CERTIFICATE OF ANALYSIS

PRODUCT DESCRIPTION	:	CARAWAY ESSENTIAL OIL
APPEARANCE	:	CLEAR VERY PALE YELLOW LIQUID
CODE	:	OE.CARA
BATCH NUMBER	:	4484102
BEST BEFORE END	:	OCTOBER 2025

ANALYSIS	RESULTS	SPECIFICATION
Refractive Index 20degC	1.487	>= 1.484 <= 1.490
Optical Rotation	75.9	>= 65.0 <= 81.0
Specific Gravity (20c)	0.911	>= 0.904 <= 0.920

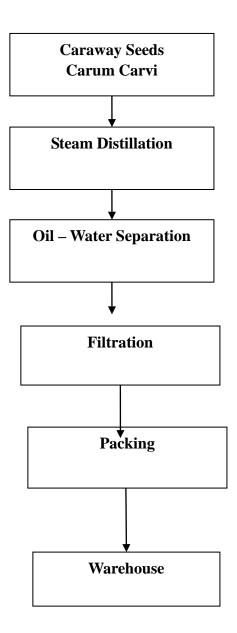
Allergen Analysis

Compound Name : CARAWAY ESSENTIAL OIL

flavour ingredient	040 Nie	Concentration present as a percentage (%) or 'A' for absent in flavour		
havour ingreulent	CAS No.	Added as such	From natural & other sources	Total
alpha-iso-Methylionone	127-51-5	A	А	
Amyl Cinnamal	122-40-7	A	А	
Amylcinnamyl Alcohol	101-85-9	A	А	
Anise Alcohol	105-13-5	A	А	
Benzyl Alcohol	100-51-6	A	Α	
Benzyl Benzoate	120-51-4	A	А	
Benzyl Cinnamate	103-41-3	A	А	
Benzyl Salicylate	118-58-1	A	А	
Butylphenyl Methylpropional (Lilial)	80-54-6	A	А	
Cinnamal	104-55-2	A	А	
Cinnamyl Alcohol	104-54-1	A	А	
Citral	5392-40-5	A	А	
Citronellol	106-22-9	A	А	
Coumarin	91-64-5	A	А	
Eugenol	97-53-0	A	А	
Evernia Furfuraceae (Tree Moss) Extract	90028-67-4	A	А	
Evernia Prunastri (Oak Moss) Extract	90028-68-5	A	А	
Famesol	4602-84-0	A	А	
Geraniol	106-24-1	A	А	
Hexyl Cinnamal	101-86-0	A	А	
Hydoxycitronellal	107-75-5	A	А	
Hydroxyisohexyl 3-Cyclohexene Carboxaldehyde (Lyral)	31906-04-4	A	А	
Isoeugenol	97-54-1	A	А	
Limonene	5989-27-5	A	40.00	40.0
Linalool	78-70-6	A	А	
Methyl 2-Octynoate	111-12-6	A	A	

The information contained herein is true and accurate to the best of our knowledge. All information is valid until revisions are issued. We will not therefore accept liability for misuse of this data resulting in damage or loss.

Process flow of Caraway Oil



GMO Declaration

According to 1829/2003/EC

Compound Name : CARAWAY ESSENTIAL OIL

We have carefully reviewed the ingredients in this product for their potential genetically modified (GM) origin. The list includes ingredients which may be produced from other GM ingredients

Material	Present	Of GMO Origin
Chicory	No	-
Cotton	No	-
Maize	No	-
Potato	No	-
Rape	No	-
Soya	No	-
Sugar Beet	No	-
Tomato	No	-
Wheat	No	-

The information contained herein is true and accurate to the best of our knowledge. All information is valid until revisions are issued. We will not therefore accept liability for misuse of this data resulting in damage or loss.

IFRA Conformity Certificate

: CARAWAY ESSENTIAL OIL Compound Name

We certify that the above compound is in compliance with the standards of the INTERNATIONAL FRAGRANCE ASSOCIATION (IFRA-48th amendment), provided it is used at a maximum concentration level of:

IFRA category (*)	Maximum level of use (%)(w/w) (**)
1 (***)	N/A (***)
2	N/A
3A	N/A
3В	N/A
3C	N/A
3D	N/A
4A	N/A
4B	N/A
4C	N/A
4D	N/A
5	N/A
6 (***)	N/A (***)
7A	N/A
7B	N/A
8A	N/A
 8B	N/A
9A	N/A
9B	N/A
9C	N/A
10A	N/A
 10B	N/A
11	N/A

(*) See annex for definition of IFRA categories

(**) Usage limit N/A = Not Applicable; no IFRA restrictions (***) IFRA would recommend that any material used to impart perfume or flavour in products intended for human ingestion should consist of ingredients that are in compliance with appropriate regulations for foods and food flavourings

The IFRA Standards regarding restrictions are based on safety assessments by the Panel of Experts of the RESEARCH INSTITUTE FOR FRAGRANCE MATERIALS (RIFM) and are enforced by the IFRA Scientific Committee.

Evaluation of individual Fragrance ingredients is made according to the safety standards contained in the relevant section of the IFRA Code of Practice.

It is the ultimate responsibility of our customer to ensure the safety of the final product (containing this fragrance) by further testing if need be.

Finished Product Types	I FRA category
Lip Products of all types (solid and liquid lipsticks, balms, clear or colored, etc.) Children's Toys	1
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 and body spray, etc.) Nose Pore Strips Fragranced Bracelets	2
Hydroalcoholic Products Applied To Recently Shaved Skin (includes After Shave) - EdT	3A
Hydroalcoholic Products Applied To Recently Shaved Skin (includes After Shave) - Fine Fragrance	3B
Eye Products of all types (eye shadow, mascara, eyeliner, eye make-up, etc.) including eye care Men's Facial Creams and Balms Baby Creams, Lotions, Oils Body Paint for Children	3C
Tampons	3D
EdT - Hydroalcoholic Products applied to unshaved skin (includes aqueous based, alcoholic based and hydroalcoholic) like Cologne, eau de cologne, Eau de Parfum or Parfum Ingredients of Perfume Kits Scent Pads, Foil packs Scent Strips for hydroalcoholic products	4A
Fine Fragrance - Hydroalcoholic Products applied to unshaved skin (includes aqueous based, alcoholic based and hydroalcoholic) like Cologne,eau de cologne, Eau de Parfum or Parfum	4B
Hair Styling Aids Sprays of all types (pumps, aerosol sprays, etc.) Body Creams, Oils, Lotions of all types (except baby creams, lotions and oils) Body sprays (including Body Mist) with no intended or reasonably foreseeable use on the axillae Fragrance Compounds for Cosmetic Kits Foot Care Products Hair deodorant Body Paint (except those for children)	4C
Fragrancing Cream, Solid Perfumes	4D
Facial Masks Women's Facial Creams/Facial Make-up, Hand Cream, Hand sanitizers, Baby Powder and Talc, Hair Permanent and other hair chemical treatments (e.g. relaxers) but not hair dyes, Wipes or Refreshing Tissues for Face, Neck, Hands, Body, Dry Shampoo or Waterless Shampoo	5(*) 5
Mouthwash, including Breath Sprays, Toothpaste	6
Intimate Wipes, Baby Wipes	7A
Insect Repellent (intended to be applied to the skin)	7B
Make-up Removers of all types (not including face cleansers), Hair Styling Aids Non-Spray of all types (mousse, gels, leave-conditioners, etc.), Nail Care, Powders and talcs, all types (except baby powders and talcs)	8A
Hair Dyes	8B
Conditioner (Rinse-Off), Liquid Soap, Shampoos of all types (including baby shampoos), Face Cleansers of all types (washes, gels, scrubs, etc.), Shaving Creams of all types (stick, gels, foams, etc.), All Depilatories (including waxes for mechanical hair removal), Body Washes of all types (including baby washes) and Shower Gels of all types, Bar Soap (Toilet Soap), Bath Gels, Foams, Mousses, Salts, Oils and Other Products added to bathwater	9A
Feminine hygiene - pads, liners, Toilet paper, Wheat bags	9B
Facial tissues, Napkins, Paper towels, Other Aerosols (including air freshener sprays and air freshener pump sprays, but not including deodorants/antiperspirants, hair styling aids sprays)	9C

Finished Product Types	
Handwash Laundry Detergents of all types including concentrates, Fabric Softeners of all types including fabric softener sheets, Household Cleaning Products, Other Types (fabric cleaners, soft surface cleaners, carpet cleaners, etc.). Machine Wash Laundry Detergents (liquids, powders, tablets, etc.) including laundry bleach and concentrates, Hand Dishwashing Detergent including concentrates, Hard Surface Cleaners of all types (bathroom and kitchen cleaners, furniture polish, etc.). Shampoos for pets, Dry cleaning kits, Scented gloves, socks, tights with moisturizers	10A
Diapers, Toilet seat wipes	10B
All non-skin contact or incidental skin contact including:	11
Candles, Air Fresheners and Fragrancing of all types (concentrated aerosol with metered doses (range 0.05-0.5mL/spray), plug-ins, solid substrate, membrane delivery, electrical), Air Delivery Systems, Cell phone cases, Pot pourri, powders, fragrancing sachets, liquid refills for air fresheners (non-cartridge systems), Reed diffusers, Liquid refills for air fresheners (cartridge systems), Shoe Polishes, Deodorizers/Maskers not intended for skin contact (e.g. fabric drying machine deodorizers, carpet powders), Insecticides (mosquito coll, paper, electrical, for clothing etc.) excluding aerosols, Scent delivery system using a dry air technology that releases a fragrance without sprays, aerosols or heated oils (technology of nebulization), Air freshening crystals, Toilet Blocks, Joss Sticks or Incense Sticks, Machine Dishwash Detergent and Deodorizers, Machine-only Laundry Detergent (e.g. liquitabs)**, Plastic articles (excluding toys), Fuels, Fragranced lamp ring, Scratch and Sniff (sampling technology), Paints, Cat Litter, Animal Sprays (all types), Treatment products for textiles (e.g. starch sprays, fabric treated with fragrances after wash, deodorizers for textiles or fabrics), Floor Wax, Odored Distilled Water (that can be added to steam irons)	

* Class 5, Facial masks: There are several types of masks: peel off (similar to rinse-off, rinse-off and leave-on (you only remove the excess with a facial tissue). To ease the split the most restrictive, i.e. leave-on is applied for all.

** Liquitabs corresponds to a dose of liquids wrapped in a film: no contact with hands is expected under normal conditions of use

The table was prepared with the intention to cover the vast majority of the products; however it may not cover some specific applications. In this case other classes may be attributed based on a specific risk assessment.

SAFETY DATA S GHS: According to 2015/830/		Printed on 22 June 2018
Version 6 Revised 15/C 11:50:10	05/2013	
Section 1. Identificatio	n of the substance/mix	ture and of the company/undertaking
1.1 Product I dentifier Product Name Alternative Name	CARAWAY ESSENTIAL O	L
REACH Reg No	Not registered	
1.2 Relevant identified	uses of the substance	or mixture and uses advised against
Concentrated material	for fragrance and flavour	ng use
1.3 Details of the supp	olier of the safety data s	heet
	MADAR Corporation Ltd	
	19-20 Sandleheath Indu Fordingbridge Hampshire	strial Estate
	SP6 1PA	
Telephone Number	+44 (0)1425 655555	
Email Address	technical@madarcorpora	tion.co.uk
1.4 Emergency Tel No	+44 (0)1425 655555	
Section 2. HAZARD I DE	NTIFICATION	
2.1 Classification of th	e substance or mixture	
FL 3	Flammable liquid, catego	bry 3
ATO 5	Acute toxicity, oral, cate	gory 5
AH 1	Aspiration hazard, categ	ory 1
ATD 4	Acute toxicity, dermal, c	ategory 4
SCI 2	Skin corrosion/irritation,	category 2
SS 1	Skin sensitisation, categ	
EH A1	Aquatic hazard, acute, ca	ategory 1
EH C1	Aquatic hazard, chronic,	category 1

The information contained herein is true and accurate to the best of our knowledge. All information is valid until revisions are issued. However, the accuracy of this information cannot be guaranteed by the company as the data has been obtained from different sources. We will not, therefore, accept liability for misuse of this data resulting in damage or loss.

SAFETY DATA		
Version 6 Revised . 11:50:10	15/05/2013	
2.2 Label elements GHS classification Hazard Pictograr	according to Regulation (EC) No	1272/2008
Signal Word	Danger	•
Hazard Statemer	nts	
H226	Flammable liquid and vapou	Jr
H303	May be harmful if swallowe	d
H304	May be fatal if swallowed a	nd enters airways
H312	Harmful in contact with skir	1
H315	Causes skin irritation	
H317	May cause an allergic skin r	reaction
H400	Very toxic to aquatic life	
H410	Very toxic to aquatic life wi	th long lasting effects
Precautionary St	atements	
P262	Do not get in eyes, on skin,	or on clothing.
P273	Avoid release to the enviror	nment.
P280	Wear protective gloves and	eye protection
P301+P310	IF SWALLOWED: Immediate	ely call a POISON CENTRE.
P331	Do NOT induce vomiting.	
P391	Collect spillage.	
2.3 Other Hazards Contains Limonene	e which may produce an allergic i	reaction
No further informa	tion available at this time	

Printed on 22 June 2018

GHS: According to 2015/830/EU

Version 6 Revised 15/05/2013 11:50:10

Section 3. Composition / information on ingredients

Any percentage values listed here for hazardous components are for illustrative purposes only

3.1 Substances

Description	CARAWAY ESSENTIAL OIL
EC/EINECS	288-921-6
CAS Number	85940-31-4
USCAS Number	8000-42-8

Hazardous components

ID Numbers	Chemical Name, Classification and Hazards	Conc (%)
CAS 99-49-0 EINECS 202-759-5 REACH	Carvone FL 4;ATD 5(3800);SS 1B;EH A2 H227,H313,H317,H401	55.0000
CAS 5989-27-5 EINECS 227-813-5 REACH	d-Limonene (p-Mentha-1,8-diene) FL 4;AH 1;SCI 2;SS 1B;EH A1,C1 H227,H304,H315,H317,H400,H410	40.0000
CAS 2111-75-3 EINECS 218-302-8 REACH	Perilla aldehyde (p-Mentha-1,8-dien-7-al) ATO 5(2500);SCI 3;SS 1B H303,H316,H317	0.1000

Refer to section 16 for the wording of listed classification and hazard statement codes

Section 4. First Aid measures

Take phrases in sections 2 into account

- 4.1 Description of first aid measures
 - After inhalation

Remove from the exposure area to fresh air. Contact a doctor if necessary.

After 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.

After eye contact

Flush with plenty of water and seek medical advice if necessary.

After ingestion

Wash mouth with plenty of water and obtain medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed No further information available at this time

Printed on 22 June 2018

GHS: According to 2015/830/EU

Version 6 Revised 15/05/2013 11:50:10

4.3 Indication of immediate medical attention and special treatment needed No further information available at this time

Section 5. Fire-fighting measures

- 5.1 Extinguishing Media Carbon dioxide, foam or dry powder DO NOT USE A DIRECT WATER JET.
- 5.2 Special hazards arising from the substance or mixture May produce Carbon dioxide and unidentified organic compounds.
- 5.3 Advice for fire-fighters

Wear protective clothing and avoid inhalation of vapours.

Section 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 absorbant material such as earth or vemiculite; transfer used material to a suitable waste container and dispose in accordance with regulations.

6.4 Reference to other sections Refer to information in Sections 7, 8 and 13

Section 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 Conditions for safe storage, including any incompatibilities Store in tightly sealed original containers away from ignition sources and in a cool place.
- 7.3 Specific end use(s) No further information available

SAFETY DATA SHEET GHS: According to 2015/830/EU		Printed on 22 June 2018
Version 6 Revised 15/05/2013 11:50:10		
Section 8. Exposure controls / per	sonal protection	
8.1 Control Parameters No information available		
 8.2 Exposure controls Engineering controls No information available Individual protection measures Refer to Section 5 for specific fire/or Always wash routinely before bread Eye/face protection Wear safety goggles. 	chemical personal protectiv	
Hand protection Wear chemically resistant disposat Other skin protection Wear overalls. Always wash routin period. Respiratory protection Not generally required. Use inhala	ely before breaks, meals a	
Thermal hazards No information available Environmental exposure contro No information available	ls	
Section 9. Physical and chemical p	properties	
9.1 Information on basic physical FLASH POINT (°C)		5
Colour	CLEAR VERY PALE YELLO	N
Aroma	GRIPE WATER	
Solubility	INSOLUBLE	
9.2 Other information No further information available		

Printed on 22 June 2018

GHS: According to 2015/830/EU

Version 6 Revised 15/05/2013 11:50:10

Section 10. Stability and reactivity
10.1 Reactivity
Not determined
10.2 Chemical Stability
Not determined
10.3 Possibility of hazardous reactions
Not determined
10.4 Conditions to avoid
Extreme temperatures
10.5 Incompatible materials
Highly reactive chemicals which may produce unknown reaction products and so cause additional hazards.
10.6 Hazardous decomposition products
Not determined
Section 11. Toxicological information
11.1 Information on toxicological effects
Acute toxicity
No data available
Skin corrosion / irritation
No data available
Serious eye damage / irritation
No data available
Respiratory or skin sensitisation
No data available
Germ cell mutagenicity
No data available
Carcinogenicity
No data available
Reproductive toxicity
No data available

Printed on 22 June 2018

GHS: According to 2015/830/EU

Version 6 Revised 15/05/2013 11:50:10

STO-single exposure

No data available

STO-repeated exposure

No data available

Aspiration hazard

No data available

Information on likely routes of exposure

No data available

Symptoms related to the physical, chemical and toxicological characteristics No data available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

No data available

Interactive effects

No data available

Other information

No data available

Section 12. Ecological information

12.1 Toxicity

No data available; avoid soil, surface water and water-bearing stratum contamination.

12.2 Persistence and degradability

No data available

- 12.3 Bioaccumulative potential No data available
- 12.4 Mobility in soil No data available
- 12.5 Results of PBT and vPvB assessment No data available
- 12.6 Other adverse effects No data available

SAFETY DATA SH GHS: According to 2015/830/EL		Printed on 22 June 2018				
Version 6 Revised 15/05, 11:50:10	/2013					
Section 13. Disposal cons	ction 13. Disposal considerations					
Please refer to the information	tion in se	ection 8 (Exposure controls and personal protection)				
13.1 Waste treatment m Dispose in accordance w		aw and local regulations. Treat as trade effluent.				
Section 14. Transport infe	ection 14. Transport information					
14.1 UN number		1169				
14.2 UN proper shipping	name	EXTRACTS, AROMATIC, LIQUID				
14.3 Transport hazard cl	ass(es)	3				
14.4 Packing group		111				
Tunnel Code		(D/E)				
14.5 Environmental Haza No relevant information						
14.6 Special precautions for user No relevant information available						
14.7 Transport in bulk a Not applicable	14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable					
Section 15. Regulatory in	formati	on				
15.1 Safety, health and e substance or mixture	5.1 Safety, health and environmental regulations/legislation specific for the					
No relevant information	No relevant information available at this time					
15.2 Chemical safety ass	15.2 Chemical safety assessment					
A chemical safety assessment has not been carried out						
Section 16. Other information						
Full list of precautiona	ry phra	ses				
		et in eyes, on skin, or on clothing.				
	-	ease to the environment.				
P280 V	Vear pro	tective gloves and eye protection				
P301+P310 I	OWED: Immediately call a POISON CENTRE.					
P331 [o NOT i	nduce vomiting.				

SAFETY DATA SHEET Printed on 22 June 2018 GHS: According to 2015/830/EU Version 6 Revised 15/05/2013 11:50:10 P391 Collect spillage. Wording of any hazard classes listed in section 3 FL 4 Flammable liquid, category 4 Acute toxicity, oral, category 5 ATO 5 AH 1 Aspiration hazard, category 1 ATD 5 Acute toxicity, dermal, category 5 SCI 2 Skin corrosion/irritation, category 2 SCI 3 Skin corrosion/irritation, category 3 SS 1B Skin sensitisation, category 1B EH A1 Aquatic hazard, acute, category 1 EH A2 Aquatic hazard, acute, category 2 EH C1 Aquatic hazard, chronic, category 1 Wording of any hazard statements listed in section 3 H227 Combustible liquid H303 May be harmful if swallowed H304 May be fatal if swallowed and enters airways H313 May be harmful in contact with skin H315 Causes skin irritation H316 Causes mild skin irritation May cause an allergic skin reaction H317 H400 Very toxic to aquatic life H401 Toxic to aquatic life H410 Very toxic to aquatic life with long lasting effects The information contained herein is true and accurate to the best of our knowledge. All information is valid until revisions are issued. However, the accuracy of this information cannot be guaranteed by the company as the data has been obtained from different sources. We will not, therefore, accept liability for misuse of this data resulting in damage or loss.

PRODUCT SPECIFICATION

Product Name	:	CARAWAY ESSENTIAL OIL
Flash Point deg C	:	59
Aroma / Taste	:	GRIPE WATER
Appearance / Physical State	:	CLEAR VERY PALE YELLOW LIQUID
Composition	:	100% ESSENTIAL OIL
Refractive Index 20degC		>= 1.484 <= 1.490
Optical Rotation		>= 65.0 <= 81.0
Specific Gravity (20c)		>= 0.904 <= 0.920

Store in full airtight containers, protected from heat and direct sunlight.

Version Number : 1 Version Date : 10 December 1996

Vegetarian Declaration

Compound Name : CARAWAY ESSENTIAL OIL

Vegan	Y	No ingredients of animal origin or animal derivatives, including additives and processing aids
Vegetarian	Y	No ingredients of animal origin, including additives and processing aids. No egg or dairy; bee products are allowed
Ovo-lacto Vegetarian	Y	May include egg, dairy and bee products. No other ingredients of animal origin or animal derivatives, including additives and processing aids are allowed

The information contained herein is true and accurate to the best of our knowledge. All information is valid until revisions are issued. We will not therefore accept liability for misuse of this data resulting in damage or loss.