Oxidising substances. To 10 ml add 5 ml of *water R*, 2 ml of *potassium iodide solution R* and 2 ml of *dilute sulphuric acid R* and allow to stand in a ground-glass-stoppered flask protected from light for 15 min. Titrate with *0.05 M sodium thiosulphate*, using 1 ml of *starch solution R* as indicator. Not more than 0.2 ml of *0.05 M sodium thiosulphate* is required.

Reducing substances. To 1 ml add 1 ml of *dilute ammonia R1* and heat in a water-bath at 60 °C for 5 min. The solution is not yellow. Immediately add 0.15 ml of *0.1 M silver nitrate* and allow to stand for 5 min. The solution does not change its appearance.

Heavy metals (*2.4.8*). Mix 4 ml with 16 ml of *water R*. 12 ml of the solution complies with limit test A for heavy metals (5 ppm *m/V*). Prepare the reference solution using *lead standard solution (1 ppm Pb) R*.

Water (*2.5.12*). Not more than 0.2 per cent, determined on 5.00 g by the semi-micro determination of water.

Sulphated ash (*2.4.14*). Heat 50 g until it burns and ignite. Allow to cool. Moisten the residue with *sulphuric acid R* and ignite; repeat the operations. The residue weighs not more than 5 mg (0.01 per cent).

STORAGE

Store in an airtight container.

01/2008:2122

PROPYLENE GLYCOL DICAPRYLOCAPRATE

Propylenglycoli dicaprylocapras

DEFINITION

Propylene glycol diesters of saturated fatty acids, mainly caprylic (octanoic) acid and capric (decanoic) acid, of vegetable origin.

CHARACTERS

Appearance: almost colourless to light yellow, oily liquid.

Solubility: practically insoluble in water, soluble in fatty oils and in light petroleum, slightly soluble in anhydrous ethanol.

IDENTIFICATION

A. Refractive index (*2.2.6*): 1.439 to 1.442.

B. Relative density (*2.2.5*): 0.910 to 0.930.

C. Viscosity (*2.2.9*): 9 mPa·s to 12 mPa·s.

D. It complies with the test for composition of fatty acids (see Tests).

TESTS

Appearance. The substance to be examined is clear (*2.2.1*) and not more intensely coloured than reference solution BY_6 (*2.2.2, Method II*).

Acid value (*2.5.1*): maximum 0.2.

Hydroxyl value (*2.5.3, Method A*): maximum 10.

Iodine value (*2.5.4*): maximum 1.0.

Peroxide value (*2.5.5, Method A*): maximum 1.0.

Saponification value (*2.5.6*): 320 to 340.

Unsaponifiable matter (*2.5.7*): maximum 0.3 per cent, determined on 5.0 g.

Alkaline impurities. Dissolve 2.00 g of the substance to be examined in a mixture of 1.5 ml of *ethanol (96 per cent) R* and 3.0 ml of *ether R*. Add 0.05 ml of *bromophenol blue solution R*. Not more than 0.15 ml of *0.01 M hydrochloric acid* is required to change the colour of the indicator to yellow.

Composition of fatty acids. Gas chromatography (*2.4.22, Method C*). Prepare reference solution (a) as indicated in Table 2.4.22.-2.

Column:

– *material*: fused silica,

– *size*: *l* = 30 m, Ø = 0.32 mm,

– *stationary phase*: *macrogol 20 000 R* (film thickness 0.5 µm),

Carrier gas: *helium for chromatography R*.

Flow rate: 1.3 ml/min.

Split ratio: 1:100.

Temperature:

	Time (min)	Temperature (°C)
Column	0 - 1	70
	1 - 35	70 → 240
	35 - 50	240
Injection port		250
Detector		250

Detection: flame ionisation.

Composition of the fatty acid fraction of the substance to be examined:

– *caproic acid*: maximum 2.0 per cent,

– *caprylic acid*: 50.0 per cent to 80.0 per cent,

– *capric acid*: 20.0 per cent to 50.0 per cent,

– *lauric acid*: maximum 3.0 per cent,

– *myristic acid*: maximum 1.0 per cent.

Water (*2.5.12*): maximum 0.1 per cent, determined on 5.00 g.

Total ash (*2.4.16*): maximum 0.1 per cent, determined on 2.0 g.

STORAGE

Protected from light.

01/2008:2087

PROPYLENE GLYCOL DILAURATE

Propylenglycoli dilauras

DEFINITION

Mixture of propylene glycol mono- and diesters of lauric (dodecanoic) acid.

Content: minimum 70.0 per cent of diesters and maximum 30.0 per cent of monoesters.

CHARACTERS

Appearance: clear, oily liquid at 20 °C, colourless or slightly yellow.

Solubility: practically insoluble in water, very soluble in alcohol, in methanol and in methylene chloride.

IDENTIFICATION

A. Thin-layer chromatography (*2.2.27*).