

CERTIFICATE OF ANALYSIS

Product Marula
Batch No: 4507801
Best Before End: June 2025

Appearance: Liquid yellow to pale yellow

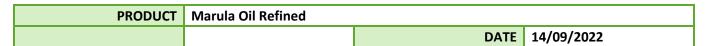
Odour: Characteristic

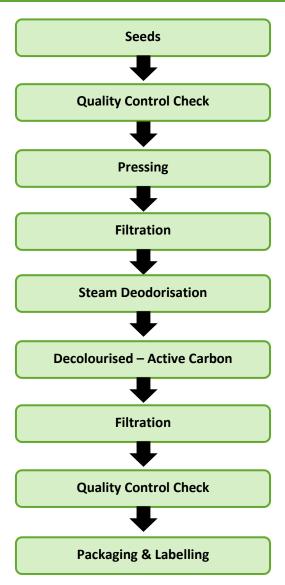
| TEST | SPECIFICATION | ANALYSIS |
|--------------------------------|------------------|----------|
| Specific Gravity @ 20°C (g/ml) | 0.910 – 0.925 | 0.918 |
| Refractive Index @ 20°C | 1.462 – 1.479 | 1.472 |
| Optical Rotation @ 20°C | -10.0° to +10.0° | +1.12° |
| Acid Value (mg/KOH/g) | 1.0 maximum | 0.12 |
| Iodine Value (mg/g) | 100.0 – 120.0 | 109.0 |
| Saponification Value | 187.0 – 197.0 | Complies |

| FATTY ACID PROFILE (%) | | |
|------------------------|-------------|------|
| C16:0 Palmitic | 8.0 maximum | 5.1 |
| C18:0 Stearic | 8.0 maximum | 2.9 |
| C18:1 Oleic Acid | 48.0 – 62.0 | 54.5 |
| C18:2 Linoleic | 27.0 – 47.0 | 34.5 |



Flowchart





DISCLAIMER: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use. Please note as this is a wholly natural material some parameters, in particular, appearance, colour and odour, may change due to natural variation and climate change. This in no way affects the quality and efficacy of the product. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



Document Date: December 2018

STATEMENT

We hereby certify that the Marula Oil we sell is free of genetically modified materials and components. No ingredients, additives or processing aids of GM origin are used in the processing and purifying of the oil.







| 01. IDENTIFICATION OF THE SUBSTANCE/PREPARATION & THE COMPANY/UNDERTAKING | | | |
|---|---|-----------------------|-----------------------|
| 1.1 | PRODUCT IDENTIFIER | | |
| | PRODUCT NAME | Marula Oil Refined | |
| | PRODUCT CODE | WHC370 | |
| | INCI NAME | Sclerocarya Birrea Se | eed Oil |
| | CAS | - | |
| | EC | - | |
| 1.2 | RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE, AND USES ADVISED AGAINST | | |
| | Component of; Food, Animal Food, Cosmetic products, pharmaceutical products and technical applications. | | |
| 1.3 | DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET | | |
| COMPANY Madar Corporation Limited ADDRESS 19 - 20 Sandleheath Industrial Estate Fordingbridge. SP6 1PA | | | |
| | EMAIL ADDRESS technical@madarcorporation.co.uk | | |
| 1.4 | 4 EMERGENCY TELEPHONE NUMBER | | + 44 (0) 1425 655 555 |

| 02. HAZARDS IDENTIFICATION | | | |
|----------------------------|--|--------------------|---------|
| 2.1 | CLASSIFICATION OF THE SUBSTANCE OR MIXTURE | | |
| | CLASSIFICATION (EC 1 | 272/2008) | |
| | Not classified as hazar | dous. | |
| 2.2 | LABEL ELEMENTS | | |
| | LABEL IN ACCORDANCE | E WITH (EC) NO 127 | 72/2008 |
| | None | | |
| | SIGNAL WORD None | | |
| | HAZARD STATEMENTS | | |
| | None | | |
| | PRECAUTIONARY STATEMENTS AND/OR SUPPLEMENTARY STATEMENTS | | |
| | None | | |
| | SUPPLEMENTARY STATEMENTS | | |
| | None | | |
| 2.3 | OTHER HAZARDS | | |
| | ADVERSE EFFECTS ON HUMAN HEALTH No additional data | | |
| | ADVERSE PHYSIO-CHEMICAL PROPERTIES No additional data | | |

| 03. COMPOSITION/INFORMATION ON INGREDIENTS | |
|--|---------------------|
| 3.1/3.2 | SUBSTANCES/MIXTURES |



No additional data

| 04. FIRST AID MEASURES | | | |
|------------------------|---|--|--|
| 4.1 | DESCRIPTION OF FIRST AID MEASURES | | |
| | INHALATION Remove to fresh air and remain in a position which is comfortable for breathing. Seek medical attention. | | |
| | INGESTION Do NOT induce vomiting. Ingestion may cause nausea and vomiting. Immediately rinse mouth and provide fresh air. Seek medical attention. | | |
| | SKIN CONTACT Remove contaminated clothing and wash before reuse. Wash skin thoroughly with soap and water. If discomfort occurs/continues, seek medical attention. | | |
| | EYE CONTACT Rinse eyes with clean water for a minimum of fifteen minutes. If safe to do so, remove contact lenses and continue to rinse. Seek medical attention. | | |
| 4.2 | MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED | | |
| | No additional data | | |
| 4.3 | INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED | | |
| | Treat symptomatically. | | |

| <u>05. FIRE</u> | 05. FIREFIGHTING MEASURES | | |
|-----------------|---|--|--|
| 5.1 | EXTINGUISHING METHODS | | |
| | Carbon Dioxide Alcohol Resistant Foam Dry Chemical Powder Do NOT use water. | | |
| 5.2 | HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE | | |
| | This product is made up of inflammable material with low risk. The product may only form ignitable mixtures or burn only upon heating above the flash point. However, minor contamination by lightly volatile hydrocarbons may in-crease the hazard. Ignition hazard at welding at the empty container. In the event of fire this product can generate oxides of carbon and other toxic gases. A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health. Do not breathe in smoke. | | |
| 5.3 | ADVICE FOR FIREFIGHTERS | | |
| | Wear self-contained respiratory equipment and appropriate protective clothing at all times. Do not inhale any gases or fumes which may be generated. Containers in close proximity to fire should be removed to a safe distance and the exterior of the container cooled with water. | | |

| 06. ACC | 06. ACCIDENTAL RELEASE MEASURES | | |
|---------|---|--|--|
| 6.1 | PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES | | |
| | Wear protective clothing as recommended at all times. Handle the product using protective gloves resistant to the chemicals exposed. Avoid contact with skin and inhalation of its vapours. Maintain adequate ventilation in the working area after spilling. | | |
| 6.2 | ENVIROMENTAL PRECAUTIONS | | |



| | Do not allow the product to enter drains or sewers, water course or the ground. Do not allow the product to enter the environment. |
|-----|---|
| 6.3 | METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP THIS PRODUCT |
| | Cover with an inert, inorganic, non-combustible absorbent material (e.g. dry-lime, sand, soda ash). Place in covered containers and dispose of in accordance with current laws and regulations. If Spillage on water occurs; Confine the spill immediately with booms. Warn other ships. Notify port and other relevant authorities. Remove from the surface by skimming or with suitable absorbents. In running waters, apply appropriate dispersants in accordance with local regulation. |
| 6.4 | REFERENCE TO OTHER SECTIONS |
| | Section 13 |

| 07. EXPOSURE CONTROLS AND/OR PERSONAL PROTECTION | | |
|--|--|--|
| 7.1 | PRECAUTIONS FOR SAFE HANDLING | |
| | Adhere to all good health, safety and hygiene practices. If handling large/heavy packages or drums, ensure the use of suitable mechanical equipment at all times. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wear personal protective equipment. Do not breathe vapours or spray mist. Use only in area provided with adequate ventilation. Do not eat, drink or smoke whilst handling this product. | |
| 7.2 | CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES | |
| | Store in a cool, dry, well-ventilated area. Protect from freezing, heat and light including sunlight. Protect from all potential sources of ignition. Keep all containers tightly sealed when not in use. Intrusion into soil to be avoided. Take precautions to avoid static discharges in working area. Electrical equipment and fittings must comply with local regulations. | |
| 7.3 | SPECIFIC END USE(S) | |
| | | |

| 08. EXP | 08. EXPOSURE CONTROLS | | |
|---------|---|--|--|
| 8.1 | CONTROL PARAMETERS | | |
| | No additional data | | |
| 8.2 | EXPOSURE CONTROLS | | |
| | PROTECTIVE EQUIPMENT | | |
| | Use all equipment as required and/or recommended for safe handling. | | |
| | PROCESS CONDITIONS No additional data | | |
| | ENGINEERING MEASURES Install sufficient ventilation across all areas. Install readily available eyew stations and safety showers. | | |
| | RESPIRATORY EQUIPMENT In the event of airborne contamination or ventilation failure ensure the usuitable respiratory equipment/protection. | | |
| | HAND PROTECTION Wear appropriate protective chemically resistant gloves which comply wi | | |



| | EN374. |
|---|---|
| EYE PROTECTION | Wear appropriate protective safety goggles which comply with EN166. |
| HYGIENE MEASURES | Good hygiene practices are always recommended, especially when handling oils, chemicals or any other similar type of material. |
| SKIN PROTECTION | Wear appropriate protective chemically resistant clothing at all times to prevent any potential skin contact with this product. |
| ENVIRONMENTAL EXPOSURE CONTROLS | Do not allow the product to enter drains or sewers, water course or the ground. Prevent environmental contamination. |
| OTHER AND/OR PERSONAL PROTECTIVE MEASURES | No additional data |

| 09. PHYSICAL AND CHEMICAL PROPERTIES | | |
|---|--|--|
| 7.1 INFORMATION ON BASIC PHYSICAL & CHEMICAL PROPERTIES | | |
| APPEARANCE (E.G. LIQUID) | Liquid | |
| COLOUR | Pale – Yellow | |
| ODOUR | Characteristic | |
| SPECIFIC GRAVITY ~0.917 @ 20°C | | |
| REFRACTIVE INDEX | ~1.470 @ 20°C | |
| FLASH POINT (°C) | >250.0 | |
| AUTO-IGNITION TEMPERATURE (°C) | No additional data | |
| MELTING POINT (°C) | No additional data | |
| BOILING POINT (°C) | No additional data | |
| SOLUBILITY | Insoluble in water. Soluble in oil, ethanol. | |
| VAPOUR PRESSURE | No additional data | |
| 9.2 ADDITIONAL INFORMATION | No additional data | |

| 10. STABILITY & REACTIVITY | | | |
|----------------------------|---|--|--|
| 10.1 | REACTIVITY | | |
| | Expected to remain stable under recommended storage conditions. | | |
| 10.2 | CHEMICAL STABILITY | | |
| | Expected to remain stable under recommended storage conditions. | | |
| 10.3 | POSSIBLE HAZARDOUS REACTIONS | | |
| | Reacts with oxidants. | | |
| 10.4 | CONDITIONS TO AVOID | | |
| | Heat. Extremes of temperature. Any potential source of ignition including but not limited to sparks and flames. | | |
| 10.5 | INCOMPATIBLE MATERIALS | | |
| | Strong Acids, Alkalis, Oxidizing Agents | | |



| 10.6 | HAZARDOUS DECOMPOSITION PRODUCTS |
|------|--|
| | In the event of fire this product may generate oxides of carbon and other toxic gases. |

| 11. TO | 11. TOXOLOGICAL INFORMATION | | |
|--------|--|--|--|
| 11.1 | ACUTE TOXICITY | | |
| | No additional data | | |
| 11.2 | SKIN CORROSION/IRRITATION | | |
| | No additional data | | |
| 11.3 | SERIOUS EYE DAMAGE/IRRITATION | | |
| | No additional data | | |
| 11.4 | RESPIRATORY/SKIN SENSITIZATION | | |
| | No additional data | | |
| 11.5 | GERM CELL MUTAGENICITY/CARCINOGENICITY/REPRODUCTIVE TOXICITY | | |
| | No additional data | | |
| 11.6 | STOT – SINGLE EXPOSURE | | |
| | No additional data | | |
| 11.7 | STOT – REPEATED EXPOSURE | | |
| | No additional data | | |
| 11.8 | ASPIRATION HAZARD | | |
| | No additional data | | |
| 11.9 | GENERAL AND/OR ADDITIONAL DATA; E.G. PHOTOTOXICITY | | |
| | No additional data | | |

| 12. ECC | 12. ECOLOGICAL AFFECTS | | |
|---------|----------------------------------|--|--|
| 12.1 | TOXICITY | | |
| | No additional data | | |
| 12.2 | PERSISTENCE & DEGRADABILITY | | |
| | No additional data | | |
| 12.3 | BIOACCUMULATIVE POTENTIAL | | |
| | No additional data | | |
| 12.4 | MOBILITY IN SOIL AND/OR WATER | | |
| | No additional data | | |
| 12.5 | RESULTS OF A PBT/vPvB ASSESSMENT | | |
| | No additional data | | |
| 12.6 | OTHER ADVERSE EFFECTS | | |
| | No additional data | | |



13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Always dispose of this product in accordance with local and national regulations. Do not allow entry into drains or waterways. Do not contaminate the ground or water with waste. Do not dispose of waste into the environment. Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals. Recycling is always preferable to disposal. When containers have been fully emptied, ensure the labelling remains.

| 14. TRA | 14. TRANSPORT INFORMATION | | |
|---------|--|--------------------------------------|--|
| 14.1 | UN NUMBER | Not restricted | |
| 14.2 | UN PROPER SHIPPING NAME | Not applicable | |
| 14.3 | TRANSPORT HAZARD CLASS(ES) | Not applicable | |
| 14.4 | PACKING GROUP | Not applicable | |
| 14.5 | ENVIRONMENTAL HAZARDS | Not applicable | |
| 14.6 | SPECIAL PRECAUTIONS FOR USER | Details throughout document: 6, 7, 8 | |
| 14.7 | TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 AND THE IBC CODE | No additional data | |

| 15. REGULATORY INFORMATION | | | |
|----------------------------|---|--|--|
| 15.1 | SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE | | |
| | This Safety Data Sheet was prepared in accordance with EC Regulation (EC) 1907/2006 (REACH), 1272/2008 (CLP), EC 453/2010&830/2015. | | |
| 15.2 | CHEMICAL SAFETY ASSESSMENT | | |
| | No additional data | | |

| 16. OTHER INFORMATION | | |
|-----------------------------|-----------------|------------|
| 16.1 HAZARD STATEMENTS None | | None |
| 16.2 | REVISION DATE | 30/09/2022 |
| 16.3 | REVISION NUMBER | 6 |



Product Specification

| PRODUCT | Marula Oil Refined | | | | |
|---------|--------------------|------|------------|----------|---|
| CODE | | DATE | 29/07/2022 | REVISION | 6 |

| DESCRIPTION | Sclerocarya Birrea Seed Oil is the oil expressed from the seeds of the Sclerocarya birrea, Anacardiaceae | | |
|-------------|--|--|---|
| INCI NAME | Sclerocarya Birrea Seed Oil | | |
| CAS NUMBER | - EC NUMBER - | | - |

| <u>CHARACTERISTICS</u> | |
|---------------------------------------|----------------|
| APPEARANCE AT ROOM TEMPERATURE Liquid | |
| COLOUR | Yellow |
| ODOUR | Characteristic |

| <u>ANALYSIS</u> | | |
|-------------------------|-----------------------|--|
| SPECIFIC GRAVITY (g/ml) | 0.910 – 0.925 @ 20°C | |
| REFRACTIVE INDEX | 1.462 – 1.479 @ 20°C | |
| OPTICAL ROTATION (°) | -10.0 to +10.0 @ 20°C | |
| ACID VALUE (mg KOH/g) | ≤1.00 | |
| IODINE VALUE (mg/g) | 100.0 – 120.0 | |

| FATTY ACID PROFILE (%) | | |
|------------------------|---------------|---------------|
| C16:0 | PALMITIC ACID | ≤8.00 |
| C18:0 | STEARIC ACID | ≤8.00 |
| C18:1 | OLEIC ACID | 48.00 – 62.00 |
| C18:2 | LINOLEIC ACID | 27.00 – 47.00 |



Vegetarian & Vegan Suitability Statement

PRODUCT NAME: Marula Oil

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