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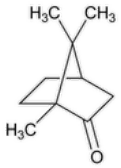
Camphor



$C_{10}H_{16}O$ 152.23
Bicyclo[2.2.1]heptane-2-one, 1,7,7-trimethyl-;
Camphor;
2-Bornanone CAS RN®: 76-22-2; UNII: 5TJD82A1ET.

DEFINITION

Camphor is a ketone of *Cinnamomum camphora* (L.) Nees et Ebermaier (Fam. Lauraceae) (natural Camphor), or is produced synthetically (synthetic Camphor).

IMPURITIES

• **Limit of Nonvolatile Residue**

Sample: 2.0 g of Camphor

Analysis: Heat the *Sample* in a tared dish on a steam bath until sublimation is complete. Dry the residue at 120° for 3 h, cool, and weigh.

Acceptance criteria: 0.05%; the weight of the residue does not exceed 1.0 mg.

• **Halogens**

Sample: Mix 100 mg of finely divided Camphor with 200 mg of sodium peroxide in a clean, dry, hard glass test tube about 25 mm in internal diameter and 20 cm in length. Suspend the tube at an angle of about 45°, using a clamp placed at the upper end. Gently heat the tube, starting near the upper end, but not heating the clamp. Gradually bring the heat toward the lower part of the tube until incineration is complete.

Analysis: Dissolve the residue in 25 mL of warm water, acidify with nitric acid, and filter the solution into a comparison tube. Wash the test tube and the filter with two 10-mL portions of hot water, adding the washings to the filtered solution. To the filtrate add 0.50 mL of 0.10 N silver nitrate, dilute with water to 50 mL, and mix.

Acceptance criteria: 0.035%; the turbidity does not exceed that produced in a blank test with the same quantities of the same reagents and 0.050 mL of 0.020 N hydrochloric acid.

SPECIFIC TESTS

• **Melting Range or Temperature ⟨741⟩:** 174°–179°

• **Optical Rotation, *Specific Rotation*⟨781S⟩**

Sample solution: 100 mg/mL in alcohol

Synthetic Camphor is optically inactive.

Acceptance criteria: +41° to +43° for natural Camphor

• **Appearance of Solution:** A 100-mg/mL solution in solvent hexane is clear.

ADDITIONAL REQUIREMENTS

• **Packaging and Storage:** Preserve in tight containers, and avoid exposure to excessive heat.

• **Labeling:** Label it to indicate whether it is of natural sources or is prepared synthetically.

Auxiliary Information - Please check for your question in the FAQs before contacting USP.

Topic/Question	Contact	Expert Committee
CAMPHOR	Documentary Standards Support	SM12020 Small Molecules 1

Chromatographic Database Information: Chromatographic Database

Most Recently Appeared In:
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