

**QUALITY CERTIFICATE**

Product name: CASTOR OIL, VIRGIN  
Quality: Ph.Eur.11.0.  
Package: 450g  
Lot No.: GF4059528  
Manufacturing date: 07.2023.  
Expiry date: 31.08.2026. (DMY)  
Anal. No.: 15749H59528

	<b>REQUIRED</b>	<b>MEASURED</b>
Appearance:	clear (at 40 oC), slightly yellow, viscous, hygroscopic liquid	clear (at 40 oC), slightly yellow, viscous, hygroscopic liquid
Identification test 'A'	identical	identical
Identification test 'C'	identical	identical
Solubility	slightly soluble in light petroleum, miscible with ethanol (96 per cent) and with glacial acetic acid	slightly soluble in light petroleum, miscible with ethanol (96 per cent) and with glacial acetic acid
Refractive index ( $n_D^{20}$ )	kb.1,479	1,478
Density ( $d_4^{20}$ )	kb.0,958	0,960
$[\alpha]_D^{20}$	(+3,5)-(+6,0) °	+4,0 °
Absorption (270 nm)	max.0,7	0,0402
Acid value	max.1,5	0,21
Hydroxyl value	min.160	164,21
Peroxide value	max.10,0	1,12
Unsaponifiable materials	max.0,8 %	0,35 %
Composition of fatty acids(GC full test)	passes test	passes test
Palmitic acid	max.2,0 %	1,19 %
Stearic acid	max.2,5 %	1,25 %
Oleic acid content	2,5-6,0 %	3,61 %
Linoleic acid	2,5-7,0 %	4,46 %
Linolenic acid	max.1,0 %	0,48 %
Eicosenoic acid	max.1,0 %	0,14 %
Ricinoleic acid	85,0-92,0 %	88,11 %
Any other fatty acid	max.1,0 %	0,76 %
Water	max.0,3 %	0,054 %

**The Product complies with the requirements of Ph.Eur.11.0.**

Kiállítva: Halásztelek, 2023.08.21.

  
Nagy Balázs

minőségbiztosítási vezető

**Molar Chemicals Kft.**  
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