

Phytin Datasheet

5th Edition (Revised in January, 2017)

[Product Information]

Name: Phytin

Catalog No.: CFN99795

Cas No.: 3615-82-5

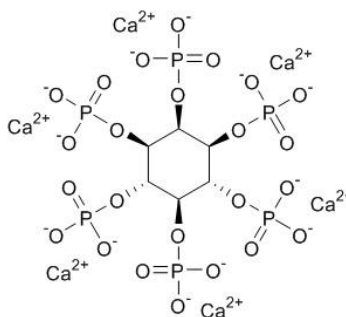
Purity: >=98%

M.F: C₆H₆Ca₆O₂₄P₆

M.W: 888.42

Physical Description: Powder

Synonyms: Calcium, magnesium, (2,3,4,5,6-pentaphosphonatooxycyclohexyl) phosphate; Calcium Phytate.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Synthetic precursor compounds;
5. Intermediates & Fine Chemicals;
6. Agricultural research;
7. Others.

[Source]

The herbs of *Oryza sativa*.

[Biological Activity or Inhibitors]

Phytin and magnesium citrate have hypocalciuric effect , they can reduce urinary calcium excretion in rats fed on high-calcium diets.^[1]

A six-day treatment with phytin can restore the normal level of the liver monooxygenase system components and MMW peptides, also can reduce the level of lactic acid (LA) and increased that of pyruvic acid (PA) in liver tissues, which lead to a sharp drop in the LA/MA ratio indicative of a decrease in the extent of hypoxia.^[2]

Individually phytin, EDTA and copper (Cu^{2+}) have inhibitory effect on growth of Gram positive as well as Gram negative bacteria, phytin preferentially protects only Gram negative bacteria from Cu^{2+} ion toxicity, phytin also has chelating ability.^[3]

[Solvent]

Pyridine, Methanol, Ethanol, etc.

[HPLC Method]^[4]

Mobile phase: 5 mM Sodium acetate trihydrate, gradient elution ;

Flow rate: 0.5 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 254 nm.

[Storage]

2-8°C , Protected from air and light, refrigerate or freeze.

[References]

[1] Wu N, Thon W F, Krah H, *et al. World J. Urol.*, 1994;12(6):323-8.

[2] Fkh R, Khakimov Z Z. *Eksp. Klin. Farmakol.*, 2001,64(1):71-3.

[3] Sarkar S, Pal M K, Basu P S. *Indian J. Exp. Biol.*, 1999, 37(6):618-20.

[4] *Chen J H. Chinese Journal of Chromatography, 1990, 8(6):386-7*

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