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ProductInformation

Ferulic acid

Product Number **12,870-8**
Store at Room Temperature

Replacement for Product Number F 3500

Product Description

Molecular Formula: $C_{10}H_{10}O_4$
Molecular Weight: 194.2
CAS Number: 537-98-4
Melting point: 174 °C[1]
λ_{max}: 234 nm, 322 nm[2]
Extinction Coefficient: E^{mM} (ethanol) = 12.0 (234 nm), 18.6 (322 nm)[2]

This product is the *trans* isomer. This product has a specification of not more than 2% *cis* isomer based on melting point data.

Ferulic acid degradation by catabolic genes is the precursor of lignin biosynthesis. Ferulic acid and other cinnamic acid derivatives are involved in coupling of cell walls in various plants. Ferulic acid and other cinnamic acid derivatives make up approximately 1.5% of the total weight of some plant cell walls. It is this important function and abundance that is causing ferulic acid and other cinnamic acid derivative to be looked at as an important bioresource.[3]

Ferulic acid is also believed to play a role in development of diabetes. Recent studies have shown that ferulic acid, a flavinoid, can help reduce blood glucose levels when given to rats at low dosage levels.[4] The preventive role of flavonoids in diabetes and several other chronic diseases has been published.[5]

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This product is soluble in 95% ethanol (50 mg/ml), yielding a clear faint yellow solution. Heat may be required to get it to dissolve at that concentration.

References

1. The Merck Index, 11th ed., Entry# 4011.
2. J. Chem. Soc. Japan, **79**, 1011 (1958).
3. Masai, E., et al. Cloning and characterization of the ferulic acid catabolic genes of *Sphingomonas paucimobilis* SYK-6. Applied and Environmental Microbiology, **68**, 4416-4424 (2002).
4. Sri Balasubashini, et al., Protective effects of ferulic acid on hyperlipidemic diabetic rats. Acta Diabetol., **40**, 118-122 (2003).
5. Knekt. P., et al. Flavonoid intake and risk of chronic diseases. Am. J. Clin. Nutr., **76**, 560-568 (2002).

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