

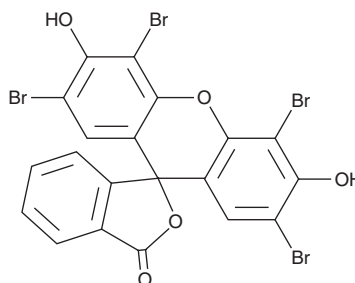
PRODUCT INFORMATION



Eosin Y

Item No. 40128

CAS Registry No.: 15086-94-9
Formal Name: 2',4',5',7'-tetrabromo-3',6'-dihydroxy-spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one
Synonyms: AMI 5, C.I. 45380:2, C.I. Solvent Red 43, Eosin Acid, NSC 244436,
MF: C₂₀H₈Br₄O₅
FW: 647.9
UV/Vis.: λ_{max}: 234, 531 nm
Ex./Em. Max: 526/544 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Eosin Y is supplied as a solid. A stock solution may be made by dissolving the eosin Y in the solvent of choice, which should be purged with an inert gas. Eosin Y is soluble in methanol.

Description

Eosin Y is a dye and brominated derivative of the fluorescent compound fluorescein.¹ It exists as a tautomer in aqueous solutions.^{2,3} Eosin Y has minimal pH dependence at physiological pH and has commonly been used in hematoxylin and eosin (H&E) staining to stain the extracellular matrix and cytoplasmic proteins.^{3,4} It displays absorption/emission maxima of 526/544 nm, respectively.⁵ It has also been used as a photoredox catalyst in organic synthesis reactions, including for cyclization and the formation of carbon-carbon or carbon-non-carbon bonds, and as a cooperative catalyst with transition metals.³ Eosin Y (100 μM) non-selectively inhibits histone methyltransferases.⁶ Formulations containing eosin Y have been used in the screening of cervical cancer as part of the Papanicolaou (Pap) staining process.

References

1. Bosveli, A., Montagnon, T., Kalaitzakis, D., *et al.* Eosin: A versatile organic dye whose synthetic uses keep expanding. *Org. Biomol. Chem.* **19**(15), 3303-3317 (2021).
2. McHedlov-Petrosyan, N.O., Vodolazkaya, N.A., Surov, Y.N., *et al.* 2,4,5,7-Tetranitrofluorescein in solutions: Novel type of tautomerism in hydroxyxanthene series as detected by various spectral methods. *Spectrochim. Acta A Mol. Biomol. Spectrosc.* **61**(11-12), 2747-2760 (2005).
3. Slyusareva, E. and Gerasimova, M.A. pH-dependence of the absorption and fluorescent properties of fluorone dyes in aqueous solutions. *Russ. Phys. J.* **56**(12), 1370-1377 (2014).
4. Fischer, A.H., Jacobson, K.A., Rose, J., *et al.* Hematoxylin and eosin staining of tissue and cell sections. *CSH Protoc.* **3**(5), prot4986 (2006).
5. Seybold, P.G., Gouterman, M., and Callis, J. Calorimetric, photometric and lifetime determinations of fluorescence yields of fluorescein dyes. *Photochem. Photobiol.* **9**(3), 229-242 (1969).
6. Okabe, J., Fernandez, A.Z., Ziemann, M., *et al.* Endothelial transcriptome in response to pharmacological methyltransferase inhibition. *ChemMedChem* **9**(8), 1755-1762 (2014).

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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