

STORAGE

Protected from light.

01/2008:1041

SORBITAN OLEATE

Sorbitani oleas

01/2008:1040

SORBITAN LAURATE

Sorbitani lauras

DEFINITION

Mixture usually obtained by partial esterification of sorbitol and its mono- and di-anhydrides with lauric (dodecanoic) acid.

CHARACTERS

Appearance: brownish-yellow, viscous liquid.

Solubility: practically insoluble, but dispersible in water, miscible with alcohol.

Relative density: about 0.98.

IDENTIFICATION

A. Hydroxyl value (see Tests).

B. Iodine value (see Tests).

C. Composition of fatty acids (see Tests).

TESTS

Acid value (2.5.1): maximum 7.0, determined on 5.0 g.

Hydroxyl value (2.5.3, *Method A*): 330 to 358.

Iodine value (2.5.4): maximum 10.

Peroxide value (2.5.5): maximum 5.0.

Saponification value (2.5.6): 158 to 170.

Carry out the saponification for 1 h.

Composition of fatty acids. Gas chromatography (2.4.22, *Method C*).

Prepare reference solution (a) as indicated in tables 2.4.22.-1 and 2.4.22.-2.

Composition of the fatty acid fraction of the substance:

- *caproic acid*: maximum 1.0 per cent,
- *caprylic acid*: maximum 10.0 per cent,
- *capric acid*: maximum 10.0 per cent,
- *lauric acid*: 40.0 per cent to 60.0 per cent,
- *myristic acid*: 14.0 per cent to 25.0 per cent,
- *palmitic acid*: 7.0 per cent to 15.0 per cent,
- *stearic acid*: maximum 7.0 per cent,
- *oleic acid*: maximum 11.0 per cent,
- *linoleic acid*: maximum 3.0 per cent.

Heavy metals (2.4.8): maximum 10 ppm.

2.0 g complies with test D. Prepare the reference solution using 2 mL of *lead standard solution* (10 ppm Pb) R.

Water (2.5.12): maximum 1.5 per cent, determined on 1.00 g.

Total ash (2.4.16): maximum 0.5 per cent.

STORAGE

Protected from light.

DEFINITION

Mixture usually obtained by esterification of 1 mole of sorbitol and its mono- and di-anhydrides per mole of oleic (*cis*-9-octadecenoic) acid. A suitable antioxidant may be added.

CHARACTERS

Appearance: brownish-yellow, viscous liquid.

Solubility: practically insoluble but dispersible in water, soluble in fatty oils producing a hazy solution, miscible with alcohol.

Relative density: about 0.99.

IDENTIFICATION

A. Hydroxyl 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

Acid value (2.5.1): maximum 8.0, determined on 5.0 g.

Hydroxyl value (2.5.3, *Method A*): 190 to 210.

Iodine value (2.5.4): 62 to 76.

Peroxide value (2.5.5): maximum 10.0.

Saponification value (2.5.6): 145 to 160.

Carry out the saponification for 1 h.

Composition of fatty acids. Gas chromatography (2.4.22, *Method C*).

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 with chain length greater than C₁₈*: maximum 4.0 per cent.

Heavy metals (2.4.8): maximum 10 ppm.

2.0 g complies with test D. Prepare the reference solution using 2 mL of *lead standard solution* (10 ppm Pb) R.

Water (2.5.12): maximum 1.5 per cent, determined on 1.000 g.

Total ash (2.4.16): maximum 0.5 per cent, determined on 1.5 g.

STORAGE

Protected from light.

LABELLING

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