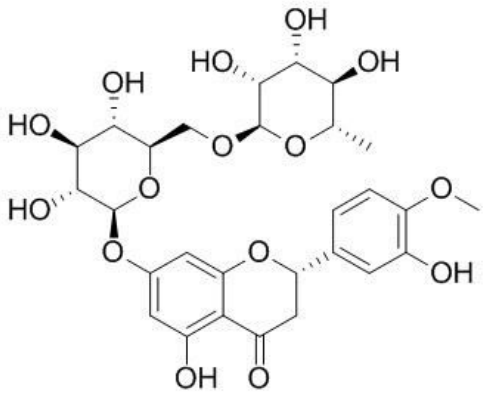
Natural Products

ChemFaces

Hesperidin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Hesperidin

Catalog No.: CFN98839

Cas No.: 520-26-3

Purity: > 98%

M.F: $C_{28}H_{34}O_{15}$

M.W: 610.6

Physical Description: Powder

Synonyms:(2S)-5-hydroxy-2-(3-hydroxy-4-methoxyphenyl)-7-[[(2S,3R,4S,5S)-3,4,5-trihydroxy-6-[[(2R,3R,4R,5R,6S)-3,4,5-trihydroxy-6-methyl-2-oxanyl]oxymethyl]-2-oxanyl]oxy]-3,4-dihydro-2H-1-benzopyran-4-one.

[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Ingredient in supplements, beverages;
8. Others.

[Source]

The fruits of *Citrus aurantium L.*

[Biological Activity or Inhibitors]

Hesperidin, a bioflavonoid, is an abundant and inexpensive by-product of Citrus cultivation, has antioxidant, anti-inflammatory, hypolipidemic, vasoprotective and anticarcinogenic and cholesterol lowering actions; can improves the health of capillaries by reducing the capillary permeability; can inhibit following enzymes: phospholipase A2, lipoxygenase, HMG-CoA reductase and cyclo-oxygenase. [1]

Hesperidin supplementation and diosmin individually or in combination, is effective in inhibiting the development of oesophageal cancer induced by MNAN, such inhibition might be related to suppression of increased cell proliferation caused by MNAN in the oesophageal mucosa.[2]

Hesperidin contributes to the vascular protective effects of orange juice.[3]

Hesperidin has beneficial effects on bone and lipids, can inhibit bone loss in ovariectomized mice (OVX), an animal model of postmenopausal osteoporosis. [4]

Hesperidin improves biomarkers of oxidative stress and has a hypocholesterolemic effect in an animal model of diet-induced hypercholesterolemia.[5]

[Solvent]

Pyridine, Methanol, Formamide, Hot water, Low-concentration alkali solution, etc.

[HPLC Method][6]

Mobile phase: Acetonitrile : H2O=20:80;

Flow rate: 1.0 ml/min;

Column temperature: Room temperature;

The wave length of determination: 280 nm.

[Storage]

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

[References]

[1] Garg A, Garg S, Zaneveld L J D, *et al. Phytotherapy Research Ptr, 2001, 15(8):655-69.*

[2] Tanaka T, Makita H, Kawabata K, *et al.Carcinogenesis, 1997, 18(4):761-9.*

[3] Morand C, Dubray C, Milenkovic D, *et al. Am. J. Clin. Nutr., 2011, 93(1):73-80.*

[4] Chiba H, Uehara M, Wu J X, *et al. J. Nutr., 2003, 133(6):74-5.*

[5] Mostafa M, El-Shafey, Mohamed F. *Int. J. Pharm. Sci.. 2014, 4(3): 554-5.*

[6] Han S, Mok S Y, Kim H M, *et al. 농업과학연구, 2011, 38(2):295-9.*

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