

D. MONOGRAPHS

Ammonium Dihydrogen Phosphate

Ammonium Phosphate, Monobasic

$\text{NH}_4\text{H}_2\text{PO}_4$

Mol. Wt. 115.03

monoammonium dihydrogen phosphate

[7722-76-1]

Content Ammonium Dihydrogen Phosphate contains 96.0 - 102.0% of ammonium dihydrogen phosphate ($\text{NH}_4\text{H}_2\text{PO}_4$).

Description Ammonium Dihydrogen Phosphate occurs as colorless to white crystals or as a white crystalline powder.

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

Purity (1) Clarity and color of solution Colorless and almost clear (1.0 g, water 20 ml).

(2) pH 4.1 - 5.0 (1.0 g, water 100 ml).

(3) Chloride Not more than 0.035% as Cl (0.50 g, Control solution 0.01 mol/l hydrochloric acid 0.50 ml).

(4) Sulfate Not more than 0.038% as SO_4 (0.50 g, Control solution 0.005 mol/l sulfuric acid 0.40 ml).

(5) Heavy metals Not more than 20 $\mu\text{g/g}$ as Pb.

Test Solution Dissolve 1.0 g of Ammonium Dihydrogen Phosphate in 2 ml of diluted acetic acid (1 : 20) and 30 ml of water, and add water to make 50 ml.

Control Solution Add 2 ml of diluted acetic acid (1 : 20) and water to 2 ml of Lead Standard Solution, measured exactly, to make 50 ml.

(6) Arsenic Not more than 4.0 $\mu\text{g/g}$ as As_2O_3 (0.50 g, Method 1, Apparatus B).

Assay Weigh accurately about 3 g of Ammonium Dihydrogen Phosphate, dissolve in 30 ml of water, add 5 g of sodium chloride, and shake well. Keep the solution at about 15 °C, and titrate with 1 mol/l sodium hydroxide (indicator: 2 drops of phenolphthalein TS).

1 ml of 1 mol/l sodium hydroxide = 115.03 mg of $\text{NH}_4\text{H}_2\text{PO}_4$