DIAMMONIUM HYDROGEN PHOSPHATE

Prepared at the 26th JECFA (1982), published in FNP 25 (1982) and FNP 52 (1992). Metals and arsenic specifications revised at the 59th JECFA (2002). A group MTDI of 70 mg/kg bw, as phosphorus from all food sources, was established at the 26th JECFA (1982)

SYNONYMS Dibasic ammonium phosphate, diammonium phosphate; INS No. 342(ii)

DEFINITION

Chemical names	Diammonium hydrogen phosphate, diammonium hydrogen tetraoxophosphate, diammonium hydrogen orthophosphate
C.A.S. number	7783-54-0
Chemical formula	$(NH_4)_2HPO_4$
Formula weight	132.06
Assay	Not less than 96.0% and not more than 102.0%

DESCRIPTION White crystals or crystalline powder

FUNCTIONAL USES Acidity regulator, dough conditioner, raising agent, yeast food

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4)	Soluble in water
pH (Vol. 4)	7.6 - 8.4 (1 in 100 soln)
Test for ammonium (Vol. 4)	Passes test
Test for phosphate (Vol. 4)	Passes test

PURITY

Fluoride (Vol. 4)	Not more than 10 mg/kg (Method I or III)
Arsenic (Vol. 4)	Not more than 3 mg/kg (Method II)
Lead (Volume 4)	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 Dissolve about 600 mg of the sample, accurately weighed, in 40 ml of water and titrate to a pH of 8.0 with 0.1 N sulfuric acid. Each ml of 0.1 N sulfuric acid is equivalent to 13.21 mg of $(NH_4)_2HPO_4$.