



CERTIFICATE OF ANALYSIS

PRODUCT NAME: MANUKA
BOTANICAL NAME: LEPTOSPERMUM SCOPARIUM OIL
HARVESTING METHOD: WILD HARVEST
BATCH NUMBER: 4379204
BEST BEFORE END: NOVEMBER 2022

PHYSICAL DATA:

Relative Density 20 °C 0.955 ± 0.005
Refractive Index 20 °C 1.5010 ± 0.0005
Flash point 98° C >

OTHER INFORMATION

GAS CHROMATOGRAPH ANALYSIS ATTACHED

CHEMICAL COMPOSITION : TRIKETONE CONTENT

Triketone -Flavesone
 - Leptospermone
 Iso-Leptospermone } Combined total : 31.1 %
 - Grandiflorone

Note: Triketone % Composition shown is determined by % peak area from GC - FID analysis. It should be noted that determination of Triketones % composition from GC- MS analysis will indicate a concentration of triketones up to 30 % higher than the GC-FTD figure shown. ie a GC-FTD figure of 24% is comparable to a GC-MS figure of 31 %

Results

Ret. Time	Area	Area%	Compound
7.10	5287334	1.67	a-pinene
8.47	338135	0.11	b-pinene
9.09	950307	0.30	myrcene
10.18	543187	0.17	p-cymene
10.46	600479	0.19	1,8-cineole
11.83	535318	0.17	
14.10	0	0.00	b-ocimene
17.50	0	0.00	linalool
26.33	13665487	4.31	a-cubebene
27.26	616112	0.19	a-ylangene
27.52	16412908	5.17	a-copaene
28.17	2930398	0.92	b-elemene
29.05	3457190	1.09	a-gurjurene
29.34	944.3452	2.98	b-caryophyllene
30.27	5269910	1.66	aromadendrene
30.76	18800054	5.93	
30.87	1014205	0.32	a-humulene
31.19	2356726	0.74	a-amorphene
31.91	12947308	4.08	
32.02	5601916	1.77	
32.35	12760917	4.02	b-seleinene
32.51	4064046	1.28	
32.84	15458286	4.87	a-selinene
33.10	2691136	0.85	a-murolene
33.60	2355468	0.74	g-cadiene
33.89	41110018	12.96	trans-calamenene
34.17	21007487	6.62	d-cadinine
34.52	20286726	6.39	c-cadina-1,4-diene
34.64	15564758	4.91	d-flavesone
35.97	2728812	0.86	
36.15	1038821	0.33	caryophyllene oxide
36.39	701353	0.22	
36.68	813178	0.26	
37.17	860207	0.27	
38.00	15946382	5.03	isoleptospermone
38.41	52559508	16.57	leptospermone
38.88	808092	0.25	
39.05	3400914	1.07	e-a-eudesmol?
39.19	569928	0.18	b-eudesmol?
41.12	711238	0.22	
45.30	1053306	0.33	grandiflorone



ALLERGEN STATEMENT MANUKA OIL

(*Leptospermum Scoparium* Oil)
ALLERGENIC SUBSTANCES

7^{ème} amendment of the European Cosmetic Directive 76/768/EEC

CAS NUMBER	SUBSTANCE	Concentration in the product (mg/kg)
122-40-7	AMYL CINNAMAL	< 100
100-51-6	BENZYL ALCOHOL	< 100
104-54-1	CINNAMYL ALCOHOL	< 100
5392-40-5	CITRAL	< 100
97-53-0	EUGENOL	< 100
107-75-5	HYDROXYCITRONELLAL	< 100
97-54-1	ISOEUGENOL	< 100
101-85-9	AMYL CINNAMYL ALCOHOL	< 100
118-58-1	BENZYL SALICYLATE	< 100
104-55-2	CINNAMAL	< 100
91-64-5	COUMARIN	< 100
106-24-1	GERANIOL	< 100
31906-04-4	HYDROXYMETHYLPENTYL CYCLO-HEXENECARBOXALDEHYDE	< 100
105-13-5	ANISYL ALCOHOL	< 100
103-41-3	BENZYL CINNAMATE	< 100
4602-84-0	FARNESOL	< 1
80-54-6	2-(4-TERT-BUTYLBENZYL) PROPIONALDEHYDE	< 1
78-70-6	LINALOOL	2000
120-51-4	BENZYL BENZOATE	< 100
106-22-9	CITRONELLOL	< 100
101-86-0	HEXYL CINNAMALDEHYDE	< 1
138-86-3	d-LIMONENE	500
111-12-6	METHYL HEPTIN CARBONATE	< 100
127-51-5	3-METHYL-4-(2,6,6-TRIMETHYL-2-CYCLOHEXEN-1-YL)-3-BUTEN-2-ONE	< 100
90028-68-55	OAK MOSS EXTRACT	ND
90028-67-4	TREEMOSS EXTRACT	ND

Date: 24/08/2016

MANUKA OIL - PROCESSING METHOD.

Manuka brush harvested from natural plantations by hand, packed in bales and delivered to factory.

In the field

Bales are emptied and visual inspection made of the Manuka brush for impurities (foreign materials)

In the Factory – Communion, Distillation, Separation, Filtration, and Packing

Manuka Brush is then fed through a brush chopper to reduce material size to 25-50mm in length

The chopped brush is then blown into 3000 ltr stainless steel distillation cartridges.

Samples of brush are taken from each distillation cartridge for assessment of moisture and leaf content.

The distillation cartridges are weighed and placed inside the distillation vessels. The oil is extracted with steam at atmospheric pressure for 5 hours.

The steam and oil vapour is piped out of the distillation tanks through a condenser (to cool to a liquid) and into a separating vessel where the Oil is separated from the water.

The separated Oil is pumped through a filter and into bulk storage containers. Multiple production lots are combined in the bulk storage containers to make Product batches.

Samples of each Product batch is taken and dispatched to an independent laboratory for GC analysis, physio-chemical testing and compliance to standard specification.

Approved Oil batches are then packed into final containers, nitrogen capped and sent to warehouse for storage and later despatch .



SAFETY DATA SHEET

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY / UNDERTAKING

MADAR Corporation Limited
19-20 Sandleheath Industrial Estate
Fordingbridge
Hampshire
SP6 1PA
Telephone : 01425 653574

Approved Sellers
Mystic Moments, New Directions, World of Moulds

PRODUCT NAME: Manuka Oil

BOTANICAL NAME: Leptospermum Scoparium

INCI NAME LEPTOSPERMUM SCOPARIUM OIL

2 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Cas No.	EC No.	Volume %	Symbols
Leptospermum Scoparium Oil	219828-87-2	425-630-7	100	



Warning

Allergenic Substances:

CAS NUMBER	SUBSTANCE	Concentration in the product (mg/kg)
78-70-6	LINALOOL	2000
5989-27-5	d-LIMONENE	500

Reach Notification No. 98-06-1056
Reach Registration No. 01-0000017203-81-0000

3 HAZARDS IDENTIFICATION

H302 Harmful If Swallowed
H315 Causes Skin Irritation
H319 Causes Serious Eye Irritation



Warning

4 FIRST-AID MEASURES

CONTACT WITH SKIN

- Remove contaminated clothing immediately and wipe affected skin with dry cloth. Then wash with soap and water
- Seek medical attention if irritation persists

CONTACT WITH EYES

- If substance has got into eyes, immediately wash out with plenty of water for a least 15 minutes
- Seek medical attention if irritation persists

INGESTION

- Do not induce vomiting
- Do not give patient anything to drink
- Seek immediate medical attention

INHALATION

- Remove patient to fresh air
- Seek medical attention if ill effects occur

OTHER INFORMATION

- If you feel unwell, seek medical advice (show the label where possible)

5 FIRE-FIGHTING MEASURES

- In case of fire, use water, foam, carbon dioxide or dry agent to extinguish (P370/P378))
- Keep container(s) exposed to fire cool, by spraying with water
- Portable containers should be moved if possible and without risk
- Wear Positive-Pressure Breathing Apparatus

6 ACCIDENTAL RELEASE MEASURES

- Dyke to prevent entry to sewer or water way. Transfer liquid to a holding container
- Absorb/collect spillage in inert material and shovel up (P390/P391)
- Place in sealable container

7.1 HANDLING

- The usual precautions for handling chemicals should be observed
- Do not eat, drink or smoke when using this product (P270)
- Handle and open container with care
- Ensure adequate ventilation

7.2 STORAGE

- Protect from sunlight, Store in a well-ventilated place. Keep cool(P410/P403/P235)
- Store in a dry place, Store in a corrosive resistant container (P402/406)
- Shelf life 48 months in original sealed container.

8.1 EXPOSURE CONTROL/PERSONAL PROTECTION

- Wear suitable protective clothing, including eye/ face protection and gloves (plastic or rubber are recommended)
- Proper chemicals handling procedure should be adopted
- Take off contaminated clothing and wash it before reuse. (P362/P364)

8.2 EXPOSURE LIMITS

There are no recommended or established controls for this product

9 PHYSICAL AND CHEMICAL PROPERTIES

- Liquid, yellow, clear
- Boiling point: 230 deg C to 285 deg C
Flash point: 95 - 105 deg C (CC)
- Melting point: <-25 deg C
- Auto-ignition point: not known
- pH: not known
- Relative Density: 0.9550 - 0.9850 g/ml
- Vapour pressure: not known
- Water solubility: 42.3 mg/l
- Fat solubility: not known
- Partition coefficient : n-Octanol/water 1.79

10 STABILITY AND REACTIVITY

- This article is considered stable under normal conditions
- Reacts slowly with butyl rubber and some plastics
- Discoloration occurs in contact with mild steel

11 TOXICOLOGICAL INFORMATION

- Harmful if swallowed (H302)
Irritation to skin: Positive
- Irritation to eyes and skin:(H315/H319)
Sensitization: Negative
- Mutagenicity (Ames Test): Negative

12 ECOLOGICAL INFORMATION

Not readily biogradable

13 DISPOSAL CONSIDERATIONS

- This material and/or its container must be disposed of as hazardous waste
- Disposal should be in accordance with local, state or national legislation

14.1 TRANSPORT REGULATIONS

PROPER SHIPPING NAME:
NOT APPLICABLE

14.2 TRANSPORT INFORMATION

Class Pack Group Sub Risk UN-nr. IMDG page
Road (ADR/RID) : Not regulated
Air (IATA) : Not regulated
Sea (IMDG) : Not regulated
Harmonized Customs Tarriff Code: 3301.29

15 REGULATORY INFORMATION

- Refer to Dangerous Substance Directive (67/548/EEC)
 - Refer to Safety Data Sheet Directive (91/155/EC)
 - The data given here only applies when product used for proper application. The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) with out seeking advice from manufacturer
 - Caution: this substance is not fully tested
-

15.1 RISKS PHRASES

- Harmful if swallowed (H302)
 - Irritating to eyes and skin (H315/H319)
 - Harmful to health (Xn)
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15.2 PRECAUTIONARY STATEMENTS

P301/P312/P331/P313: If Swallowed: Call a Poison Center/Doctor, Do not induce vomiting, Get Medical advice/attention.

P302/P332/P351/P314: If On Skin, If Skin Irritation Occurs, Rinse Cautiously with Water for Several Minutes, Get Medical Advice/Attention if You Feel Unwell.

P305/P337/P338/P351: If In Eyes, If Eye Irritation Persists, Remove Contact Lenses If Present and Easy To Do. Continue Rinsing, Wash Cautiously For Several Minutes.

16 OTHER INFORMATION

The information in the Safety Data Sheet is based on the properties of the material known to MADAR Corporation Limited at the time the data sheet was issued. The Safety Data Sheet is intended to provide information for a health and safety assessment of the material and the circumstances under which is packaged, stored or applied in the workplace. For such a safety assessment, MADAR Corporation Limited, hold no responsibility. This document is not intended for quality assurance purposes.

PRODUCT SPECIFICATIONS.

PRODUCT NAME : Manuka Oil
INCI NAME Leptospermum Scoparium Oil
TRADENAMES East Cape Manuka Oil
APPEARANCE Clear Yellow Liquid

PHYSICAL DATA :

Relative Density 20°/20° C (g/ml) 0.9550 0.9900
Refractive Index 20° C 1.4960 1.5060

Flash point, ° C (ASTMD93-80) 95 ° C - 105 ° C

Boiling Point, ° C (BS 4591:1971) 230 ° C - 285 ° C

Melting Point, ° C (BS 4633:1970) <-25 ° C

Water Solubility (Method A6) : 42.3 mg/l at 20 ° C

Partition Coefficient n - octanol/water (Method A8) log Pow = 1.79 at 21 ° C

CHEMICAL COMPOSITION : (as determined by GC)**Main Components. Concentration Range %.**

1. α - Cubebene	2.0 - 7.0
2. α - Copaene	2.5 - 7.5
3. β - Selinene	1.0 - 6.0
4. α - Selinene	2.0 - 7.0
5. Calamanene	9.0 - 18.0
6. δ - Cadinene	3.0 - 8.0
7. Flavesone	3.0 - 8.0
8. Iso-leptospermone	2.0 - 7.0
9. Leptospermone	10.0 - 20.0

TRIKETONE CONTENT: > 25.0 %

Note ; The apparent triketone content varies depending on the equipment and method used to analyse the oil . Concentrations have been determined using the two main methods of analysis GC -FID and GC - MS and are as follows:

contains between 25 % and 35 % total triketones (% peak area - GC - FID)
: contains between 28 % and 40 % total triketones (% peak area - GC- MS)

GAS CHROMATOGRAPHIC ANALYSIS : comparable to standard

(GC-FID is considered to provide the most accurate measurement of triketone content and is hence used for the Certificate of Analysis) : see attached standard (M00.2)

STORAGE CONDITIONS : store at cool temperature (< 18 ° C), protected from air and light.

IFRA CERTIFICATE

PRODUCT NAME: MANUKA OIL

conforms to the 48th amendment of the international fragrance association (IFRA) using a percentage (%) of:

<i>IFRA Class(es) (see annex for details)</i>	<i>level of use %</i>
1	≤ 10%
2	≤ 10%
3.A	≤ 10%
3.B	≤ 10%
3.C	≤ 10%
3.D	≤ 10%
4.A	≤ 10%
4.B	≤ 10%
4.C	≤ 10%
4.D	≤ 10%
5	≤ 10%
6	≤ 10%
7.A	≤ 10%
7.B	≤ 10%
8.A	≤ 10%
8.B	≤ 10%
9.A	≤ 10%
9.B	≤ 10%
9.C	≤ 10%
10.A	≤ 10%
10.B	≤ 10%
11	No Restriction

(**) This certificate does not include food status conformity check. For these applications provides a separate document when required.

For other kinds of applications or use at higher concentration levels, a new evaluation may be needed: please contact

These recommendations are meant for the use of fragrance compounds in perfumery products and have been established by the Technical Committee of IFRA after careful examination of the studies from RIFM, the industry and appropriate scientific literature.

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

ANNEX: Definition of IFRA classes

Finished product types	IFRA class
Lip Products of all types (solid and liquid lipsticks, balms, clear or colored, etc.), Children's Toys	Class 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	Class 2
Hydroalcoholic Products Applied To Recently Shaved Skin (includes After Shave)- EDT Range	Class 3.A
Hydroalcoholic Products Applied To Recently Shaved Skin (includes After Shave)- Fine Fragrances	Class 3.B
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	Class 3.C
Tampons	Class 3.D
Hydroalcoholic Products applied to unshaved skin (includes aqueous based, alcoholic based and hydroalcoholic) like Cologne, eau de cologne, Eau de Parfum or Parfum – EDT Range Ingredients of Perfume Kits; Scent Pads, Foil packs; Scent Strips for Hydroalcoholic products	Class 4.A
Hydroalcoholic Products applied to unshaved skin (includes aqueous based, alcoholic based and hydroalcoholic) like Cologne, eau de cologne, Eau de Parfum or Parfum – Fine Fragrances	Class 4.B
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)	Class 4.C
Fragrancing cream; Solid perfumes	Class 4.D
Women's Facial Creams/Facial Make-up; Facial Masks; Hand Cream; Hand sanitizers Hair Permanent and other hair chemical treatments (e.g. relaxers) but not hair dyes Wipes or Refreshing Tissues for Face, Neck, Hands, Body Baby Powder and Talc; Dry Shampoo or Waterless Shampoo	Class 5
Mouthwash, including Breath Sprays; Toothpaste	Class 6
Intimate Wipes; Baby Wipes	Class 7.A
Insect Repellent (intended to be applied to the skin)	Class 7.B
Make-up Removers of all types (not including face cleansers) Hair Styling Aids Non-Spray of all types (mousse, gels, leave-in conditioners, etc.) Nail Care; Powders and talc, all types (except baby powders and talc)	Class 8.A
Hair Dyes	Class 8.B
Face Cleansers of all types (washes, gels, scrubs, etc.) Body Washes of all types (including baby washes) and Shower Gels of all types Bath Gels, Foams, Mousses, Salts, Oils and Other Products added to bathwater Conditioner (Rinse-Off); Liquid Soap; Bar Soap (Toilet Soap) Shaving Creams of all types (stick, gels, foams, etc.) Shampoos of all types (including baby shampoos) All Depilatories (including waxes for mechanical hair removal)	Class 9.A
Feminine hygiene - pads, liners; Toilet paper; Wheat bags	Class 9.B
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)	Class 9.C
Hand wash 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 cleansers, furniture polish, etc.) Shampoos for pets; Dry cleaning kits; Scented gloves, socks, tights with moisturizers	Class 10.A
Diapers; Toilet seat wipes	Class 10.B
All non-skin contact including: Air Fresheners and Fragrancing of all types (plug-ins, solid substrate, membrane delivery, ambient, electrical...) Toilet Blocks; Joss Sticks, Incense; Insecticides (mosquito coil, paper, electrical, for clothing etc.) excluding aerosols; excluding aerosol products; Plastic articles (excluding toys); Candles; Fuels; Paints; Liquid refills for air fresheners (cartridge systems); Floor wax; Fragranced lamp ring; Scent pack; Scent delivery system using a dry air technology that releases a fragrance without sprays, aerosols or heated oils (technology of nebulization); Air freshening crystals; Machine only Laundry detergent (e.g. liquid tabs); All non-skin contact including: Machine dish wash detergent and deodorizers; Deodorizers/Maskers not intended for skin contact (e.g. fabric drying machine deodorizers, carpet powders); Potpourri, fragrance sachets, liquid refills for air fresheners (non-cartridge systems), Reed diffusers; Shoe Polishes; Cat litter; Animal sprays (all types); Treated Textiles (e.g. starch sprays, fabric treated with fragrances after wash, deodorizers for textiles or fabrics, tights with moisturizers); Odoured distilled water (that can be added to steam irons); Scratch and Sniff (sampling technology).	Class 11