

AMMONIUM POLYPHOSPHATE

Prepared at the 41st JECFA (1993), published in FNP 52 Add 2 (1993) superseding specifications prepared at the 26th JECFA (1982), published in FNP 25 (1982). Metals and arsenic specifications revised at the 55th JECFA (2000)

A group MTDI of 70 mg/kg bw, as phosphorus from all food sources, was established at the 26th JECFA (1982)

SYNONYMS INS No. 452(v)

DEFINITION

Chemical names Ammonium polyphosphate

C.A.S. number 6833-79-9

Chemical formula Heterogeneous mixture of ammonium salts of linear condensed polyphosphoric acids of general formula $H_{n+2}P_nO_{3n+1}$

Assay Not less than 55.0% and not more than 75.0% on an anhydrous basis, calculated as P_2O_5

DESCRIPTION Aqueous solution

FUNCTIONAL USES Sequestrant, emulsifier

CHARACTERISTICS

IDENTIFICATION

Solubility Freely soluble in water

pH (Vol. 4) 4.0-9.0 (1 in 100 soln)

Test for ammonium
(Vol. 4) Passes test

Test for phosphate
(Vol. 4) Passes test
Test a solution resulting from mixing 0.5 g of sample with 10 ml of nitric acid and 50 ml of water, boiled for 30 min and cooled

PURITY

Cyclic phosphate (Vol. 4) Not more than 8% calculated as P_2O_5 content

Fluoride (Vol. 4) Not more than 10 mg/kg

Arsenic (Vol. 4) Not more than 3 mg/kg

Lead Not more than 4 mg/kg
Determine using an atomic absorption technique appropriate to the specified level. The selection of sample size and method of sample preparation may be

based on the principles of the method described in Volume 4, "Instrumental Methods."

**METHOD OF
ASSAY**

Proceed as directed under *Phosphate Determination as P₂O₅*, Method I, in Volume 4.