

(+)-Catechin hydrate Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: (+)-Catechin hydrate

Catalog No.: CFN90163

Cas No.: 225937-10-0

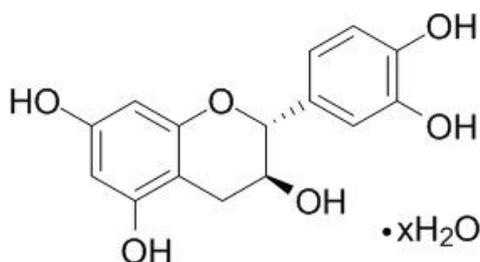
Purity: >=98%

M.F: C₁₅H₁₆O₇

M.W: 308.28

Physical Description: Powder

Synonyms: (2R,3S)-2-(3,4-Dihydroxyphenyl)-3,4-dihydro-1(2H)-benzopyran-3,5,7-triol hydrate.



[Intended Use]

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

[Source]

The herbs of *Camellia sinensis*.

[Biological Activity or Inhibitors]

Catechin hydrate (CH), a strong antioxidant that scavenges radicals, is a phenolic compound that is extracted from plants and is present in natural food and drinks, such as green tea and red wine; CH possesses anticancer potential, the induction of apoptosis by CH is affected by its ability to increase the expression of pro-apoptotic genes such as caspase-3, -8, and -9 and TP53.^[1]

Catechin hydrate is effective in preventing memory loss, ameliorating the oxidative stress and might be beneficial for the treatment of sporadic dementia of Alzheimer's type (SDAT).^[2]

Catechin hydrate can ameliorate redox imbalance and limit inflammatory response in focal cerebral ischemia, this effect may be through downregulation of NF-kB expression. ^[3]

Catechin hydrate has anti-cytotoxic and anti-genotoxic potentials against cadmium toxicity in human peripheral blood lymphocytes.^[4]

(+)-Catechin hydrate to some extent can prevent the weight gain, rise in blood glucose, cholesterol and Triglyceride levels in the development of an obese type 2 diabetic rat model.^[5]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method]^[6]

Mobile phase: Methanol-1% Phosphoric acid H₂O, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 280 nm.

[Storage]

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

[References]

- [1] Alshatwi A A. *J. Exp. Clin. Cancer Res.*, 2010; 29(1): 167.
- [2] Ejaz A M, Khan M M, Javed H, *et al. Neurochem. Int.*, 2013, 62(4):492-501.
- [3] Ashafaq M, Raza S S, Khan M M, *et al. Neurochem. Res.*, 2012, 37(8):1747-60.
- [4] Alshatwi A A, Hasan T N, Alqahtani A M, *et al. Environ. Toxicol. Phar.*, 2014, 38(2): 653-62.
- [5] Mehra P, Koul A, Bansal D D, *et al. Am.J.Biomed.Sci*, 2010, 2:352-64.
- [6] Rahim A A, Rocca E, Steinmetz J, *et al. Food Chem.*, 2008, 107(1):200-7.

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