MAGNESIUM HYDROGEN PHOSPHATE

Prepared at the 26th JECFA (1982), published in FNP 25 (1982) and in FNP 52 (1992). Metals and arsenic specifications revised at the 63rd JECFA (2004). A group MTDI of 70 mg/kg bw, as phosphorus from all food sources, was established at the 26th JECFA (1982)

SYNONYMS: Magnesium phosphate, dibasic; secondary magnesium phosphate; dimagnesium phosphate; INS No. 343(ii).

DEFINITION: May contain 4, 5 or 8 molecules of water of hydration. The article of commerce can be specified further as to titration value.

Chemical names Magnesium hydrogen orthophosphate trihydrate, magnesium salt of phosphoric acid (1:1)

C.A.S. number 7757-86-0

Chemical formula MgHPO.3H2O

Formula weight 174.33

INS Code E343(ii)

Assay Not less than 96.0% on the ignited basis

DESCRIPTION Odourless white crystalline powder

USES Nutrient adjunct, dietary supplement, nutrient agent

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4) Slightly soluble in water, soluble in dilute acids, but insoluble in ethanol

Test for phosphate (Vol. 4) Passes test

Test for magnesium (Vol. 4) Dissolve 100 mg in 0.5 ml of diluted acetic acid TS and 20 ml of water. Add 1 ml of ferric chloride TS, let stand for 5 min and filter. The filtrate gives a positive test for Magnesium.

PURITY

Loss on ignition Not less than 29% and not more than 36% (800±25℃ to constant weight)

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

Use 10 ml of N hydrochloric acid to dissolve the sample

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

Lead (Vol. 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.”