Z - Zinc acetate R.... Zirconyl nitrate TS

Zinc acetate R

$C_4H_6O_4Zn,2H_2O$ (SRIP, 1963, p. 216).

Zinc AsR, granulated

Granulated zinc R that complies with the following tests:

Limit of arsenic. Add 10 mL of stannated hydrochloric acid (~250 g/L) AsTS to 50 mL of water and apply the general test for arsenic; use 10 g of granulated zinc R and allow the reaction to continue for 1 hour; no visible stain is produced.

Test for sensitivity. Repeat the test for arsenic with the addition of 0.1 mL of dilute arsenic AsTS; a faint but distinct yellow-coloured stain is produced.

Zinc bis(dibenzyldithiocarbamate) R

$Zn(C_5H_{10}NS_2)_2$.

Description. A white, crystalline powder.

Solubility. Soluble in chloroform R.

Melting range. 178–180 °C.

Zinc bis(dibenzyldithiocarbamate) TS

Procedure. Dissolve 10.0 mg of zinc bis(dibenzyldithiocarbamate) R in sufficient carbon tetrachloride R to produce 100 mL.

Zinc chloride R

$ZnCl_2$ (SRIP, 1963, p. 217).

Zinc R

Zn (SRIP, 1963, p. 216); granulated, powder or dust.

Zinc standard (20 µg/mL Zn) TS

Procedure. To 4.398 g of zinc sulfate R add 1 mL of acetic acid (~300 g/L) TS and dilute with sufficient water to produce 1000 mL. Dilute 1 mL of this solution to 100 mL with water.

Zinc sulfate R

$ZnSO_4,7H_2O$. Contains not less than 99.0% and not more than 105.0% of $ZnSO_4,7H_2O$.

Description. Colourless crystals or a white, crystalline powder; odourless; efflorescent.

Solubility. Very soluble in water; practically insoluble in ethanol (~750 g/L) TS.

Clarity and colour of solution. A 0.05 g/mL solution is clear and colourless.

Chlorides. Dissolve 0.7 g in a mixture of 2 mL of nitric acid (~130 g/L) TS and 30 mL of water and proceed as described under *2.2.1 Limit test for chlorides*; not more than 0.35 mg/g.

Iron. Use 0.4 g; the solution complies with the *2.2.4 Limit test for iron*; not more than 0.10 mg/g.

pH value. pH of a 0.05 g/mL solution, 4.4–5.6.

Assay. Dissolve about 0.2 g, accurately weighed, in 5 mL of acetic acid (~60 g/L) TS and proceed with the titration as described under *2.5 Complexometric titrations*. Each mL of disodium edetate (0.05 mol/L) VS is equivalent to 14.38 mg of $ZnSO_4,7H_2O$.

Storage. Store at a temperature below 35 °C in a tightly closed container.

Zirconyl nitrate R

Contains not less than 43.5% and not more than 45.5% of ZrO_2.

Description. A white powder.

Solubility. Soluble in water giving a solution that is clear or not more than faintly turbid.

Assay. Dissolve about 0.1 g, accurately weighed, in 5 mL of sulfuric acid (~1760 g/L) TS and add carefully 50 mL of water. Add, with stirring, 5 mL of hydrogen peroxide (~330 g/L) TS and 350 mL of diammonium hydrogen phosphate (100 g/L) TS. Add 40 mL

of sulfuric acid (~1760 g/L) TS and keep the mixture at a temperature of 40–50 °C for 2 hours. Filter and wash with not more than 200 mL of cold ammonium nitrate (50 g/L) TS until the washings no longer give the reaction A for orthophosphates described under *2.1 General identification tests*. Dry and ignite to constant weight. Each g of residue is equivalent to 0.4647 g of ZrO_2.

Zirconyl nitrate TS

Procedure. Dissolve 0.1 g of zirconyl nitrate R in a mixture of 60 mL of hydrochloric acid (~420 g/L) TS and 40 mL of water.