

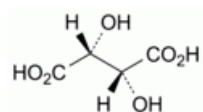


Edition: BP 2025 (Ph. Eur. 11.6 update)

Tartaric Acid

[General Notices](#)

(Ph. Eur. monograph 0460)



$C_4H_6O_6$ 150.1 87-69-4

Ph Eur

DEFINITION

(2*R*,3*R*)-2,3-Dihydroxybutanedioic acid.

The substance is of natural origin, obtained by extraction of lees during winemaking.

Content

99.5 per cent to 101.0 per cent (dried substance).

CHARACTERS

Appearance

White or almost white, crystalline powder or colourless crystals.

Solubility

Very soluble in water, freely soluble in ethanol (96 per cent).

IDENTIFICATION

- A. Solution S (see Tests) is strongly acid ([2.2.4](#)).
B. It gives the reactions of tartrates ([2.3.1](#)).

TESTS

Solution S

Dissolve 5.0 g in [distilled water R](#) and dilute to 50 mL with the same solvent.

Appearance of solution

Solution S is clear ([2.2.1](#)) and not more intensely coloured than reference solution Y₆ ([2.2.2, Method II](#)).

Specific optical rotation ([2.2.7](#))

+ 12.0 to + 12.8 (dried substance).

Dissolve 5.00 g in [water R](#) and dilute to 25.0 mL with the same solvent.

Oxalic acid

Maximum 360 ppm, calculated as anhydrous oxalic acid.

Dissolve 0.80 g in 4 mL of [water R](#). Add 3 mL of [hydrochloric acid R](#) and 1 g of [zinc R](#) in granules and boil for 1 min. Allow to stand for 2 min. Collect the liquid in a test-tube containing 0.25 mL of a 10 g/L solution of [phenylhydrazine hydrochloride R](#) and heat to boiling. Cool rapidly, transfer to a graduated cylinder and add an equal volume of [hydrochloric acid R](#) and 0.25 mL of a 50 g/L solution of [potassium ferricyanide R](#). Shake and allow to stand for 30 min. Any pink colour in the solution is not more intense than that in a standard prepared at the same time in the same manner using 4 mL of a 0.1 g/L solution of [oxalic acid R](#).

Chlorides ([2.4.4](#))

Maximum 100 ppm.

Dilute 5 mL of solution S to 15 mL with [water R](#).

Sulfates ([2.4.13](#))

Maximum 150 ppm.

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

Calcium ([2.4.3](#))

Maximum 200 ppm.

To 5 mL of solution S add 10 mL of a 50 g/L solution of [sodium acetate R](#) in [distilled water R](#).

Loss on drying ([2.2.32](#))

Maximum 0.2 per cent, determined on 1.000 g by drying in an oven at 105 °C.

Sulfated ash ([2.4.14](#))

Maximum 0.1 per cent, determined on 1.0 g.

ASSAY

Dissolve 0.650 g in 25 mL of [water R](#). Titrate with [1 M sodium hydroxide](#) using 0.5 mL of [phenolphthalein solution R](#) as indicator, until a pink colour is obtained.

1 mL of [1 M sodium hydroxide](#) is equivalent to 75.05 mg of C₄H₆O₆.

