

Castor oil Ph. Eur. refined (former DAB)

CAS No. 8001-79-4
EC No. 232-293-8
INCI name Ricinus communis seed oil
Monograph no. 2367 version 8.3

General

Castor oil (also known as Ricinus oil / ricini oleum) is a vegetable oil extracted by mechanical cold pressing of the Castor seed and slight refining / adulteration. During the pressing the temperature of the oil is not allowed to exceed 50 °C. It is slightly yellow or almost colourless with a mild characteristic odour.

Because of its unique molecule structure there are numerous applications in pharmaceutical and cosmetic segments.

Standard specifications Castor oil Ph. Eur. refined

Physical characteristics

appearance (25 °C)		Clear, almost colourless or slightly yellow, viscous, hygroscopic liquid
odour		slight, characteristic
colour	Gardner	max. 1,5
colour (on 5 1/4" Lovibond)		max. 10 yellow, max. 1 red
relative density (20 °C)		0,954 - 0,969
refractive index (25 °C)		1,477 - 1,481
viscosity	Gardner-Holdt	U – V (about 1000 mPa s)

Chemical characteristics

acetyl value	mg KOH/g	min. 140
hydroxyl value	mg KOH/g	min. 160
saponification value	mg KOH/g	min. 177
acid value	mg KOH/g	max. 0,8
iodine value	g I ₂ /100g	82 - 90
moisture, impurities & volatile matter	%	max. 0,15
free fatty acid	%	max. 1
unsaponifiable matter	%	max. 0,8
peroxide value	meq O ₂ /kg	max. 5
identificaton A, B, C, D	Ph. Eur. (2.4.19)	complies
optical rotation	Ph. Eur. (2.5.6)	+3,5 - +6,0
specific absorbance (maximum at 268-270nm)	Ph. Eur. (2.2.25)	0,7 - 1,5
foreign fatty substances	DAB	complies

Fatty acid composition

Palmitic acid (C16)	%	max. 2
Stearic acid (C18)	%	max. 2,5
Oleic acid (C18)	%	max. 2,5 - 6
Ricinoleic acid (C18)	%	85 - 92
Linoleic acid (C18:2)	%	max. 2,5 - 7
Linolenic acid (C18:3)	%	max. 1
Eicosenoic acid (C20:1)	%	max. 1
other fatty acids	%	max. 1

Applications

- lubricants: in food grade lubricants or lubricants in contact with food products.
- polyurethane: as component for special mouldings for medical applications.
- cosmetics & personal care: used in lipsticks, deodorant sticks and sun protecting products.
- laxative.
- total parenteral nutrition.
- carrier of hormones in infusion fluids.
- eye drops.
- surface coating of pills.

Packing

Castor oil Ph. Eur. refined is supplied in:

- cans (25 kg)
- drums (200 kg)
- IBC (1.000 kg)
- bulk (truckloads and/or ISO containers)