

GREEN MANDARIN OIL

Print Date: 28/11/2019 - Revision RR6 - Jul 2010

CERTIFICATE of ANALYSIS BATCH NUMBER: 4406207

Pa e 1/1

Expiry date

AUGUST 20223

botanical origin	Citrus spp.
chemical identification & grade	100% Natural Complex Substance

5 ANALYSTS DATA h sical chemical GC & HPLC

PHYSICAL & CHEMICAL	value	range	measuring instrument		
appearance	liquid	liquid	sensorial		
colour	dark green	greenish to dark green	sensorial		
odour	APS	-	sensorial		
relative density d_4^{2i}		0.8390÷0.8490	Anton Paar DMA 4500		
optical rotation α_0^{2i}		+87.00°÷+97.00°	Optical Activity POLAAR 20		
refractive index n_0^{24}	1.4734	1.4690÷1.4790	Anton Paar RXA 170		
peroxides	11 mmol/l	<20 mmol <u>/</u> l	cdR FOODLAB		
GC	value	range	measuring instrument		
pinenes (a+β)	1.80%	<4.00%			
myrcene	1.70%	≤3.00%			
limonene	87.60%	82.00%÷92.00%			
y-terpinene	7.70%	5.00%÷9.00%			
linalool	0.10%	≤0.40%	Parkin Florar Instrumenta Cas Chromatagraph Victoria 600		
citronellol	<0.01%	<0.03%	PerkinElmer Instruments: Gas Chromatograph "Clarus 680		
citral	<0.01%	<0.10%			
geraniol	<0.01%	≤0.05%			
dimethylanthranilate	0.18%	<0.30%			



GMO Statement

PRODUCT NAME: Mandarin Green

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

06/03/2019

Print Date: 18/08/2017 - Version 1BME01 (Revision Number: 1 - Revision Date: November 2015)

IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

product trade name: Mandarin Oil Green

REACh / CLP: all substances (ingredients) are preregistered / notified or registered.

1.2 Relevant identified uses of the mixture and uses advised against

relevant uses: odour agent / flavouring agent - ingredient for industrial manufacturing.

uses advised against: not for personal use in this form or concentration.

1.3 Details of the supplier of the safety data sheet

company: MADAR Corporation Limited

19-20 Sandleheath Industrial Estate

Fordingbridge Hampshire, SP6 1PA

approved sellers: Cosmetic Butters, Mystic Moments, New Directions, World of Moulds

1.4 Emergency telephone number

supplier: 01425 655555

poison control centre: contact your local centre

2. HAZARDS IDENTIFICATION

2.1 Classification of the mixture

Reg. (EC) No 1272/2008:	Asp. Tox. 1	Aquatic Chronic 1	Skin Irrit. 2	Skin Sens. 1	Flam. Liq. 3
hazard categories:	AH1	EHC1	SCI2	SS1	FL3
hazard statements:	H304	H410	H315	H317	H226
hazard pictograms:	GHS08	GHS09	GH:	S07	GHS02

2.2 Label elements

hazard pictograms:









signal word: dange

hazard statements: H304, H410, H315, H317, H226

precautionary statement: P210, P241, P262, P273, P280, P301/310, P303/361/353, P331, P405, P501

2.2.1 Additional information

for full text of relevant hazard and precautionary statements see section 16-e.

2.3 Other hazards

N/D

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

N/A

3.2 Mixture

production process: obtained from citrus essential oils & citrus by-products (mainly from Citrus reticulata,

BLANCO)

chemical identification: composition consisting of citrus essential oils and citrus derivates

EU chemical name: N/A EC number: N/A CAS number (EC inventory): N/A

3.2.1 Mixture: main hazardous constituents

chemical name	EINECS	CAS	CLP classification	content (typical %)
limonene	227-813-5	5989-27-5	AH1, EHC1, FL3, SCI2, SS1B	80÷95
Υ-terpinene	202-794-6	99-85-4	AH1, FL3, SCI3, ATO5	5 ÷ 9
mvrcene	204-622-5	123-35-3	AH1, EDI2A, FL3, SCI2	<3

3.2.2 Additional information

for full text of relevant hazard statements see section 16 (e & e-1).



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4. FIRST AID MEASURES

ingestion:

4.1 Description of first aid measures

inhalation: move to fresh air for at least 15 minutes, in case of complaints seek medical attention.

contact with the skin: remove contaminated clothing and wash with water and soap the contaminated part - make

sure you have eliminated the contamination - in case of complaints seek medical attention. abundant eye-wash for several minutes with pure water, make sure you have eliminated the

contact with the eyes: abundant eye-wash for several minutes with pure water, make sure you had contamination - in case of persistent eye irritation seek medical attention.

ask **immediately** medical assistance - mouth washing with water and **do not provoke vomiting**.

4.2 Most important symptoms and effects, both acute and delayed

symptoms: inhalation: can cause slight headache - contact: can cause eye irritation - can cause slight skin rash.

acute and delayed effects: no post-disorder effects are reported.

4.3 Indication of any immediate medical attention and special treatment needed

immediate medical assistance: see point 4.1. immediate/special treatment: see point 4.1.

first aid specific means: eye wash fountain / safety shower should be available in the work area.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

suitable extinguishing media: SMALL FIRE: use CO₂, foam, dry powder - LARGE FIRE: use water spray or fog - cool containing

vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

unsuitable extinguishing media: pressurized water jet.

5.2 Special hazards arising from the substance

vapours may form explosive mixture with air - in case of fire, the following can be released: carbon monoxide (CO), carbon dioxide (CO_2) , smoke, soot.

5.3 Advice for firefighters

standard procedure for chemical fires - spray extinguishing media to base of flames - use adequate protections for respiratory apparatus, avoid vapour inhalation.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

for non emergency personnel: in an emergency (i.e. unintentional important release of the product in enclosed space)

respiratory protection (Gas filter A, Colour code brown: consider the maximum duration for wear) must be worn. Use insulating device for respiratory protection with an independent air supply in circumstances which are unclear - use adequate protections solvent resistant: security shoes,

bodysuit, gloves and protective goggles solvent-resistant (see section 8).

for emergency responders: as per non-emergency personnel.

emergency procedures: remove any ignition source and ensure adequate ventilation in working areas following

accidental releases.

6.2 Environmental precautions

keep away from drains - keep away from surface and ground water.

6.3 Methods and material for containment and cleaning up

keep away from heat and use non-combustible absorbing sawdust (sand, specific binder) - using suitable pumping systems for inflammable materials. Refer to section 13 for the appropriate methods of waste treatment.

6.4 Reference to other sections

section 4, 8 & 13

. HANDLING AND STORAGE

.1 Precautions for safe handling

safe handling: during handling keep original container closed - avoid contact with skin and eyes - wear

adequate protective gloves and eye/face protection - avoid any sources of ignition - avoid exposing to high temperature during processing - maintain adequate local and general

ventilation where product is handled.

hygiene at work: do not ingest or apply to the skin as such - no smoking - remove contaminated clothing - good

personal washing routines should be followed - if at risk of contamination, foods, beverages

and other articles of consumption must not be stored or consumed at the work areas.



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7.2 Conditions for safe handling, including any incompatibilities

container: to be stored in stainless steel drums, preferably under inert atmosphere (nitrogen) with

minimum head space, protected from day-light. • take note: the container used during transportation must be considered only as a temporary container and it must not be

considered in any case adequate for medium or long term warehousing.

conditions: stored in a dry, aerated place, away from any heat source and ignition source.

temperature: from 5 °C and 20 °C.

7.3 Specific end uses

odour agent / flavouring agent - the information of this section are not related to the use of the product in combination with any other material or any other process altering its characteristics.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

occupational exposure limit: N/D (National and / or European)

8.2 Exposure control

a good basic standard of occupational hygiene is to be implemented (see also section 7).

8.2.1 Appropriate engineering controls

where appropriate, use closed system to transfer and process this material - if appropriate, isolate mixing rooms and other areas where this material is used or openly handled - maintain these areas under negative air pressure relative to the rest of the plant.

8.2.2 Individual protection measures, such as personal protective equipment

eye/face protection: protective goggles with built-in-frame tested to EN166 (should be checked regularly).

skin protection - hand: suitable gloves tested to EN374 (should be checked regularly) - always use with clean, dry hands.

skin protection - other: protective work clothing solvent resistant (should be checked regularly).

respiratory protection: not necessary in adequate local with general ventilation - avoid breathing vapors.

thermal hazards: none

8.2.3 Environmental exposure controls

the usual precautions in handling chemicals have to be observed.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

appearance: liquid – greenish to dark green

citrus note

odour threshold: N/D pH: N/A initial boiling point (& range): N/D melting point/freezing point: N/A flash point: ~49 °C evaporation rate: N/D upper/lower explosive limits: N/D vapour pressure: N/D vapour density: N/D

relative density d_4^{20} : 0.84 (±0.01)

solubility: in alcohol & other oils / negligible in H₂O

partition coefficient n-octanol/H₂O: N/D auto-ignition temperature: N/D decomposition temperature: N/D viscosity: N/D explosive properties: none oxidizing properties: none

9.2 Other information

N/D

odour:



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10. STABILITY AND REACTIVITY

10.1 Reactivity

product not reactive with water - product not reactive if used according to storage & handling conditions & identified uses (see subsection 1.2).

10.2 Chemical stability

product stable if used according to storage & handling conditions & identified uses (see subsection 1.2). • **shelf life**: 365 days, as per recommended storage & handling conditions (see section 7).

10.3 Possibility of hazardous reactions

none if used according to storage & handling conditions (see section 7) & identified uses (see section 1 & 7).

10.4 Conditions to avoid

avoid exposure to heat.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

this preparation has not been subjected to toxicological testing as an entity but has been blended from materials with known toxicological data and hazard classification (RIFM). In view of the difficulty of using current standard toxicological evaluation techniques to predict potential hazards arising from unforeseeable potentiation, this preparation should be considered and handled as if it displayed health hazards and treated in consequence with all possible precaution:

skin corrosion/irritation: hazard statement: H315 causes skin irritation.

skin sensitisation: hazard statement: H317 may cause an allergic skin reaction.

aspiration hazard: hazard statement: H304 may be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

this preparation has not been subjected to ecotoxicological testing as an entity but has been blended from materials with known ecotoxicological data and hazard classification (RIFM). In view of the difficulty of using current standard ecotoxicological evaluation techniques to predict the impact on vulnerable parts of the ecosystem, this preparation should be considered and handled as if it displayed potential environmental hazards and treated in consequence with all possible precaution:

aquatic life: hazard statement: H410 very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

this product (or all its ingredients) is to be considered as a readily biodegradable mixture; based on its ready biodegradability, this product does not fulfill the criteria for persistence.

12.3 Bioaccumulative potential

as the constituents are readily biodegradable, it is likely that they will also be biotransformed in higher organisms so a high bioaccumulation factor is actually not expected.

12.4 Mobility in soil

this product (or all its ingredients) is to be considered as a readily biodegradable mixture; based on the ready biodegradability of all of its ingredients, simulation tests in surface water, sediment and soil are not required.

12.5 Results of PBT and vPvB assessment

this product (or all its ingredients) is not classified as PBT or vPvb / CMR.

12.6 Other adverse effects

N/D

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

the containers used for this product must completely empty before disposal. Dispose product and/or contaminated packaging in accordance with federal, state and local environmental control regulations - disposal through the waste water is illegal.



according to Reg. (EC) No 1907/2006

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14. TRANSPORT INFORMATION

14.1 UN Number

1169

14.2 UN proper shipping name

extracts, aromatic, liquid

14.3 Transport hazard class

Class 3

14.3.1 Transport hazard symbols

for IMDG-ADR/RID: fish and tree - flame

for ICAO/IATA: flame

14.4 Packing group

14.5 Environmental hazards

marine pollutant

14.6 Special precautions for user

this product contains constituents flammables & dangerous for the environment - in case of pouring out, make sure to label new package accordingly, reproducing original label with relevant symbols



Safety, health and environmental regulations/legislation specific for the substance

no specific EU provisions and regulations apply to this product.

Chemical Safety Assessment

N/D

16. OTHER INFORMATION

Revision Revision		
Revision Number 1 (November 2015)	from	to
updating in conformity with EU Regulations	Reg. (EU) No 453/2010	Rea. (EU) No 2015/830

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CLP: Regulation (EC) No 1272/2008 Asp. Tox.: aspiration hazard Aquatic Chronic: aquatic hazard Skin Irrit.: skin irritation hazard Skin Sens.: skin sensitization hazard Flam. Liq.: flammable liquid hazard

Literature references and source of data

RIFM - FEMA database

Criteria for classification

H226	flammable liquid and vapour	analysis (Flash Point)
H304	may be fatal if swallowed and enters airways	concentration limit
H315	causes skin irritation	concentration limit
H317	may cause an allergic skin reaction	concentration limit
		concentration limit

according to Reg. (EC) No 1907/2006

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H410 very toxic to aquatic life with long lasting effects

List of relevant hazard and precautionary statements (section 2)

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

H410 very toxic to aquatic life with long lasting effects

P241 use explosion-proof electrical/ventilating/lighting/equipment

P262 do not get in eyes, on skin or on clothing

P273 avoid release to the environment

P280 wear protective gloves/eye protection/face protection

P301/310 if swallowed: immediately call a poison center or doctor/physician

P303/361/353 if on skin (or hair): remove/take off immediately all contaminated clothing. rinse skin with water/shower

P331 do not induce vomiting

P405 store locked up

P501 dispose product/container in accordance with applicable regulations

List of relevant hazard statements (section 3)

H319 causes serious eye irritation

Inventories & other

	CAS	ID	NOTE
EINECS	various	various	all ingredients are listed
TSCA	various	-	all ingredients are listed
IECSC	various		all ingredients are listed
KECI	various	various	all ingredients are listed
DSL	various	-	all ingredients are listed
AICS	various	-	all ingredients are listed
ENCS - ISHL	various	various	all ingredients are listed
NZIOC	various	-	all ingredients are listed
PICCS	various	-	all ingredients are listed
RIFM	various	various	all ingredients are listed
HS Code	-	3302909000	EU TARIC

Further information

the information on this SDS is correct to the best of our knowledge, covering the involved product at the date of its publication. They apply to the product as such as per the described specifications. The information are not related to the use of the product in combination with any other material or any other process altering its characteristics. The end user should apply to the existing normative and laws covering the use of the product, the hygiene and security at work. The container used during transportation must be considered only as a temporary container and it must not be considered in any case adequate for medium or long term warehousing. Upon receipt, our product must be stored as soon as possible in compliance with section 7 of this SDS. The information given in this SDS is in accordance with the Reg. (EU) No 2015/830, Reg. (EC) No 1907/2006 and Reg. (EC) No 1272/2008.



Specification Sheet

MANDARIN OIL GREEN

Date: 18/08/2017 - Version 1BME01-112015

1. PRODUCT

1.1 Product identifier

product trade name Mandarin Oil Green

relevant identified uses odour agent / flavouring agent

botanical origin Citrus spp.

origin & production process obtained from citrus essential oils & citrus by-products (mainly from Citrus reticulata BLANCO)

chemical identification & grade 100% Natural Complex Substance

EU chemical name Citrus ext.
EC number 304-454-3
CAS number (EC inventory) 94266-47-4
FEMA number 2318
FDA number 182.20
CE number various
RIFM number 7200-G2.13

INCI name citrus species peel oil expressed

2. PHYSICAL AND CHEMICAL PROPERTIES

2.1 Organoleptic characteristics

appearance & color clear liguid -greenish to dark green

odor typical mandarin note

2.2 Physical & chemical data

analysis instruments ranges relative density d 200 $0.8390 \div 0.8490$ ANTON PAAR - DMA 4500 optical rotation a_0^{20} +87.00° ÷ +97.00° Optical Activity - POLAAR 20 $1.4690 \div 1.4790$ ANTON PAAR - RXA 170 refractive index n_0^{25} peroxides (1) CDR - FoodLab <20 mmol/l flash point ~49 °C (120 °F) GRABNER - Miniflash FLP solubility alcohol - other oils

2.3 Key peaks

restricted / regulated components (1) instruments common name ranges GC - internal method pinenes $(a+\beta)$ <4.00% myrcene <3.00% GC - internal method limonene 82.00% ÷ 92.00% GC - internal method IFRA standard - EU allergen [Reg. (EC) 1223/2009] 5.00% ÷ 9.00% GC - internal method y-terpinene linalool <0.40% GC - internal method IFRA standard - EU allergen [Reg. (EC) 1223/2009] citronellol <0.03% GC - internal method IFRA standard - EU allergen [Reg. (EC) 1223/2009] IFRA standard - EU allergen [Reg. (EC) 1223/2009] < 0.10% GC - internal method citral <0.05% GC - internal method IFRA standard - EU allergen [Reg. (EC) 1223/2009] geraniol IFRA standard methyl N-methylanthranilate ≤0.30% GC - internal method HPLC - internal method psoralens [Reg. (EC) 1223/2009]

3. IFRA 48th: identification & quantification of all involved standards complete list (1)

3.1 Involved components

common name	CAS	%	status	categories
limonene	138-86-3	⁺ <92.00	specification	QRA categories (1-11)
linalool	78-70-6	< 0.40	specification	QRA categories (1-11)
citronellol	106-22-9	≤0.03	restricted	QRA categories (1-11)
citral	5392-40-5	< 0.10	restricted	QRA categories (1-11)
geraniol	106-24-1	<0.05	restricted	QRA categories (1-11)
methyl N-methylanthranilate	85-91-6	≤0.30	restricted	SKIN categories (leave on, rinse off & non-skin contact

4. COSMETICS REGULATION (EC) 1223/2009: identification & quantification of all involved components complete list (1)

4.1 Involved components

common name	CAS	%	type	annex
limonene	5989-27-5	≤92.00	allergen	III
linalool	78-70-6	<0.40	allergen	III
citronellol	106-22-9	<0.03	allergen	III
citral	5392 - 40-5	<0.10	allergen	III
geraniol	106-24-1	≤0.05	allergen	III

5. FOOD CERTIFICATIONS

5.1 Statements Food

this product is solvents, preservatives and other technical adjuvants free, it is a 100% natural flavouring agent obtained by physical processes only from various botanical sources, according to Reg. (EC) N. 1334/2008 Art. 3

2 d & Code of Federal Re ulation CFR Title 21 - 101.22 a 3

Food Allergens Free this product is a 100% natural flavouring agent obtained by physical processes only from botanical sources and it

does not contain an food allergens

GMO Free this product has been extracted from non-genetically modified plants; no enzyme and/or no GMO enzymes has been used during the production process and consequently does not contain GMO or GMO-derived product

STORAGE / SHELF LIFE

6.1 Precautions for safe storage

container & conditions to be stored in stainless steel drums, preferably under inert atmosphere (nitrogen) with minimum head space,

protected from day-light in a dry, aerated place away from any heat source and ignition source

temperature from 5 °C and 20 °C

shelf life 365 days, as per recommended storage conditions

^{1:} in conformity with the Cosmetics Regulation (EC) 1223/2009 up to 2017/237/EU Amendment and/or in conformity with the IFRA up to 48th Amendment



Vegetarian & Vegan Suitability Statement

PRODUCT NAME: Mandarin Green

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.

28/06/19