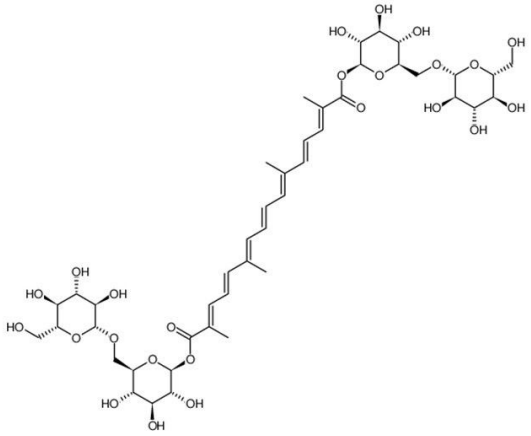
Natural Products

ChemFaces

Crocin Datasheet

4th Edition (Revised in July, 2016)

[Product Information]



Name: Crocin

Catalog No.: CFN90227

Cas No.: 42553-65-1

Purity: > 98%

M.F: $C_{44}H_{64}O_{24}$

M.W: 976.96

Physical Description: Red powder

Synonyms: Crocetin digentibiose ester;

Bis[(2S,3R,4S,5S,6R)-3,4,5-trihydroxy-6-({[(2R,3R,4S,5S,6R)-3,4,5-trihydroxy-6-(hydroxy methyl)tetrahydro-2H-pyran-2-yl]oxy}methyl)tetrahydro-2H-pyran-2-yl](2E,4E,6E,8E,10E, 12E,14E)-2,6,11,15-tetramethyl-2,4,6,8,10,12,14-hexadecaheptaenedioate.

[Intended Use]

1. Reference standards;

2. Pharmacological research;

3. Food and cosmetic research;

4. Synthetic precursor compounds;

5. Intermediates & Fine Chemicals;

6. Ingredient in supplements, beverages;

7. Others.

[Source]

The stigmas of *Crocus sativus L.*

[Biological Activity or Inhibitors]

Crocin is a pharmacologically active component of Crocus sativus L. (saffron) used in traditional Chinese medicine, crocin is a unique and potent antioxidant that combats oxidative stress in neurons.[1]

Crocin has water-solubility and high inhibitory growth effect , cells treated with crocin exhibits wide cytoplasmic vacuole-like areas, reduces cytoplasm, cell shrinkage and pyknotic nuclei, suggesting apoptosis induction; so crocin is the more promising saffron compound to be assayed as a cancer therapeutic agent.[2]

Saffron extracts have antitumour effects, radical scavenger properties or hypolipaemic effects, saffron extract or its active constituents, crocetin and crocin, could be useful as a treatment for neurodegenerative disorders accompanying memory impairment. [3]

Crocin and crocetin have anti-inflammatory effects, provide neuroprotection by reducing the production of various neurotoxic molecules from activated microglia.[4]

Crocin yields its hypolipidemic effect by inhibiting pancreatic lipase, leading to the malabsorption of fat and cholesterol.[5]

Crocin protects the photoreceptors against blue light- or white light-mediated damage in a concentration-dependent manner with an EC50 of approximately 30 microM, crocin protects retinal photoreceptors against light-induced cell death.[6]

[Solvent]

Pyridine, DMSO, Ethanol, Methanol, Hot water, etc.

[HPLC Method][7]

Mobile phase: Methanol : H2O =50:50;

Flow rate: 1.0 ml/min;

Column temperature: 25 ℃;

The wave length of determination: 440 nm.

[Storage]

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

[References]

[1] Ochiai T, Ohno S, Soeda S, *et al. Neurosci. Lett., 2004, 362(1):61-4.*

[2] Escribano J, Alonso G L, Coca-Prados M, *et al. Cancer Lett., 1996, 100(1-2):23-30.*

[3] Abe K, Saito H. *Phytother. Res., 2000, 14(3):149-52.*

[4] Nam K N, Park Y M, Jung H J, *et al. Eur. J. Pharmacol., 2010, 648(1-3):110-6.*

[5] Liang S, Qian Z, Zheng S, *et al. Eur. J. Pharmacol., 2006, 543(1-3):116-22.*

[6] Laabich A, Vissvesvaran G P, Lieu K L, *et al. Invest. Ophth. Vis. Sci., 2006, 47(7): 3156-63.*

[7] Duan Q, Chen H. *Traditional Chinese Drug Research & Clinical Pharmacology, 2010, 21(3):299-301.*

[Contact]

Address:
S5-3 Building, No. 111, Dongfeng Rd.,
Wuhan Economic and Technological Development Zone,
Wuhan, Hubei 430056,
China

Email: info@chemfaces.com
Tel: +86-27-84237783
Fax: +86-27-84254680
Web: www.chemfaces.com
Tech Support: service@chemfaces.com