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

Oleic Acid

General Notices

(Ph. Eur. monograph 0799)

112-80-1

Action and use

Excipient.

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DEFINITION

(*Z*)-Octadec-9-enoic acid ($C_{18}H_{34}O_2$; M_r 282.5), together with varying amounts of saturated and other unsaturated fatty acids. A suitable antioxidant may be added.

Content

65.0 per cent to 88.0 per cent of $C_{18}H_{34}O_2$.

CHARACTERS

Appearance

Clear, yellowish or brownish, oily liquid.

Solubility

Practically insoluble in water, miscible with ethanol (96 per cent) and with methylene chloride.

Relative density

About 0.892.

IDENTIFICATION

A. Acid value (see Tests).
B. Iodine value (see Tests).
C. Composition of fatty acids (see Tests).

Margaric acid Maximum 0.2 per cent for oleic acid of vegetable origin and maximum 4.0 per cent for oleic acid of animal origin.

TESTS

Appearance

The substance to be examined is not more intensely coloured than reference solution Y_1 or BY_1 (*2.2.2, Method I*).

Acid value (*2.5.1*)

195 to 204, determined on 0.5 g.

Iodine value (*2.5.4*)

89 to 105.

Peroxide value (*2.5.5*)

Maximum 10.0.

Composition of fatty acids

Gas chromatography (*2.4.22, Method C*).

Test solution Prepare as described in the method but omitting the initial hydrolysis.

Composition of the fatty acid fraction of the substance:

— *myristic acid*: maximum 5.0 per cent,

— *palmitic acid*: maximum 16.0 per cent,

— *palmitoleic acid*: maximum 8.0 per cent,

— *stearic acid*: maximum 6.0 per cent,

— *oleic acid*: 65.0 per cent to 88.0 per cent,

— *linoleic acid*: maximum 18.0 per cent,

— *linolenic acid*: maximum 4.0 per cent,

— *fatty acids of chain length greater than* C_{18}: maximum 4.0 per cent.

Total ash (*2.4.16*)

Maximum 0.1 per cent, determined on 2.00 g.

STORAGE

In an airtight, well-filled container, protected from light.

LABELLING

The label states the origin of oleic acid (animal or vegetable).

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