



Edition: BP 2025 (Ph. Eur. 11.6 update)

Virgin Linseed Oil

[General Notices](#)

(Ph. Eur. monograph 1908)

Ph Eur

DEFINITION

Fatty oil obtained by cold expression from ripe seeds of *Linum usitatissimum* L. A suitable antioxidant may be added.

CHARACTERS

Appearance

Clear, yellow or brownish-yellow liquid, on exposure to air turning dark and gradually thickening. When cooled, it become a soft mass at about -20 °C.

Solubility

Very slightly soluble in ethanol (96 per cent), miscible with light petroleum.

[Relative density](#)

About 0.931.

[Refractive index](#)

About 1.480.

IDENTIFICATION

First identification: B, C.

Second identification: A, B.

A. Identification of fatty oils by thin-layer chromatography ([2.3.2](#)).

Results The chromatogram obtained is similar to the corresponding chromatogram shown in Figure 2.3.2.-1.

B. Iodine value (see Tests).

C. Composition of fatty acids (see Tests).

TESTS

Acid value (2.5.1)

Maximum 4.5.

Iodine value (2.5.4)

160 to 200.

Peroxide value (2.5.5, Method A)

Maximum 15.0.

Saponification value (2.5.6)

188 to 195; carry out the saponification for 1 h.

Unsaponifiable matter (2.5.7)

Maximum 1.5 per cent, determined on 5.0 g.

Composition of fatty acids

Gas chromatography (2.4.22, Method C). Use the calibration mixture in Table 2.4.22.-3.

Composition of the fatty-acid fraction of the oil:

- *fatty acids with a chain length less than C_{16}* : maximum 1.0 per cent,
- *palmitic acid*: 3.0 per cent to 8.0 per cent,
- *palmitoleic acid*: maximum 1.0 per cent,
- *stearic acid*: 2.0 per cent to 8.0 per cent,
- *oleic acid*: 11.0 per cent to 35.0 per cent,
- *linoleic acid*: 11.0 per cent to 24.0 per cent,
- *linolenic acid*: 35.0 per cent to 65.0 per cent,
- *arachidic acid*: maximum 1.0 per cent.

Cadmium

Maximum 0.5 ppm, determined as described in general method 2.4.27. *Heavy metals in herbal drugs and herbal drug preparations.*

Water (2.5.32)

Maximum 0.1 per cent, determined on 1.00 g.

STORAGE

In an airtight container, protected from light.

