



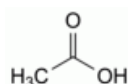
Edition: BP 2025 (Ph. Eur. 11.6 update)

Glacial Acetic Acid



[General Notices](#)

(Ph. Eur. monograph 0590)



C₂H₄O₂ 60.1 64-19-7

Ph Eur

DEFINITION

Content

99.0 per cent *m/m* to 100.5 per cent *m/m*.

CHARACTERS

Appearance

Crystalline mass or clear, colourless, volatile liquid.

Solubility

Miscible with water, with ethanol (96 per cent) and with methylene chloride.

IDENTIFICATION

- A. A 100 g/L solution is strongly acid ([2.2.4](#)).
B. To 0.03 mL add 3 mL of [water R](#) and neutralise with [dilute sodium hydroxide solution R](#). The solution gives reaction (b) of acetates ([2.3.1](#)).

TESTS

Solution S

Dilute 20 mL to 100 mL with [distilled water R](#).

Appearance

The substance to be examined is clear ([2.2.1](#)) and colourless ([2.2.2, Method II](#)).

Freezing point ([2.2.18](#))

Minimum 14.8 °C.

Reducing substances

Dilute 2.0 mL to 10.0 mL with [water R](#). Add 0.1 mL of [0.02 M potassium permanganate](#). Heat on a water-bath for 1 min, the colour remains pink.

Chlorides ([2.4.4](#))

Maximum 25 mg/L.

Dilute 10 mL of solution S to 15 mL with [water R](#).

Sulfates ([2.4.13](#))

Maximum 50 mg/L, determined on solution S.

Iron ([2.4.9](#))

Maximum 5 ppm.

Dissolve the residue obtained in the test for residue on evaporation by heating with 2 quantities, each of 15 mL, of [water R](#) and dilute to 50.0 mL with [water R](#). Dilute 5.0 mL of the solution to 10.0 mL with [water R](#).

Residue on evaporation

Maximum 0.01 per cent.

Evaporate 20 g to dryness on a water-bath and dry at 100-105 °C. The residue weighs a maximum of 2.0 mg.

ASSAY

Weigh accurately a conical flask with a ground-glass stopper containing 25 mL of [water R](#). Add 1.0 mL of the substance to be examined and weigh again accurately. Add 0.5 mL of [phenolphthalein solution R](#) and titrate with [1 M sodium hydroxide](#).

1 mL of [1 M sodium hydroxide](#) is equivalent to 60.1 mg of $C_2H_4O_2$.

STORAGE

In an airtight container.

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