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

Mercuric Chloride

General Notices

(Ph. Eur. monograph 0120)

$HgCl_2$ 271.5 *7487-94-7*

Ph Eur

DEFINITION

Content

99.5 per cent to 100.5 per cent (dried substance).

CHARACTERS

Appearance

White or almost white, crystalline powder or colourless or white or almost white crystals or heavy crystalline masses.

Solubility

Soluble in water and in glycerol, freely soluble in ethanol (96 per cent).

IDENTIFICATION

A. It gives reaction (a) of chlorides (*2.3.1*).
B. Solution S (see Tests) gives the reactions of mercury (*2.3.1*).

TESTS

Solution S

Dissolve 1.0 g in *carbon dioxide-free water R* and dilute to 20 mL with the same solvent.

Appearance of solution

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

Acidity or alkalinity

To 10 mL of solution S add 0.1 mL of *methyl red solution R*. The solution is red. Add 0.5 g of *sodium chloride R*. The solution becomes yellow. Not more than 0.5 mL of *0.01 M hydrochloric acid* is required to change the colour to red.

Mercurous chloride

Dissolve 1.0 g in 30 mL of *ether R*. The solution shows no opalescence.

Loss on drying (*2.2.32*)

Maximum 1.0 per cent, determined on 2.00 g by drying *in vacuo* for 24 h.

ASSAY

Dissolve 0.500 g in 100 mL of *water R*. Add 20.0 mL of *0.1 M sodium edetate* and 5 mL of *buffer solution pH 10.9 R*. Allow to stand for 15 min. Add 0.1 g of *mordant black 11 triturate R* and titrate with *0.1 M zinc sulfate* until the colour changes to purple. Add 3 g of *potassium iodide R*, allow to stand for 2 min, add a further 0.1 g of *mordant black 11 triturate R* and titrate with *0.1 M zinc sulfate*.

1 mL of *0.1 M zinc sulfate* used in the second titration is equivalent to 27.15 mg of $HgCl_2$.

STORAGE

Protected from light.

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