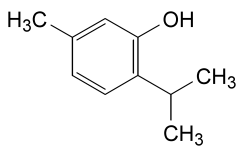
01/2008:0791

THYMOL

Thymolum



$C_{10}H_{14}O$ M_r 150.2
[89-83-8]

DEFINITION

5-Methyl-2-(methylethyl)phenol.

CHARACTERS

Appearance: colourless crystals.

Solubility: very slightly soluble in water, very soluble in ethanol (96 per cent), freely soluble in essential oils and in fatty oils, sparingly soluble in glycerol. It dissolves in dilute solutions of alkali hydroxides.

IDENTIFICATION

First identification: B.

Second identification: A, C, D.

A. Melting point (*2.2.14*): 48 °C to 52 °C.

B. Infrared absorption spectrophotometry (*2.2.24*).
Comparison: *thymol CRS.*

C. Dissolve 0.2 g with heating in 2 ml of *dilute sodium hydroxide solution R* and add 0.2 ml of *chloroform R*. Heat on a water-bath. A violet colour develops.

D. Dissolve about 2 mg in 1 ml of *anhydrous acetic acid R*. Add 0.15 ml of *sulphuric acid R* and 0.05 ml of *nitric acid R*. A bluish-green colour develops.

TESTS

Appearance of solution. The solution is not more opalescent than reference suspension IV (*2.2.1*) and not more intensely coloured than reference solution R_6 (*2.2.2, Method II*).

Dissolve 1.0 g in 10 ml of *dilute sodium hydroxide solution R*.

Acidity. To 1.0 g in a 100 ml glass-stoppered conical flask add 20 ml of *water R*. Boil until dissolution is complete, cool and stopper the flask. Shake vigorously for 1 min. Add a few crystals of the substance to be examined to initiate crystallisation. Shake vigorously for 1 min and filter. To 5 ml of the filtrate add 0.05 ml of *methyl red solution R* and 0.05 ml of *0.01 M sodium hydroxide*. The solution is yellow.

Related substances. Gas chromatography (*2.2.28*).

Test solution. Dissolve 0.100 g of the substance to be examined in *ethanol (96 per cent) R* and dilute to 10.0 ml with the same solvent.

Reference solution (a). Dilute 1 ml of the test solution to 100 ml with *ethanol (96 per cent) R*.

Reference solution (b). Dilute 1 ml of reference solution (a) to 10 ml with *ethanol (96 per cent) R*.

Reference solution (c). Dilute 5 ml of reference solution (b) to 10 ml with *ethanol (96 per cent) R*.

Column:

– *material*: glass or steel;
– *size*: *l* = 4 m, Ø = 2 mm;
– *stationary phase*: *diatomaceous earth for gas chromatography R*, impregnated with a mixture suitable for the separation of free fatty acids.

Carrier gas: *nitrogen for chromatography R.*

Flow rate: 30 ml/min.

Temperature:

	Time (min)	Temperature (°C)
Column	0 - 2	80
	2 - 22	80 → 240
	22 - 37	240
Injection port		250
Detector		300

Detection: flame ionisation.

Injection: 1 µl.

System suitability: reference solution (b):

– *signal-to-noise ratio*: minimum 5 for the principal peak.

Limits:

– *total*: not more than the area of the principal peak in the chromatogram obtained with reference solution (a) (1.0 per cent);
– *disregard limit*: the area of the principal peak in the chromatogram obtained with reference solution (c) (0.05 per cent).

Residue on evaporation: maximum 0.05 per cent.

Evaporate 2.00 g on a water-bath and heat in an oven at 100-105 °C for 1 h. The residue weighs not more than 1.0 mg.

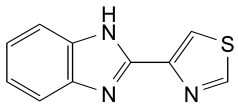
STORAGE

Protected from light.

01/2008:0866

TIABENDAZOLE

Tiabendazolum



$C_{10}H_7N_3S$ M_r 201.2
[148-79-8]

DEFINITION

Tiabendazole contains not less than 98.0 per cent and not more than the equivalent of 101.0 per cent of 2-(thiazol-4-yl)-1*H*-benzimidazole, calculated with reference to the anhydrous substance.

CHARACTERS

A white or almost white, crystalline powder, practically insoluble in water, slightly soluble in alcohol and in methylene chloride. It dissolves in dilute mineral acids. It melts at about 300 °C.

IDENTIFICATION

First identification: B.

Second identification: A, C, D.