

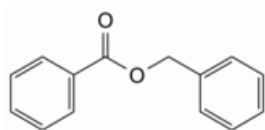


Edition: BP 2025 (Ph. Eur. 11.6 update)

Benzyl Benzoate

[General Notices](#)

(Ph. Eur. monograph 0705)



$C_{14}H_{12}O_2$ 212.2 120-51-4

Action and use

Used topically in the treatment of scabies.

Preparation

[Benzyl Benzoate Application](#)

Ph Eur

DEFINITION

Phenylmethyl benzoate.

Content

99.0 per cent to 100.5 per cent.

CHARACTERS

Appearance

Colourless or almost colourless crystals or colourless or almost colourless, oily liquid.

Solubility

Practically insoluble in water, miscible with ethanol (96 per cent), with methylene chloride and with fatty and essential oils.

bp

About 320 °C.

IDENTIFICATION

First identification: A.

Second identification: B, C.

A. Infrared absorption spectrophotometry ([2.2.24](#)).

Comparison [Ph. Eur. reference spectrum of benzyl benzoate](#).

B. To 2 g add 25 mL of [alcoholic potassium hydroxide solution R](#) and boil under a reflux condenser for 2 h. Remove the ethanol on a water-bath, add 50 mL of [water R](#) and distill. Collect about 25 mL of distillate and use it for identification test C. Acidify the liquid remaining in the distillation flask with [dilute hydrochloric acid R](#). A white precipitate is formed that, when washed with [water R](#) and dried *in vacuo* melts ([2.2.14](#)) at 121 °C to 124 °C.

C. To the distillate obtained in identification test B add 2.5 g of [potassium permanganate R](#) and 5 mL of [dilute sodium hydroxide solution R](#). Boil under a reflux condenser for 15 min, cool and filter. Acidify the filtrate with [dilute hydrochloric acid R](#). A white precipitate is formed that, when washed with [water R](#) and dried *in vacuo*, melts ([2.2.14](#)) at 121 °C to 124 °C.

TESTS

Acidity

Dissolve 2.0 g in [ethanol \(96 per cent\) R](#) and dilute to 10 mL with the same solvent. Titrate with [0.1 M sodium hydroxide](#) using [phenolphthalein solution R](#) as indicator. Not more than 0.2 mL is required to change the colour of the indicator to pink.

[Relative density](#) ([2.2.5](#))

1.118 to 1.122.

[Refractive index](#) ([2.2.6](#))

1.568 to 1.570.

[Freezing point](#) ([2.2.18](#))

Minimum 17.0 °C.

[Sulfated ash](#) ([2.4.14](#))

Maximum 0.1 per cent, determined on 1.0 g.

ASSAY

To 2.000 g add 50.0 mL of [0.5 M alcoholic potassium hydroxide](#) and boil gently under a reflux condenser for 1 h. Titrate the hot solution with [0.5 M hydrochloric acid](#) using 1 mL of [phenolphthalein solution R](#) as indicator. Carry out a blank determination.

1 mL of [0.5 M alcoholic potassium hydroxide](#) is equivalent to 106.1 mg of C₁₄H₁₂O₂.

STORAGE

In an airtight, well-filled container, protected from light.

