



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

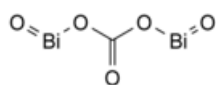
Bismuth Subcarbonate



[General Notices](#)

Bismuth Carbonate

(*Ph. Eur. monograph 0012*)



(BiO)₂CO₃ 510 5892-10-4

Ph Eur

DEFINITION

Bis(oxobismuthanyl) carbonate.

Content

80.0 per cent to 82.5 per cent of Bi (*A*_r 209.0) (dried substance).

CHARACTERS

Appearance

White or almost white powder.

Solubility

Practically insoluble in water and in ethanol (96 per cent). It dissolves with effervescence in mineral acids.

IDENTIFICATION

- A. It gives the reaction of carbonates ([2.3.1](#)).
- B. It gives the reactions of bismuth ([2.3.1](#)).

TESTS

Solution S

Shake 5.0 g with 10 mL of [water R](#) and add 20 mL of [nitric acid R](#). Heat to dissolve, cool and dilute to 100 mL with [water R](#).

Appearance of solution

Solution S is not more opalescent than reference suspension II ([2.2.1](#)) and is colourless ([2.2.2, Method II](#)).

Chlorides ([2.4.4](#))

Maximum 500 ppm.

To 6.6 mL of solution S add 4 mL of [nitric acid R](#) and dilute to 50 mL with [water R](#).

Nitrates

Maximum 0.4 per cent.

To 0.25 g in a 125 mL conical flask, add 20 mL of [water R](#), 0.05 mL of [indigo carmine solution R1](#) and then, as a single addition but with caution, 30 mL of [sulfuric acid R](#). Titrate immediately with [indigo carmine solution R1](#) until a stable blue colour is obtained. Not more than n mL of the titrant is required, n being the volume corresponding to 1 mg of NO_3 .

Alkali and alkaline-earth metals

Maximum 1.0 per cent.

To 1.0 g add 10 mL of [water R](#) and 10 mL of [acetic acid R](#). Boil for 2 min, cool and filter. Wash the residue with 20 mL of [water R](#). To the combined filtrate and washings add 2 mL of [dilute hydrochloric acid R](#) and 20 mL of [water R](#). Boil and pass [hydrogen sulfide R](#) through the boiling solution until no further precipitate is formed. Filter, wash the residue with [water R](#), evaporate the combined filtrate and washings to dryness on a water-bath and add 0.5 mL of [sulfuric acid R](#). Ignite gently and allow to cool. The residue weighs a maximum of 10 mg.

[Loss on drying \(2.2.32\)](#)

Maximum 1.0 per cent, determined on 1.000 g by drying in an oven at 105 °C.

ASSAY

Dissolve 0.500 g in 3 mL of [nitric acid R](#) and dilute to 250 mL with [water R](#). Carry out the complexometric titration of bismuth ([2.5.11](#)).

1 mL of [0.1 M sodium edetate](#) is equivalent to 20.90 mg of Bi.

STORAGE

Protected from light.

Ph Eur