*Natural Products*

ChemFaces

# Astragalin Datasheet

4th Edition (Revised in July, 2016)

## [ Product Information ]

**Name:** Astragalin

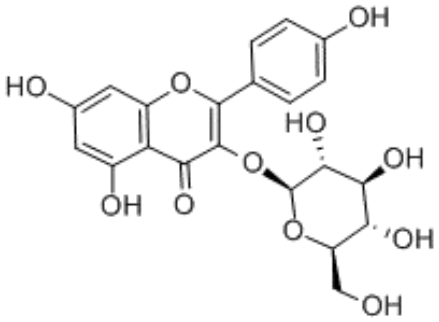
**Catalog No.:** CFN98733

**Cas No.:** 480-10-4

**Purity:** >= 98%

**M.F:** $C_{21}H_{20}O_{11}$

**M.W:** 448.38




**Physical Description:** Yellow powder

**Synonyms:**4H-1-Benzopyran-4-one,3-(b-D-glucopyranosyloxy)-5,7-dihydroxy-2-(4-hydroxyphenyl)-;3-Glucosylkaempferol;4',5,7-Trihydroxyflavone 3-b-D-Glucopyranoside; Kaempferol 3-O-glucoside;Kaempferol 3-O-b-D-glucoside;Kaempferol-3-glucoside; Kaempferol 3-O-b-D-glucopyranoside;Kaempferol 3-b-D-glucoside.

## [ Intended Use ]

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

## [ Source ]

The leaves of *Nelumbo nucifera Gaertn.*

## [ Biological Activity or Inhibitors]

Astragalin (kaempferol-3-O-glucoside), a newly found flavonoid from leaves of persimmon or Rosa agrestis, is known to have anti-atopic dermatitis and antioxidant activity; it also has anti-inflammatory activity, inhibits expression of proinflammatory mediators through the inhibition of NF-κB in macrophages.[1]

Astragalin has antiallergic effects on atopic dermatitis-model mice.[2]

Astragalin has antioxidant effect against free radical-induced oxidative hemolysis of human red blood cells. [3]

Astragalin can be effective in allaying ROS-promoted bronchial fibrosis through inhibiting autophagosome formation in airways.[4]

Astragalin decreases the overexpression of vascular endothelial growth factor (VEGF) in Müller cells and alleviates the effects caused by high glucose, thus, it has promising application in preventing and treating diabetic retinopathy (DR) caused by diabetes mellitus.[5]

Astragalin inhibits IL-1β-induced inflammatory mediators production in human osteoarthritis chondrocyte by inhibiting NF-κB and MAPK activation.[6]

## [ Solvent ]

Pyridine, Methanol, Ethanol, etc.

## [ HPLC Method ][7]

Mobile phase: 0.1% Phosphoric acid in acetonitrile- 0.16% Phosphoric acid and 0.18% triethylamine in water, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: 35 ℃;

The wave length of determination: 360 nm.

## [ Storage ]

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

## [ References ]


[1] Kim M S, Kim S H. *Arch. Pharm. Res., 2011, 34(12):2101-7.*

[2] Kotani M, Matsumoto M, Fujita A, *et al. J. Allergy. Clin. Immun.2000, 106(1Pt 1): 159-66.*

[3] Choi J, Kang H J, Kim S Z, *et al. Arch. Pharm. Res., 2013, 36(7):912-7.*

[4] Cho I H, Choi Y J, Gong J H, *et al. Resp. Res., 2015, 16(1):1-13.*

[5] Ke M, Hu X Q, Ouyang J, *et al. Bio-med. Mater. Eng., 2012, 22(1-3):113-9.*

[6] Ma Z, Piao T, Wang Y, *et al. Int. Immunopharmacol., 2015, 25(1):83-7.*

[7] Di X, Gu L Y, Wang H B, *et al. Chinese Journal of Experimental Traditional Medical Formulae, 2014, 20(15):92-5.*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