



## CERTIFICATE OF ANALYSIS

**CASTOR OIL VIRGIN, PH.EUR. 7.0**

**Ricini oleum virginale**

|                         |                           |                     |                   |
|-------------------------|---------------------------|---------------------|-------------------|
| <b>Product code:</b>    | P170302; P170322; P170300 | <b>Lot No.:</b>     | PH/JAN/LM-3/13-14 |
| <b>Production date:</b> | Jan 2014                  | <b>Expiry date:</b> | Jan 2016          |
| <b>Packaging:</b>       | 1,0 L; 5,0 L; 10,0 L      |                     |                   |

| Parameter                | Unit                                 | Specification                 | Result   |
|--------------------------|--------------------------------------|-------------------------------|----------|
| Appearance               | ----                                 | Clear and bright fluid (20°C) | Complies |
| Acid value               | mg KOH/g                             | Max 2                         | 0,96     |
| Hydroxyl value           | mg KOH/g                             | Min 150                       | > 150    |
| Peroxyde value           | meq O <sub>2</sub> /Kg               | Max 10                        | 0,8      |
| Iodine value             | g I <sub>2</sub> /100 g              | 82-90                         | 85,15    |
| Specific gravity at 20°C | g/cm <sup>3</sup>                    | ca 0,958                      | 0,9615   |
| Refractive index at 20°C | nD                                   | ca 1,479                      | 1,4805   |
| Unsaponifiable matter    | %                                    | Max 0,8                       | 0,37     |
| Optical rotation         | ----                                 | +3,5 - +6,0                   | +3,8     |
| Water content            | %                                    | Max 0,3                       | 0,14     |
| Light absorption         | 1% solution in 96% ethanol at 269 nm | Max 1,0                       | 0,57     |
| Palmitic acid (C16:0)    | %                                    | Max 2                         | < 2      |
| Stearic acid (C18:0)     | %                                    | Max 2,5                       | < 2,5    |
| Oleic acid (C18:1)       | %                                    | 2,5 - 6                       | Complies |
| Linoleic acid (C18:2)    | %                                    | 2,5- 7                        | Complies |
| Linolenic acid (C18:3)   | %                                    | Max 1                         | < 0,1    |
| Eicosenoic acid (C20:1)  | %                                    | Max 1                         | < 0,1    |
| Ricinoleic acid          | %                                    | 85 - 92                       | Complies |
| Another fatty acid       | %                                    | Max 1                         | < 1,0    |

### Registry

CAS: 8001-79-4

EINECS: 232-293-8

INCI: Ricinus communis Seed Oil

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