

## Catechin Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)

### [ Product Information ]

**Name:** Catechin

**Catalog No.:** CFN99646

**Cas No.:** 154-23-4

**Purity:** > 98%

**M.F:** C<sub>15</sub>H<sub>14</sub>O<sub>6</sub>

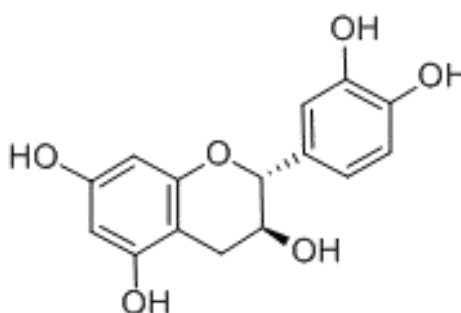
**M.W:** 290.27

**Physical Description:** Powder

**Synonyms:** Cianidanol; 3,3,4,5,7-Flavanpentol; (+)-Catechins;

2-(3,4-dihydroxyphenyl)chromane-3,5,7-triol(2R,3S);

(2R,3S)-2-(3,4-dihydroxyphenyl)-3,4-dihydro-2H-chromene-3,5,7-triol.



### [ Intended Use ]

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

### [ Source ]

The bark of *Taxus yunnanensis*.

## **[ Biological Activity or Inhibitors]**

Green tea catechin, epigallocatechin-3-gallate (EGCG) functions as a powerful antioxidant, preventing oxidative damage in healthy cells, but also as an antiangiogenic and antitumor agent and as a modulator of tumor cell response to chemotherapy; much of the cancer chemopreventive properties of green tea are mediated by EGCG that induces apoptosis and promotes cell growth arrest by altering the expression of cell cycle regulatory proteins, activating killer caspases, and suppressing oncogenic transcription factors and pluripotency maintain factors.<sup>[1]</sup>

(+/-)-Catechin has phytotoxic and antimicrobial activity.<sup>[2]</sup>

Catechins have antiviral effect on influenza virus, mediated not only by specific interaction with HA, but altering the physical properties of viral membrane. <sup>[3]</sup>

Catechins, whether from tea or other sources, may reduce the risk of ischemic heart disease mortality but not of stroke.<sup>[4]</sup>

## **[ Solvent ]**

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

## **[ HPLC Method ]**<sup>[5]</sup>

Mobile phase: Acetonitrile- 20mM KH<sub>2</sub>PO<sub>4</sub>, gradient elution ;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 210 nm.

## **[ Storage ]**

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

## **[ References ]**

- [1] Singh B N, Shankar S, Srivastava R K. *Biochem. Pharmacol.*, 2011, 82(12):1807-21.
- [2] Stermitz F R, Hufbauer R A, Vivanco J M. *Plant Physiol.*, 2002, 128(4):1173-9.
- [3] Song J M, Lee K H, Seong B L. *Antiviral Res.*, 2005, 68(2):66-74.
- [4] Arts I C, Hollman P C, Feskens E J, *et al.* *Am. J. Clin. Nutr.*, 2001, 74(2):227-32.
- [5] Friedman M, Levin C E, Choi S H, *et al.* *J. Food Sci.*, 2006, 71(6):C328–37.

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