

**QUALITY CERTIFICATE**

Product name: CASTOR OIL, VIRGIN  
Quality: Ph.Eur.10.0.  
Package: 1,8 kg  
Lot No.: FR7554575  
Manufacturing date: 09.2021.  
Expiry date: 21.06.2025. (DMY)  
Anal. No.: 14134H54575

	<b>REQUIRED</b>	<b>MEASURED</b>
Appearance	clear (at 40 oC), slightly yellow liquid	clear (at 40 oC), slightly yellow liquid
Identification test 'A'	identical	identical
Identity (FT-IR)	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	1,476
Density ( $d_4^{20}$ )	kb.0,958	0,954
$[\alpha]_D^{20}$	(+3,5)-(+6,0) °	+4,25 °
Absorption (270 nm)	max.0,7	0,264
Acid value	max.1,5	0,15
Hydroxyl value	min.160	164,55
Peroxide value	max.10,0	1,11
Unsaponifiable materials	max.0,8 %	0,36 %
Composition of fatty acids(GC full test)	passes test	passes test
Palmitic acid	max.2,0 %	1,07 %
Stearic acid	max.2,5 %	1,22 %
Oleic acid content	2,5-6,0 %	3,47 %
Linoleic acid	2,5-7,0 %	4,45 %
Linolenic acid	max.1,0 %	0,75 %
Eicosenoic acid	max.1,0 %	0,16 %
Ricinoleic acid	85,0-92,0 %	88,41 %
Any other fatty acid	max.1,0 %	0,47 %
Water	max.0,3 %	0,1994 %

**The Product complies with the requirements of Ph.Eur.10.0.**

Kiállítva: Halásztelek, 2023.03.13.

  
Nagy Balázs

minőségbiztosítási vezető

**Molar Chemicals Kft.**  
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