

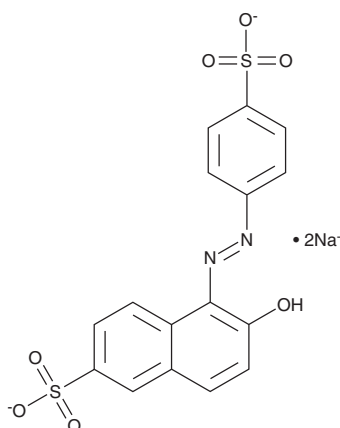
PRODUCT INFORMATION



Sunset Yellow FCF

Item No. 33257

CAS Registry No.: 2783-94-0
Formal Name: 6-hydroxy-5-[2-(4-sulphophenyl)diazenyl]-2-naphthalenesulfonic acid, disodium salt
Synonyms: C.I. 15985, 1351 Yellow, 1899 Yellow, Orange Yellow S
MF: $C_{16}H_{10}N_2O_7S_2 \cdot 2Na$
FW: 452.4
Purity: $\geq 85\%$
UV/Vis.: λ_{max} : 214, 235, 312, 479 nm
Abs max: 480 nm
Supplied as: A crystalline solid
Storage: $-20^\circ C$
Stability: ≥ 2 years



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

Laboratory Procedures

Sunset yellow FCF is supplied as a crystalline solid. A stock solution may be made by dissolving the sunset yellow FCF in the solvent of choice, which should be purged with an inert gas. Sunset yellow FCF is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of sunset yellow FCF in these solvents is approximately 30 and 10 mg/ml, respectively. Sunset yellow FCF is slightly soluble in ethanol.

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. Organic solvent-free aqueous solutions of sunset yellow FCF can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sunset yellow FCF in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Sunset yellow FCF is an azo dye.¹ It displays an absorption maximum of 480 nm.^{1,2} It reduces LPS-induced proliferation of isolated mouse splenocytes, as well as inhibits proliferation of isolated mouse splenocytes in an allogenic mixed lymphocyte reaction when used at a concentration of 250 $\mu g/ml$.³ Sunset yellow FCF (0.325 mg/kg) induces chromosomal aberrations in somatic and germ cells and morphological abnormalities in sperm in mice, but it is not genotoxic in a micronucleus gut assay in mice when administered at doses up to 2,000 mg/kg.⁴ Formulations containing sunset yellow FCF have been used as colorants in food and cosmetic preparations.

References

1. Ghoneim, M.M., El-Desoky, H.S., and Zidan, N.M. Electro-Fenton oxidation of Sunset Yellow FCF azo-dye in aqueous solutions. *Desalination* **274(1-3)**, 22-30 (2011).
2. Sabnis, R.W. *Handbook of biological dyes and stains: Synthesis and industrial applications*. John Wiley & Sons, Inc., Madison, NJ, USA (2010).
3. Yadav, A., Kumar, A., Tripathi, A., et al. Sunset yellow FCF, a permitted food dye, alters functional responses of splenocytes at non-cytotoxic dose. *Toxicol. Lett.* **217(3)**, 197-204 (2013).
4. Sayed, H.M., Fouad, D., Ataya, F.S., et al. The modifying effect of selenium and vitamins A, C, and E on the genotoxicity induced by sunset yellow in male mice. *Mutat. Res.* **744(2)**, 145-53 (2012).

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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