product is GMO Free.

26-07-2022

#### **IFRA STATEMENT**

PRODUCT NAME: STAR ANISE, ESSENTIAL OIL

PRODUCT INCI: ILLICIUM VERUM FRUIT OIL

#### WE CERTIFY THAT THE ABOVE-MENTIONED MATERIAL CONFORMS TO THE IFRA 49 CODE OF PRACTICE AND CONTAINS THE FOLLOWING RESTRICTED COMPONENTS THAT ARE LISTED IN THE 49<sup>TH</sup> AMENDMENT OF THE IFRA CODE OF PRACTICE:

Restricted Component	Cas No:	% Level in Product	IFRA Standard
Limonene	5989-27-5	≤ 1.0	Specification
Linalool	78-70-6	≤ 5.0	Specification
Estragole (Methyl Chavicol)	140-67-0	≤ 5.0	Restriction
p-Methoxybenzaldehyde (Anisaldehyde)	123-11-5	≤ 1.0	Restriction

#### Additional comments:

**Flavour use consideration** - Due to the possible ingestion of small amounts of fragrance ingredients from their use in products in Categories 1 and 6, materials must not only comply with IFRA Standards but must also be recognized as safe as a flavouring ingredient as defined by the IOFI Code of Practice (www.iofi.org). For more details see chapter 1 of the Guidance for the use of IFRA Standards.

IFRA Category	% Maximum Use Level
IFRA Category 1	0.240
IFRA Category 2	0.460
IFRA Category 3	0.240
IFRA Category 4	8.400
IFRA Category 5A	1.500
IFRA Category 5B	0.124
IFRA Category 5C	0.240
IFRA Category 5D	0.042
IFRA Category 6	0.620
IFRA Category 7A	0.240
IFRA Category 7B	0.240
IFRA Category 8	0.042
IFRA Category 9	1.000
IFRA Category 10A	1.000
IFRA Category 10B	1.000
IFRA Category 11A	0.042
IFRA Category 11B	0.042
IFRA Category 12	30.00

IFRA Category	Product Type	Flavour Use	Phototoxicity
Category 1	Lip Products of all types (solid and liquid lipsticks, balms, clear or coloured, etc.). Children's toys.	Yes	Applicable (leave-on products)
Category 2	Deodorant and antiperspirant products of all types including any product with intended or reasonably foreseeable use on the axillae or labelled as such (spray, stick, roll-on, under-arm, deo-cologne, etc.). Body sprays (including body mist)	No	Applicable (leave-on products)
Category 3	Eye products of all types (eye shadow, mascara, eyeliner, eye make-up, eye masks, eye pillows, etc.) including eye care and moisturizer Facial make up and foundation. Make-up remover for face and eyes. Nose pore strips. Wipes or refreshing tissues for face, neck, hands, body. Body and face paint (for children and adults). Facial masks for face and around the eyes	No	Applicable (leave-on products)
Category 4	Hydro alcoholic and non-hydro alcoholic fine fragrance of all types (Eau de Toilette, Parfum, Cologne, solid perfume, fragrancing cream, aftershaves of all types, etc.). Fragranced bracelets. Ingredients of perfume kits and fragrance mixtures for cosmetic kits. Scent pads, foil packs. Scent strips for hydro alcoholic products	No	Applicable (leave-on products)
Category 5A	Body creams, oils, lotions of all types. Foot care products (creams and powders). Insect repellent (intended to be applied to the skin). All powders and talc (excluding baby powders and talc).	No	Applicable (leave-on products)
Category 5B	Facial toner. Facial moisturizers and creams	No	Applicable (leave-on products)
Category 5C	(women facial creams) Hand cream. Nail care products including cuticle creams, etc. Hand sanitizers	No	Applicable (leave-on products)
Category 5D	Baby cream/lotion, baby oil, baby powders and talc.	No	Applicable (leave-on products)
Category 6	Toothpaste. Mouthwash, including breath sprays. Toothpowder, strips, mouthwash tablets	Yes	Applicable (leave-on products)

Category 7A	Hair permanent or other hair chemical treatments (rinse-off) (e.g. relaxers), including rinse-off hair dyes	No	Applicable (leave-on products)
Category 7B	Hair sprays of all types (pumps, aerosol sprays, etc.). Hair styling aids non-sprays (mousse, gels, leave- on conditioners). Hair permanent or other hair chemical treatments (leave-on) (e.g. relaxers), including leave-on hair dyes. Shampoo - Dry (waterless shampoo). Hair deodorizer	No	Applicable (leave-on products)
Category 8	Intimate wipes. Tampons. Baby wipes. Toilet paper (wet).	No	Applicable (leave-on products)
Category 9	Bar soap. Shampoo of all type. Cleanser for face (rinse-off). Conditioner (rinse-off). Liquid soap. Body washes and shower gels of all types. Baby wash, bath, shampoo. Bath gels, foams, mousses, salts, oils and other products added to bathwater. Foot care products (feet are placed in a bath for soaking). Shaving creams of all types (stick, gels, foams, etc.). All depilatories (including facial) and waxes for mechanical hair removal. Shampoos for pets	NO	Applicable (rinse-off products)
Category 10A	Hand wash laundry detergent (including concentrates). Laundry pre-treatment of all types (e.g. paste, sprays, sticks). Hand dishwashing detergent (including concentrates). Hard surface cleaners of all types (bathroom and kitchen cleansers, furniture polish, etc.). Machine laundry detergents with skin contact (e.g. liquids, powders) including concentrates. Dry cleaning kits. Toilet seat wipes. Fabric softeners of all types including fabric softeners sheets. Household cleaning products, other types including fabric cleaners, soft surface cleaners, carpet cleaners, furniture polishes sprays and wipes, leather cleaning wipes, stain removers, fabric enhancing sprays, treatment products for textiles (e.g. starch sprays, fabric treated with fragrances after wash, deodorizers for textiles or fabrics). Floor wax. Fragranced oil for lamp ring, reed diffusers, pot-pourri, liquid refills for air fresheners (non-cartridge systems), etc. Ironing water (Odorized distilled water).	NO	Applicable (rinse-off products)
Category 10B	Animal sprays – sprays applied to animals of all types. Air freshener sprays, manual, including aerosol and pump. Aerosol/spray insecticides	NO	Applicable (rinse-off products)
Category 11A	Feminine hygiene conventional pads, liners, interlabial pads. Diapers (baby and adult). Adult incontinence pant, pad. Toilet paper (dry).	NO	Not applicable (leave-on products without UV exposure)
Category 11B	Tights with moisturizers. Scented socks, gloves. Facial tissues (dry tissues). Napkins. Paper towels. Wheat bags. Facial masks (paper/protective) e.g. surgical masks not used as medical device. Fertilizers, solid (pellet or powder).	NO	Applicable (leave- on products)
Category 12	Candles of all types (including encased). Laundry detergents for machine wash with minimal skin contact (e.g. Liquid tabs, pods). Automated air fresheners and fragrancing of all types (concentrated aerosol with metered doses (range 0.05-0.5mL/spray), plug-ins, closed systems, solid substrate, membrane delivery, electrical, powders, fragrancing sachets, incense, liquid refills (cartridge), air freshening crystals). Air delivery systems. Cat litter. Cell phone cases. Deodorizers/maskers not intended for skin contact (e.g. fabric drying machine deodorizers, carpet powders). Fuels. Insecticides (e.g. mosquito coil, paper, electrical, for clothing) excluding aerosols/sprays. Joss sticks or incense sticks. Dish wash detergent and deodorizers – for machine wash. Olfactive board games. Paints. Plastic articles (excluding toys). Scratch and sniff. Scent pack. Scent delivery system (using dry air technology). Shoe polishes. Rim blocks (Toilet).	NO	Not applicable (non-skin contact products)

#### **Material Safety Data Sheet**

EU Regulation: 1907/2006

SECTION 1: IDENTIFICATION OF	THE SUBSTANCE	/MIXTURE /	AND OF THE COMPANY/	UNDERTAKING	
1.1 Product Identification					
PRODUCT NAME	STAR ANISE, ESSENTIA				
INCI NAME	ILLICIUM VERUM FRUIT	OIL			
<b>BIOLOGICAL DEFINITION</b>	"Anise Oil". Illicium	Verum Fruit (	OIL IS AN ESSENTIAL OIL DISTILLED F	ROM THE FRUITS OF	THE STAR ANISE, ILLICIUM VERUM, ILLICIACEAE.
Synonyms & Trade Names	STAR ANISE OIL, CHIN	NA STAR.			
Internal Product Code					
CAS-NO	84650-59-9	EC NO.	283-518-1	EINECS NO.	283-518-1
1.2 DETAILS OF THE SUPPLIER OF THE SAFETY DAT	A SHEET				
COMPANY ADDRESS	Madat Corporation 19 - 20 Sandlehec		Estate, Fordingbridge, SP6 1P	'A	
EMAIL	technical@madarcorpo	ration.co.uk			
1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DAT	A SHEET				
Emergency Contacts	Mrs. 01425 655 5	55			

#### **SECTION 2: HAZARDS IDENTIFICATION** 2.1 **CLASSIFICATION OF THE SUBSTANCE OR MIXTURE** THE FULL TEXT FOR ALL HAZARD STATEMENTS IS DISPLAYED IN SECTION 16. CLASSIFICATION (67/548/EEC) NO ADDITIONAL DATA AVAILABLE. PHYSICAL AND CHEMICAL HAZARDS: NOT CLASSIFIED. CLASSIFICATION (EU1272/2008) HUMAN HEALTH: SKIN SENS. 1 - H317, MUTA. 2 - H341, CARC. 2 - H351 **ENVIRONMENT:** AQUATIC CHRONIC 3 - H412 2.2 LABEL ELEMENTS LABEL IN ACCORDANCE WITH REGULATION (EC) NO 1272/2008. GHS LABEL GHS08 GHS07 SIGNAL WORD WARNING. CONTAINS TRANS-ANETHOLE, ESTRAGOLE, ALPHA- PINENE, D-LIMONENE, ALPHA- TERPINOLENE H317 MAY CAUSE AN ALLERGIC SKIN REACTION. H341 SUSPECTED OF CAUSING GENETIC DEFECTS. HAZARDS STATEMENT H351 SUSPECTED OF CAUSING CANCER. H412 HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS. SIGNAL WORD NONF. P261 AVOID BREATHING VAPOUR/ SPRAY. P273 AVOID RELEASE TO THE ENVIRONMENT. P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECTION. **PRECAUTIONARY STATEMENTS** P262 DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. P302+P352 IF ON SKIN: WASH WITH PLENTY OF WATER. P501 DISPOSE OF CONTENTS/ CONTAINER IN ACCORDANCE WITH NATIONAL REGULATIONS. P201 OBTAIN SPECIAL INSTRUCTIONS BEFORE USE. P202 DO NOT HANDLE, UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD. P272 CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE. P308+P313 IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/ ATTENTION. SUPPLEMENTARY PRECAUTIONARY STATEMENTS P321 SPECIFIC TREATMENT (SEE MEDICAL ADVICE ON THIS LABEL). P333+P313 IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/ ATTENTION. P362+P364 TAKE OFF CONTAMINATED CLOTHING AND WASH IT BEFORE REUSE. P405 STORE LOCKED UP. SECTION 16 (OTHER INFORMATION): RISK & SAFETY PHRASES IN FULL. 2.3 OTHER HAZARDS **ADVERSE PHYSIO-CHEMICAL PROPERTIES** NONE. ADVERSE EFFECTS ON HUMAN HEALTH NONF. PBT OR VPVB ACCORDING TO ANNEX XIII NONE **SECTION 3: COMPOSITION OF INGREDIENTS** 3.1 NOT APPLICABLE. **SUBSTANCES** > 86.0 % TRANS-ANETHOLE CAS-No.: 4180-23-8 EC No.: 224-052-0 CLASSIFICATION (EC 1272/2008) SKIN SENS. 1 - H317 3.2 MIXTURES

1.0 – 5.0% Estragole	CAS-No.: 140-67-0 EC No.: 2	
CLASSIFICATION (EC 1272/2008)	Acute Tox. 4 - H302, Skin Sens. 1	1 - H317, MUTA. 2 - H341, CARC. 2 - H351
1.0 – 5.0% LINALOOL	CAS-No.: 78-70-6	EC No.: 201-134-4
CLASSIFICATION (EC 1272/2008)	SKIN IRRIT. 2 - H315, SKIN SENS. 1	B- H317, Eye Irrit. 2 - H319
< 1.0% d- Limonene	CAS-No.: 5989-27-5	EC No.: 227-813-5
CLASSIFICATION (EC 1272/2008) H317, AQUATIC ACUTE 1 - H400,	•	H304, Skin Irrit. 2 - H31 <i>5</i> , Skin Sens. 1 -
< 1.0% P-METHOXYBENZALDEHYDI	E (ANISALDEHYDE) CAS-NO.: 123-	11-5 EC No.: 204-602-6
CLASSIFICATION (EC 1272/2008)	NOT CLASSIFIED	
< 0.7% ALPHA- TERPINOLENE	CAS-No.: 586-62-9	EC No.: 209-578-0
		- H317, AQUATIC ACUTE 1 - H400
< 0.7% ALPHA- PINENE	CAS-NO.: 80-56-8	EC No.: 201-291-9
	FLAM. LIQ. 3 - H226, ACUTE TOX. 4	
	- H317, AQUATIC ACUTE 1 - H400,	

SECTION 4: FIRST AID MEASURES	
4.1 Description of First Aid Measures	
GENERAL INFORMATION	ALWAYS REMOVE CONTAMINATED CLOTHING IMMEDIATELY.
INHALATION	GET MEDICAL ATTENTION IMMEDIATELY. REMOVE FROM EXPOSURE SITE TO FRESH AIR, KEEP AT REST, AND OBTAIN MEDICAL ATTENTION.
INGESTION	GET MEDICAL ATTENTION IMMEDIATELY. RINSE MOUTH WITH WATER AND OBTAIN MEDICAL ATTENTION.
Skin Contact	REMOVE CONTAMINATED CLOTHING IMMEDIATELY AND WASH SKIN WITH SOAP AND WATER. GET MEDICAL ATTENTION IF IRRITATION PERSISTS AFTER WASHING.
Eye Contact	REMOVE ANY CONTACT LENSES AND OPEN EYELIDS WIDE APART. RINSE IMMEDIATELY WITH PLENTY OF WATER. GET MEDICAL ATTENTION IF SYMPTOMS ARE SEVERE OR PERSIST AFTER WASHING.
4.2 Most important symptoms & effects (Acute & Delayed)	INHALATION: MAY CAUSE COUGHING AND DIFFICULTIES IN BREATHING. INGESTION: INGESTION IS IRRITATING TO THE RESPIRATORY TRACT AND MAY CAUSE DAMAGE TO THE CENTRAL NERVOUS SYSTEM. SKIN CONTACT: TOXIC IN CONTACT WITH SKIN. EYE CONTACT: MAY CAUSE EYE IRRITATION.
4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION OR SPECIAL TREATMENT REQUIRED	NO ADDITIONAL DATA AVAILABLE.

#### **SECTION 5: FIRE FIGHTING MEASURES**

5.1		
EXTINGUISHING MATERIAL	FOAM, CO2, DRY CHEMICAL POWDER.	
5.2		
SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR	BURNING PRODUCES IRRITATING, TOXIC AND OBNOXIOUS FUMES	
MIXTURE		
5.3	SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS:	
Advice For Fire-Fighters	WEAR POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS (SCBA) AND APPROPRIATE PROTECTIVE CLOTHING.	

SECTION 6: ACCIDENTAL RELEASE MEASURES		
6.1 Personal precautions	ENSURE ADEQUATE VENTILATION OF THE WORKING AREA, EVACUATE PERSONNEL TO SAFE AREA, WEAR SUITABLE PROTECTIVE EQUIPMENT. NO SMOKING, SPARKS, FLAMES OR OTHER SOURCES OF IGNITION NEAR SPILLAGE. AVOID CONTACT WITH SKIN, EYES AND CLOTHING.	
6.2 ENVIRONMENTAL PRECAUTIONS	DO NOT DISCHARGE INTO DRAINS, WATER COURSES OR ONTO THE GROUND. DISPOSE OF IN LINE WITH LOCAL AUTHORITY GUIDELINES.	
6.3 METHODS & MATERIAL FOR CONTAINMENT AND CLEANING UP	<b>G</b> REMOVE IGNITION SOURCES. PROVIDE ADEQUATE VENTILATION. AVOID EXCESSIVE INHALATION OF VAPOURS. CONTAIN SPILLAGE IMMEDIATELY BY USE OF SAND OR INERT POWDER. DISPOSE OF ACCORDING TO LOCAL REGULATIONS.	

6.4 References to other sections	REFER & CONSIDER SECTION 8. REFER & CONSIDER SECTION 13.	
SECTION 7: HANDLING & STORAGE		
7.1 Precautions for safe-handling	HANDLE IN ACCORDANCE WITH GOOD HYGIENE AND SAFETY PRACTICE. KEEP AWAY FROM HEAT, SPARKS, OPEN FLAMES AND HOT SURFACES NO SMOKING. USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED. USE IN ACCORDANCE WITH GOOD MANUFACTURING AND INDUSTRIAL HYGIENE PRACTICES. USE IN AREAS WITH ADEQUATE VENTILATION DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.	
7.2 Conditions for safe storage, including any incompatibilities	KEEP THE PRODUCT CONTAINER TIGHTLY CLOSED, IN A DRY, VENTILATED AREA. KEEP AWAY FROM POTENTIAL SOURCES OF IGNITION AND PROTECTED FROM LIGHT. MAINTAIN LIMITED CONTACT WITH OXYGEN.	
7.3 Specific end use(s)	SUITABLE FOR COSMETIC, FRAGRANCE, FLAVOUR AND PROFESSIONAL USE ONLY.	
SECTION 8: EXPOSURE CONTROLS & PERSONAL PROTECTION		
8.1 Control Parameters	TRANS-ANETHOLE (CAS: 4180-23-8) DNEL         WORKERS - INHALATION; LONG TERM SYSTEMIC EFFECTS: 2.5 W/DAY, MG/KG         GENERAL OPPULATION - INHALATION; LONG TERM SYSTEMIC EFFECTS: 6.5 MG/M <sup>3</sup> GENERAL OPPULATION - DERMAL; LONG TERM SYSTEMIC EFFECTS: 3.75 BW/DAY, MG/KG         PNEC         - FRESH WATER; SHORT TERM 0.007 MG/L         - STP; SHORT TERM 0.972 MG/L         UNALCOL (CAS: 78-70-6)         DNEL         WORKERS - INHALATION; LONG TERM SYSTEMIC EFFECTS: 5 MG/KG         WORKERS - INHALATION; SHORT TERM SYSTEMIC EFFECTS: 5 MG/KG         WORKERS - INHALATION; SHORT TERM SYSTEMIC EFFECTS: 2.5 MG/KG         WORKERS - INHALATION; SHORT TERM SYSTEMIC EFFECTS: 2.5 MG/KG         WORKERS - INHALATION; LONG TERM SYSTEMIC EFFECTS: 2.5 MG/KG         GENERAL POPULATION - ORAL; SHORT TERM SYSTEMIC EFFECTS: 1.5 MG/KG         GENERAL POPULATION - DERMAL; SHORT TERM SYSTEMIC EFFECTS: 1.5 MG/KG         GENERAL POPULATION - ORAL; SHORT TERM SYSTEMIC EFFECTS: 2.5 MG/KG         GENERAL POPULATION - DERMAL; SHORT TERM SYSTEMIC EFFECTS: 1.5 MG/KG         GENERAL POPULATION - DERMAL; SHORT TERM SYSTEMIC EFFECTS: 0.2 MG/KG         GENERAL POPULATION - DERMAL; LONG TERM SYSTEMIC EFFECTS: 0.2 MG/KG         GENERAL POPULATION - DERMAL; LONG TERM SYSTEMIC EFFECTS: 0.7 MG/KG         GENERAL POPULATION - DERMAL; LONG TERM SYSTEMIC EFFECTS: 0.7 MG/KG         GENERAL POPULATION - DERMAL; LONG TERM SYSTEMIC EFFECTS: 0.7 MG/KG	

GENERAL POPULATION - DERMAL; LONG TERM SYSTEMIC EFFECTS: 0.19 MG/KG, BW/DAY GENERAL POPULATION - ORAL; LONG TERM SYSTEMIC EFFECTS: 0.19 MG/KG, BW/DAY PNEC

- FRESH WATER; SHORT TERM 0.606 MG/L
- Fresh water, intermittent release; 3.03  $\ensuremath{\mathsf{mg/L}}$
- Marine water; Short term  $0.061\;\text{mg/L}$
- Intermittent release, Marine water;  $0.303\;\text{mg/l}$
- STP; SHORT TERM 0.2 MG/L
- SEDIMENT (FRESHWATER); SHORT TERM 157 MG/KG
- SEDIMENT (MARINE WATER); SHORT TERM 15.7 MG/KG
- SOIL; SHORT TERM 31.7 MG/KG

#### (R)-P-MENTHA-1,8-DIENE (CAS: 5989-27-5) DNEL

Workers - Inhalation; Long term systemic effects: 33.3  $\mbox{mg}/\mbox{m}^3$ 

General population - Oral; long term systemic effects: 4.76  $\ensuremath{\mathsf{MG}}\xspace/\ensuremath{\mathsf{KG}}\xspace$ 

#### PNEC

- STP; 1.8 MG/L
- SOIL; 0.262 MG/KG
- FRESH WATER; 0.0054 MG/L
- MARINE WATER; 0.00054 MG/L
- SEDIMENT (FRESHWATER); 1.32 MG/KG
- SEDIMENT (MARINE WATER); 0.13 MG/KG

#### P-METHOXYBENZALDEHYDE (CAS: 123-11-5)

#### DNEL

WORKERS - INHALATION; LONG TERM SYSTEMIC EFFECTS: 14.7 MG/M<sup>3</sup> WORKERS - DERMAL; LONG TERM SYSTEMIC EFFECTS: 6.9 BW/DAY, MG/KG GENERAL POPULATION - INHALATION; LONG TERM SYSTEMIC EFFECTS: 4.35 MG/M<sup>3</sup> GENERAL POPULATION - DERMAL; LONG TERM SYSTEMIC EFFECTS: 4.2 BW/DAY, MG/KG GENERAL POPULATION - ORAL; LONG TERM SYSTEMIC EFFECTS: 2.5 BW/DAY, MG/KG **PNEC** 

- FRESH WATER; SHORT TERM 81.11 MG/L
- FRESH WATER, INTERMITTENT RELEASE; SHORT TERM 811.1 MG/L
- MARINE WATER; SHORT TERM 8.111 MG/L
- STP; SHORT TERM 4.5 MG/L
- SEDIMENT (FRESHWATER); SHORT TERM 409 MG/KG
- Sediment (Marine water); Short term 40.9 Mg/kg
- SOIL; SHORT TERM 96.7 MG/KG

#### A TERPINOLENE (CAS: 586-62-9)

#### DNEL

WORKERS - INHALATION; LONG TERM SYSTEMIC EFFECTS: 3.6 MG/M<sup>3</sup> WORKERS - DERMAL; LONG TERM SYSTEMIC EFFECTS: 0.52 BW/DAY, MG/KG GENERAL POPULATION - INHALATION; LONG TERM SYSTEMIC EFFECTS: 0.9 MG/M<sup>3</sup> GENERAL POPULATION - DERMAL; LONG TERM SYSTEMIC EFFECTS: 0.26 BW/DAY, MG/KG GENERAL POPULATION - ORAL; LONG TERM SYSTEMIC EFFECTS: 0.26 BW/DAY, MG/KG **PNEC** 

- FRESH WATER; SHORT TERM 0.634 MG/L

- INTERMITTENT RELEASE, FRESH WATER; SHORT TERM 0.634 MG/L

- MARINE WATER; SHORT TERM 0.063 MG/L	
	- STP; SHORT TERM 0.2 MG/L
	- Sediment (Freshwater); Short term 14.7 mg/kg
	- Sediment (Marine water); Short term 14.7 mg/kg
	- Soil; Short term 29.1 mg/kg
8.2 EXPOSURE CONTROLS	
EYE PROTECTION	WEAR PROTECTIVE GLOVES/EYE PROTECTION/FACE PROTECTION.
HAND PROTECTION	WEAR PROTECTIVE GLOVES/EYE PROTECTION/FACE PROTECTION.
RESPIRATORY EQUIPMENT	UNDER NORMAL CONDITIONS OF USE AND WHERE ADEQUATE VENTILATION IS AVAILABLE TO PREVENT BUILD UP OF EXCESSIVE VAPOUR, THIS MATERIAL SHOULD NOT REQUIRE SPECIAL ENGINEERING CONTROLS. HOWEVER, IN CONDITIONS OF HIGH OR PROLONGED USE, OR HIGH TEMPERATURE OR OTHER CONDITIONS WHICH INCREASE EXPOSURE, THE FOLLOWING ENGINEERING CONTROLS CAN BE USED TO MINIMISE EXPOSURE TO PERSONNEL: A) INCREASE VENTILATION OF THE AREA WITH LOCAL EXHAUST VENTILATION. B) PERSONNEL CAN USE AN APPROVED, APPROPRIATELY FITTED RESPIRATOR WITH ORGANIC VAPOUR CARTRIDGE OR CANISTERS AND PARTICULATE FILTERS. C) USE CLOSED SYSTEMS FOR TRANSFERRING AND PROCESSING THIS MATERIAL. ALSO REFER TO SECTIONS 2 AND 7.
HYGIENE MEASURES	GOOD PERSONAL HYGIENE PRACTICES ARE ALWAYS ADVISABLE, ESPECIALLY WHEN WORKING WITH CHEMICALS / OILS.
ENGINEERING MEASURES	PROVIDE AQEQUATE VENTILATION.
SKIN PROTECTION	WEAR PROTECTIVE CLOTHING TO REDUCE THE RISK OF SKIN AND EYE CONTACT.
PERSONAL PROTECTION	AVOID INHALATION OF THE PRODUCT. AVOID CONTACT WITH SKIN AND EYES.
OTHER PROTECTION	WEAR SUITABLE PROTECTION TO AVOID CONTACT WITH SKIN AND EYES. DO NOT INHALE VAPOURS.
Process Conditions	ENSURE AREA IS WELL VENTILATED. AVOID VAPOUR INHALATION. SAFETY SHOWER & EYE BATH.
ENVIROMENTAL EXPOSURE CONTROLS	AVOID DISCHARGING INTO DRAINAGE WATER.

#### SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

9.1 Physical & Chemical Properties		
Appearance	Liquid	
COLOUR	CLEAR-PALE YELLOW-YELLOW	
Odour	CHARACTERISTIC	
RELATIVE DENSITY	Approx. 0.984 @ 20⁰C	
FLASH POINT (°C)	96°C.	
<b>Refractive Index @ 20</b> °C	Approx. 1.560 @ 20⁰C	
Solubility in water @ 20 °C	INSOLUBLE IN WATER	
9.2 Other Information	NO DATA.	
SECTION 10: STABILITY & REACTIVITY		
10.1 Reactivity	NOT APPLICABLE.	
10.2 Chemical stability	Stable under suggested storage conditions (<15 $^{\circ}$ C).	
10.3 Possibility of hazardous reactions	NOT EXPECTED UNDER NORMAL CONDITIONS OF USE.	

10.4 Conditions to avoid	Storage at high temperatures. Do not store above $15^{\circ}$ C. Avoid heat, flames and other sources of ignition.
10.5 INCOMPATIBLE MATERIALS	AVOID CONCENTRATED ACIDS, ALKALIS & OXIDISING AGENTS.
10.6 HAZARDOUS DECOMPOSITION PRODUCTS	This product does not decompose under normal conditions. Under fire conditions the product will produce a mixture of irritating fumes & smoke & carbon monoxide.

SECTION 11: TOXICOLOGICAL INFORMATION		
11.1 Toxicological effects		
	ACUTE TOXICITY - ORAL ATE ORAL 15,151.52 MG/KG	
Skin irritation	NOT CLASSIFIED.	
EYE DAMAGE OR IRRITATION	NOT CLASSIFIED.	
RESPIRATORY OR SKIN SENSITIVITY	MAY CAUSE AN ALLERGIC SKIN REACTION.	
GERM CELL MUTAGENICITY	SUSPECTED OF CAUSING GENETIC DEFECTS.	
CARCINOGENICITY	SUSPECTED OF CAUSING CANCER.	
Reproductive toxicity	NOT CLASSIFIED.	
STOT – SINGLE EXPOSURE	NOT CLASSIFIED.	
STOT – REPEATED EXPOSURE	NOT CLASSIFIED.	
Aspiration hazard	NOT CLASSIFIED.	
OTHER INFORMATION	NO ADDITIONAL DATA AVAILABLE.	
SECTION 12: ECOLOGICAL INFORMATION		
Τοχιζιτγ	HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS.	
12.2 Persistence & degradability	NO ADDITIONAL DATA AVAILABLE.	
12.3 BIO- ACCUMULATIVE POTENTIAL	NO ADDITIONAL DATA AVAILABLE.	
12.4 Mobility in soil	NO ADDITIONAL DATA AVAILABLE.	
12.5 Results of PBT & VPVB assessment	NO ADDITIONAL DATA AVAILABLE.	
12.6 Other adverse effects	Do not allow product to enter streams, sewers or other waterways.	
SECTION 13: DISPOSAL INFORMATION		
13.1 Waste treatment methods	Always recover spilled product. Discard waste material with authorized waste management services. Act in accordance with local & national waste regulations.	

SECTION 14: TRANSPORT INFORMATION		
14.1 Transport Information		
UN NUMBER	ROAD: NOT CLASSIFIED SEA: NOT CLASSIFIED AIR: NOT CLASSIFIED	
14.2 UN Shipping Name	NOT APPLICABLE.	
14.3 TRANSPORT HAZARD CLASS(ES)	NOT APPLICABLE.	
14.4 Packing Group	NOT APPLICABLE.	
14.5 Enviromental Hazards	NOT ENVIRONMENTALLY HAZARDOUS FOR TRANSPORT.	
14.6 Special precautions for user	SEE SECTIONS 6-8.	
14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 & THE IBC CODE.	NOT APPLICABLE.	
SECTION 15: REGULATORY INFORMATION 15.1 PRODUCT SPECIFIC SAFETY, HEALTH & ENVIRONMENTAL REGULATIONS &		
LEGISLATION	REGULATION (EC) NO 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 18 <sup>TH</sup> DECEMBER 2006. CONCERNING THE REGISTRATION, EVALUATION, AUTHORIZATION & RESTRICTION OF CHEMICALS (REACH), ESTABLISHING A EUROPEAN CHEMICALS AGENCY, AMENDING DIRECTIVE 1999/45/EC and REPEALING COUNCIL REGULATION (EEC) NO793/93 & COMMISSION REGULATION (EC) NO1488/94 AS WELL AS COUNCIL DIRECTIVE 76/769/EEC & COMMISSION DIRECTIVE 91/155/ECC, 93/67/ECC, 93/105/EEC & 2000/21/EC (INCLUDING AMENDMENTS).	
STATUTORY INSTRUMENTS	The Chemicals (Hazard Information & Packaging for Supply Regulations 2009 (S.I.2009 No 716).	
APPROVED CODE OF PRACTICE	CLASSIFICATION & LABELLING OF SUBSTANCES & PREPARATIONS DANGEROUS FOR SUPPLY. SAFETY DATA SHEETS FOR SUBSTANCES & PREPARATIONS.	
Guidance Notes	WORKPLACE EXPOSURE LIMITS EH40. CHIP FOR EVERYONE HSG 108.	
15.2 Chemical Safety Assessment	Assessment has not been carried out as this is a non-hazardous material according to article 31 of REACH 1907/2006.	

SECTION 16: OTHER INFORMATION		
Hazard and/ or Precautionary Statements in full	H226 FLAMMABLE LIQUID AND VAPOUR. H302 HARMFUL IF SWALLOWED. H304 MAY BE FATAL IF SWALLOWED AND ENTERS AIRWAYS. H315 CAUSES SKIN IRRITATION. H317 MAY CAUSE AN ALLERGIC SKIN REACTION. H319 CAUSES SERIOUS EYE IRRITATION. H341 SUSPECTED OF CAUSING GENETIC DEFECTS. H351 SUSPECTED OF CAUSING CANCER. H400 VERY TOXIC TO AQUATIC LIFE. H410 VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS. H412 HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS.	
TRAINING INSTRUCTIONS: REFER TO POSSIBLE HAZARD BEFORE USE OF THIS PRODUCT.		
ABBREVIATIONS & ACRONYMS:		
MSDS	Material Safety Data Sheet.	
INCI	INTERNATIONAL NOMENCLATURE OF COSMETIC INGREDIENTS.	
CAS	CHEMICAL ABSTRACT SERVICE.	
IMDG	International Maritime code for Dangerous Goods.	
ADR	Accord European sur le transport des merchandises Dangereuses par Route (European Agreement concerning the international Carriage of Dangerous goods by Road).	
RID	International Carriage of Dangerous Goods by Rail.	
ICAO	International Civil Aviation Organization.	
ADN	INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS.	
GHS	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION & LABELLING OF CHEMICALS.	
TREM CARD	TRANSPORT EMERGENCY CARD.	
STOT	Specific Target Organ Toxicity.	

DOCUMENTATION REVISION	
DATE	CHANGE DESCRIPTION
10™ April 2018	Data Launch
2021	Review

### **SPECIFICATION SHEET**

PRODUCT NAME: STAR ANISE, ESSENTIAL OIL		
	PRODUCT INCI: ILLICIUM VERUM FRUIT OIL	
	Cas Number: 84650-59-9	
	EINECS NUMBER: 283-518-1	
MANUFACTURING METHOD: STEAM DISTILLATION S <sub>HELF</sub> L <sub>IFE</sub> / B <sub>EST</sub> B <sub>EFORE</sub> : 36 <sub>MONTHS</sub>		

ANALYTICAL DETAILS	RANGE
Appearance	LIQUID
COLOUR	CLEAR- PALE YELLOW-YELLOW
Odour	CHARACTERISTIC
SPECIFIC GRAVITY @ 20°C	0.975 – 0.994
Refractive Index @ 20°C	1.5525 – 1.5610
OPTICAL ROTATION (°C)	-2.0 to +2.0
ANETHOLE CONTENT (%, GC)	≥87.0

STORAGE CONDITIONS STORE IN A COOL DRY PLACE AWAY FROM HEAT & SUNLIGHT

DOCUMENTATION REVIEW DATE:

2021

#### Vegetarian & Vegan Suitability Statement

PRODUCT NAME: Star Anise

MADAR Corporation Limited can confirm that the above listed product has not been tested in animals and does not contain dairy or any other animal product, by product or derivative and is therefore suitable for vegetarian and vegan use.

26/07/2022