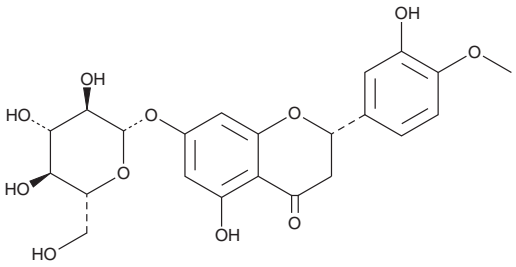
PRODUCT INFORMATION

Hesperetin 7-O-glucoside

Item No. 34545

CAS Registry No.:	31712-49-9
Formal Name:	(2S)-7-(β-D-glucopyranosyloxy)-2,3-dihydro-5-hydroxy-2-(3-hydroxy-4-methoxyphenyl)-4H-1-benzopyran-4-one
MF:	$C_{22}H_{24}O_{11}$
FW:	464.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 286 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/Unspecified sp.



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

Laboratory Procedures

Hesperetin 7-O-glucoside is supplied as a solid. A stock solution may be made by dissolving the hesperetin 7-O-glucoside in the solvent of choice, which should be purged with an inert gas. Hesperetin 7-O-glucoside is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of hesperetin 7-O-glucoside in these solvents is approximately 10 and 5 mg/ml, respectively.

Hesperetin 7-O-glucoside is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, hesperetin 7-O-glucoside should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Hesperetin 7-O-glucoside has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Hesperetin 7-O-glucoside is a flavanone glucoside that has been found in immature citrus fruits and has diverse biological activities.[1-3] It active against *H. pylori* when used at a concentration of 0.5 mM.[2] Hesperetin 7-O-glucoside scavenges DPPH (Item No. 14805) radicals (IC_{50} = 2.04 mM) and inhibits the activity of intestinal maltase and HMG-CoA reductase (K_is = 1,800 and 9.8 µM, respectively, for the human enzymes) in cell-free assays.[1,2] Dietary administration of hesperetin 7-O-glucoside (2.5 and 5 g/kg diet) prevents decreases in bone mineral density in the femur of ovariectomized rats.[3]

References

1. Liu, A., Huang, B., Lei, L., *et al*. Production of high antioxidant activity flavonoid monoglucosides from citrus flavanone with immobilised α-L-rhamnosidase in one step. *Int. J. Food Sci. Tech.* **54(10)**, 2854-2862 (2019).
2. Lee, Y.-S., Huh, J.-Y., Nam, S.-H., *et al*. Enzymatic bioconversion of citrus hesperidin by *Aspergillus sojae* naringinase: Enhanced solubility of hesperetin-7-O-glucoside with *in vitro* inhibition of human intestinal maltase, HMG-CoA reductase, and growth of *Helicobacter pylori*. *Food Chem.* **135(4)**, 2253-2259 (2012).
3. Habauzit, V., Nielsen, I.-L., Gil-Izquierdo, A., *et al*. Increased bioavailability of hesperetin-7-glucoside compared with hesperidin results in more efficient prevention of bone loss in adult ovariectomised rats. *Br. J. Nutr.* **102(7)**, 976-984 (2009).

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