

PRODUCT INFORMATION



Curcumin

Item No. 81025

CAS Registry No.: 458-37-7
Formal Name: 1,7-bis(4-hydroxy-3-methoxyphenyl)-

Synonyms: Indian Saffron, Turmeric yellow

MF: C₂₁H₂₀O₆

FW: 368.4

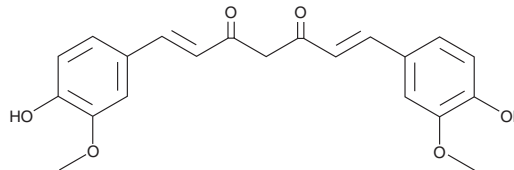
Purity: ≥90%

UV/Vis.: λ_{max}: 427 nm

Supplied as: An orange crystalline solid

Storage: 22°C

Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Curcumin is supplied as a crystalline solid. A stock solution may be made by dissolving the curcumin in an organic solvent. Curcumin is soluble in organic solvents such as acetone, ethanol, DMSO, and dimethyl formamide. The solubility of curcumin in these solvents is at least 1 mg/ml, and in acetone it is at least 20 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. A control using the solvent in the absence of curcumin will address this potential variable. Organic solvent-free aqueous solutions of curcumin are difficult to prepare, and it may precipitate at concentrations greater than 0.1 mg/ml, depending on the pH of the aqueous solution. Its solubility is greatly increased in basic solutions. The solubility of curcumin in 0.1 M NaOH is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than 12 hours.

Description

Curcumin is the principal curcuminoid of turmeric with antioxidant, anti-tumor, and anti-inflammatory properties. Curcumin inhibits the induction of nitric oxide synthase in macrophages.¹⁻³

References

1. Brouet, I. and Ohshima, H. Curcumin, an anti-tumor promoter and anti-inflammatory agent, inhibits induction of nitric oxide synthase in activated macrophages. *Biochem. Biophys. Res. Commun.* **206**, 533-540 (1995).
2. Conney, A.H., Lysz, T., Ferraro, T., *et al.* Inhibitory effect of curcumin and some related dietary compounds on tumor promotion and arachidonic acid metabolism in mouse skin. *Adv. Enzyme Regul.* **31**, 385-396 (1991).
3. Tanaka, T., Makita, H., Ohnishi, M., *et al.* Chemoprevention of 4-nitroquinoline 1-oxide-induced oral carcinogenesis by dietary curcumin and hesperidin: Comparison with the protective effect of β-carotene. *Cancer Res.* **54**, 4653-4659 (1994).

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.

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