

CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by Intertek. Certificate Number. 2317548

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|---------------------------|--|
| Catalogue Number | 34885 |
| Lot Number | A0472258 |
| Description | Castor oil, specified according to the requirements of Ph.Eur. |
| CAS Number | 8001-79-4 |
| Quality Test/Release Date | 12/May/2025 |
| Suggested retest date | 12/May/2027 |
| Country of Origin | INDIA |
| Declaration of Origin | plant |
| BSE/TSE | The plant to produce this product is Ricinus Communis |

| Result Name | Units | Specifications | Test Value |
|----------------------------|-----------|------------------------------------|---------------------------------|
| Appearance (Color) | | Clear colorless to slightly yellow | Clear slightly yellow |
| Appearance (Form) | | Hygroscopic viscous liquid | Hygroscopic viscous liquid |
| Identification A | | Passes test | Passes test |
| Water | % | =<0.3 | 0.2 |
| Angle of optical rotation | nm | +3.5° to +6.0° (20°C, 589 (neat) | +4.0° (20°C, 589) (neat) |
| Absorbance | | =<0.7 (270 nm, 1 % in EtOH 96%) | 0.177 (270 nm, 1 % in EtOH 96%) |
| Acid value | mg KOH/g | =<1.5 | 0.6 |
| Hydroxyl value | mg KOH/g | >=160 | 165 |
| Peroxide value | meq O2/kg | =<10.0 | 0.8 |
| Unsaponifiable matter | % | =<0.8 | 0.4 |
| Composition of fatty acids | % | =<2.0 (Palmitic acid) | 1.2 (Palmitic acid) |
| Composition of fatty acids | % | =<2.5 (Stearic acid) | 1.3 (Stearic acid) |
| Composition of fatty acids | % | 2.5 to 6.0 (Oleic acid) | 3.6 (Oleic acid) |
| Composition of fatty acids | % | 2.5 to 7.0 (Linoleic acid) | 4.7 (Linoleic acid) |
| Composition of fatty acids | % | =<1.0 (Linolenic acid) | 0.5 (Linolenic acid) |
| Composition of fatty acids | % | =<1.0 (Eicosenoic acid) | 0.3 (Eicosenoic acid) |
| Composition of fatty acids | % | 85.0 to 92.0 (Ricinoleic acid) | 87.8 (Ricinoleic acid) |
| Composition of fatty acids | % | =<1.0 (Any other fatty acid) | 0.6 (Any other fatty acid) |



Geert Torfs
Supervisor, QC

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.