

D. MONOGRAPHS

Ammonium Chloride

NH₄Cl
ammonium chloride

Mol. Wt. 53.49
[12125-02-9]

Content Ammonium Chloride, when dried, contains not less than 99.0% of ammonium chloride (NH₄Cl).

Description Ammonium Chloride occurs as white crystalline powder or crystalline lumps, having a salty and cool taste.

Identification Ammonium Chloride responds to all tests for Ammonium Salt and for Chloride as described in the Qualitative Tests.

Purity (1) Clarity of solution Almost clear (2.0 g, water 20 ml).

(2) Heavy metals Not more than 20 µg/g as Pb (1.0 g, Method 1, Control solution Lead Standard Solution 2.0 ml).

(3) Arsenic Not more than 4.0 µg/g as As₂O₃ (0.50 g, Method 1, Apparatus B).

Loss on Drying Not more than 2.0% (4 hours).

Residue on Ignition Not more than 0.50%.

Assay Weigh accurately about 3 g of Ammonium Chloride, previously dried, and dissolve in water to make exactly 250 ml. Measure exactly 25 ml of this solution, add 10 ml of sodium hydroxide solution (2 5), and immediately equip with a distilling apparatus connected to a receiver containing 40 ml of 0.1 mol/l sulfuric acid, exactly measured. Heat to distill the ammonia into sulfuric acid. Titrate the excess sulfuric acid with 0.2 mol/l sodium hydroxide (indicator: 3 drops of methyl red TS).

1 ml of 0.1mol/l sulfuric acid = 10.698 mg of NH₄Cl