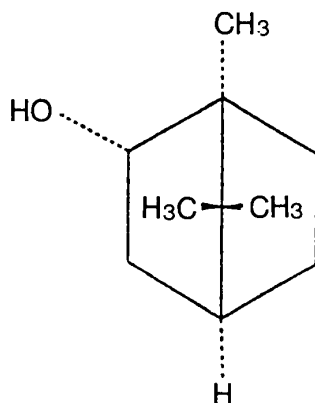


D. MONOGRAPHS

d-Borneol



C₁₀H₁₈O

Mol. Wt. 154.25

(1*R*-endo)-1,7,7-trimethyl-bicyclo [2,2,1] heptan-2-ol

Content *d*-Borneol contains not less than 95.0% of *d*-borneol (C₁₀H₁₈O).

Description *d*-Borneol occurs as white crystals, crystalline powder, or lumps, having a Borneo camphor-like odor.

Identification (1) Grind, and mix with an equal amount of thymol. It liquefies.

(2) Place about 0.1g of *d*-Borneol into a test tube, heat the bottom part of the test tube tilted about 45° in a colorless flame of Bunsen burner for 1 minute. A white sublimate adheres on the upper place of the test tube.

Purity (1) Specific rotation $[\alpha]_D^{20}$: +16.05 - +37.0° (2.5 g, ethanol, 25 ml).

(2) Melting point 205 - 210°.

(3) Heavy metals Not more than 10 µg/g as Pb (2.5 g, Method 2, Lead Standard Solution 2.0 ml).

(4) Arsenic Not more than 4.0 µg/g as As₂O₃ (0.50g, Method 4, Apparatus B).

Assay Weigh accurately about 1 g of *d*-Borneol, place into a 200-ml flask with a stopper, and exactly 5 ml of acetic anhydride-pyridine TS, equip the flask with a reflux condenser (with its ground-glass joint moistened with 2 - 3 drops of pyridine), and heat in a water bath for 3 hours. After cooling, wash the residue through the reflux condenser with 10 ml of water, combine the liquid in the flask and the washings, and allow to cool until reaching to the room temperature. Add again 10 ml of water, stopper, and shake well. Wash the inside of the flask and the joint of the condenser with 5 ml of neutralized ethanol, and titrate with ethanolic 0.5 mol/l potassium hydroxide (indicator: 10 drops of cresol-red-thymol blue TS). Perform a blank test in the same manner.

1 ml of 0.5 mol/l ethanolic potassium hydroxide = 77.13 mg of C₁₀H₁₈O