add 2 to 3 drops of sulfuric acid: a deep red-brown to deep red-purple color develops.

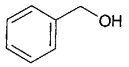
Purity Ethanol-insoluble substances—Boil gently 1.0 g of Benzoin with 30 mL of ethanol (95) on a water bath for 15 minutes under a reflux condenser. After cooling, collect the insoluble substances through a tared glass filter (G3), and wash with three 5-mL portions of ethanol (95). Dry the residue at 105°C for 4 hours: the mass of the residue does not exceed 0.30 g.

Total ash Not more than 2.0%.

Acid-insoluble ash Not more than 1.0%.

Benzyl Alcohol

ベンジルアルコール



C_7H_8O: 108.14
Benzyl alcohol [*100-51-6*]

Benzyl Alcohol contains not less than 98.0% of C_7H_8O.

Description Benzyl Alcohol is a clear, colorless liquid. It is odorless, or has a faint, aromatic odor. It has an irritative, burning taste.

It is miscible with ethanol (95) and with diethyl ether.

It is soluble in water.

It is gradually affected by air and by light with decreasing solubility in water.

Identification Add 1 mL of Benzyl Alcohol to 5 mL of a solution of potassium permanganate (1 in 20), add 2 mL of dilute sulfuric acid, and shake for 2 minutes. Add 20 mL of chloroform, and shake well. Evaporate the chloroform layer on a water bath: the residue has the odor of benzaldehyde. Dissolve the residue in 5 mL of aldehyde-free ethanol, and add 1 mL of 2,4-dinitrophenylhydrazine TS: an orange precipitate is produced.

Refractive index n_D^{20}: 1.538 - 1.541

Specific gravity d_{20}^{20}: 1.043 - 1.053

Purity **(1)** Clarity and color of solution—Dissolve 1.0 mL of Benzyl Alcohol in 40 mL of water: the solution is clear and colorless.

(2) Acid—To 10 mL of Benzyl Alcohol add 10 mL of neutralized ethanol, 0.20 mL of 0.1 mol/L sodium hydroxide VS and 2 drops of phenolphthalein TS: a red color develops.

(3) Benzaldehyde—Dissolve 1.0 mL of Benzyl Alcohol in water to make 100 mL. Transfer 10.0 mL of the solution to a Nessler tube, add water to make 25 mL, add 1 mL of 2,4-dinitrophenyhydrazine TS, mix, and allow to stand for 5 minutes: no turbidity nor floating matters forms.

(4) Chlorinated compounds—Perform the test with 2 drops of Benzyl Alcohol according to the Flame Coloration Test (2): no green color appears.

Residue on ignition Not more than 0.005% (20 g, after evaporation).

Distilling range 202.5 - 206.5°C, not less than 96.0 v/v%.

Assay Weigh accurately about 0.5 g of Benzyl Alcohol, add exactly 10 mL of a mixture of pyridine and acetic anhydride (17:3), and heat on a water bath under a reflux condenser for 30 minutes. Cool, add 25 mL of water, and titrate the excess acetic acid with 1 mol/L sodium hydroxide VS (indicator: 2 drops of phenolphthalein TS). Perform a blank determination.

Each mL of 1 mol/L sodium hydroxide VS
= 108.14 mg of C_7H_8O

Containers and storage Containers—Tight containers.
Storage—Light-resistant.

Benzyl Benzoate

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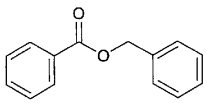

$C_{14}H_{12}O_2$: 212.24
Benzyl benzoate [*120-51-4*]

Benzyl Benzoate contains not less than 99.0% of $C_{14}H_{12}O_2$.

Description Benzyl Benzoate is a colorless, clear, viscous liquid. It has a faint, aromatic odor and a pungent, burning taste.

It is miscible with ethanol (95) and with diethyl ether.

It is practically insoluble in water.

Congealing point: about 17°C

Specific gravity d_{20}^{20}: about 1.123

Boiling point: about 323°C

Identification **(1)** Heat gently 1 mL of Benzyl Benzoate with 5 mL of sodium carbonate TS and 2 mL of potassium permanganate TS: the odor of benzaldehyde is perceptible.

(2) Warm the titrated mixture obtained in the Assay on a water bath to remove ethanol, and add 0.5 mL of iron (III) chloride TS: a light yellow-red precipitate is produced, which turns white on the addition of dilute hydrochloric acid.

Refractive index n_D^{20}: 1.568 - 1.570

Purity Acid—Dissolve 5.0 mL of Benzyl Benzoate in 25 mL of neutralized ethanol, and add 0.50 mL of 0.1 mol/L sodium hydroxide VS: a red color develops.

Residue on ignition Not more than 0.05% (2 g).

Assay Weigh accurately about 2 g of Benzyl Benzoate, add exactly 50 mL of 0.5 mol/L potassium hydroxide-ethanol VS, and boil gently for 1 hour under a reflux condenser with a carbon dioxide-absorbing tube (soda lime). Cool, and titrate the excess potassium hydroxide with 0.5 mol/L hydrochloric acid VS (indicator: 2 drops of phenolphthalein TS). Perform a blank determination.