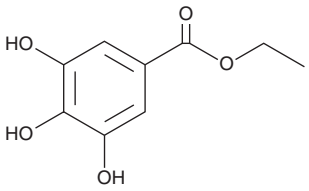
PRODUCT INFORMATION

Ethyl Gallate

Item No. 34193

CAS Registry No.:	831-61-8
Formal Name:	3,4,5-trihydroxy-benzoic acid, ethyl ester
Synonyms:	Ethyl 3,4,5-trihydroxybenzoate, Gallic Acid, NSC 402626, Phyllemblin
MF:	$C_9H_{10}O_5$
FW:	198.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 220, 276 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Semi-synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ethyl gallate is supplied as a solid. A stock solution may be made by dissolving the ethyl gallate in the solvent of choice, which should be purged with an inert gas. Ethyl gallate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ethyl gallate in these solvents is approximately 30 mg/ml.

Ethyl gallate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ethyl gallate should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Ethyl gallate has a solubility of approximately 0.30 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ethyl gallate is an ellagitannin that has been found in *A. nilotica* and has diverse biological activities.[1-5] It inhibits squalene epoxidase with an IC_{50} value of 4.2 µM for the rat enzyme.[1] Ethyl gallate scavenges DPPH (Item No. 14805) radicals in a cell-free assay (IC_{50} = 4.96 µg/ml).[2] It inhibits the proliferation of, and induces apoptosis in, HL-60 leukemia cells when used at a concentration of 100 µM.[3] Ethyl gallate is also active against the Gram-negative bacterium *M. catarrhalis* (IC_{50} = 1.15 µg/ml).[4] It reverses decreases in mean arterial blood pressure (MAP) and systemic vascular resistance in a dog model of *E. coli*-induced septic shock when administered at a dose of 80 mg/kg.[5]

References

1. Abe, I., Kashiwagi, Y., Noguchi, H., *et al. J. Nat. Prod.* **64(8)**, 1010-1014 (2001).
2. Kalaivani, T., Rajasekaran, C., and Mathew, L. *J. Food Sci.* **76(6)**, T144-T149 (2011).
3. Kim, W.-H., Song, H.-O., Choi, H.-J., *et al. Int. J. Mol. Sci.* **13(9)**, 11912-11922 (2012).
4. Cueva, C., Mingo, S., Muñoz-González, I., *et al. Lett. Appl. Microbiol.* **54(6)**, 557-563 (2012).
5. Mink, S.N., Jacobs, H., Gotes, J., *et al. J. Appl. Physiol.* **110(2)**, 359-374 (2011).

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