

# PRODUCT INFORMATION



## Rutin (hydrate)

Item No. 19868

**CAS Registry No.:** 250249-75-3  
**Formal Name:** 3-[[6-O-(6-deoxy- $\alpha$ -L-mannopyranosyl)- $\beta$ -D-glucopyranosyl]oxy]-2-(3,4-dihydroxyphenyl)-5,7-dihydroxy-4H-1-benzopyran-4-one, trihydrate

**Synonyms:** Quercetin-3-O-rutinoside, Rutoside, Sophorin

**MF:**  $C_{27}H_{30}O_{16} \cdot 3H_2O$

**FW:** 664.6

**Purity:**  $\geq 98\%$

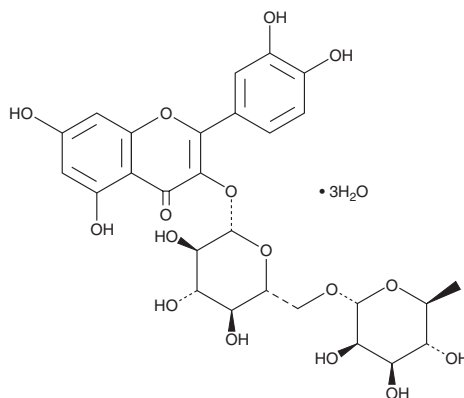
**UV/Vis.:**  $\lambda_{max}$ : 257, 359 nm

**Supplied as:** A crystalline solid

**Storage:** Room temperature

**Stability:**  $\geq 4$  years

**Item Origin:** Plant/*Styphnolobium japonicum*



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

### Laboratory Procedures

Rutin (hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the rutin (hydrate) in the solvent of choice, which should be purged with an inert gas. Rutin (hydrate) is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of rutin (hydrate) in these solvents is approximately 25 and 30 mg/ml, respectively.

Rutin (hydrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, rutin (hydrate) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Rutin (hydrate) has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Rutin is a flavonoid glycoside that has been found in buckwheat and has diverse biological activities.<sup>1-5</sup> It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) and ABTS (Item No. 27317) radicals when used at a concentration of 163.79  $\mu$ M, as well as inhibits iron autoxidation, in cell-free assays.<sup>1,2</sup> Dietary administration of rutin (0.2% w/v) reduces tumor growth and the number of lung metastases in a B16/F10 murine melanoma model.<sup>3</sup> Rutin (50 and 100 mg/kg) decreases intestinal acidity, increases intestinal activity of superoxide dismutase (SOD) and catalase, and reduces intestinal levels of protein carbonyls and thiobarbituric acid reactive substances (TBARS) formation in a rat model of intestinal toxicity induced by methotrexate (Item No. 13960).<sup>4</sup> It also increases the time spent exploring the novel object in the novel object recognition (NOR) test and increases recognition and discriminative indices in a rat model of short-term episodic memory deficits induced by scopolamine (Item No. 14108).<sup>5</sup>

### References

1. Lee, K.J., Oh, Y.C., Cho, W.K., *et al. Evid. Based Complement. Alternat. Med.* 165457 (2015).
2. Chobot, V., Hadacek, F., and Kubocova, L. *Molecules* **19**(12), 20023-20033 (2014).
3. Conesa, C.M., Ortega, V.V., Gascón, M.J.Y., *et al. J. Agric. Food Chem.* **53**(17), 6791-6797 (2005).
4. Gautam, R., Singh, M., Gautam, S., *et al. BMC Complement. Altern. Med.* **16**, 99 (2016).
5. Ramalingayya, G.V., Nampoothiri, M., Nayak, P.G., *et al. Pharmacogn. Mag.* **12**(Suppl 1), S63-S70 (2016).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/21/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM