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Product Information

Sudan IV

Product Code **19,810-2**

Store at Room Temperature

Replacement for Product Number S 8756

Product Description

Molecular Formula: $C_{24}H_{20}N_4O$

Molecular Weight: 380.5

CAS Number: 85-83-6

λ_{max} : 520 nm, 357 nm (toluene)¹

Synonyms: Oil Red IV, Fat ponceau, Cerotin ponceau 3B²

This red β -naphthol disazo dye has the same basic structure as Sudan III with two added methyl groups. This makes it a deeper, more intense stain, but with the hydroxyl group in the ortho position, it has similar physical properties and is fat soluble.^{1,2} This dye has been used industrially to color oils, waxes, shoe polish, greases, oily-resin lacquers, varnishes, cellulose acetate and acrylic resins, and in wood stains. As a biological stain, it is used primarily to stain lipids and fatty substances present in cells and tissues. The color imparted is a function of the solubility of the dye in the substance affected and does not involve chemical bonding.¹ Procedures using either isopropanol or ethanol as stock solutions have been reported.³

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions

This dye is soluble in chloroform (1 mg/ml). It is soluble in water (0.7 mg/ml), slightly soluble in ethanol and very soluble in benzene, methanol, acetone, hydrocarbon solvents, oils, fats, and waxes.¹

Storage/Stability

Procedures using either isopropanol or ethanol as stock solutions have been reported.³ The isopropanol stock solution is diluted in water (6 ml of stock : 4 ml of water), allowed to stand 5-10 minutes, and then filtered. The filtrate can be used for several hours. Another stock solution is 0.1 gram Sudan IV in a mixture of 50 ml 70% alcohol and 50 ml acetone. This solution should be made fresh every few days.

References

1. The Sigma-Aldrich Handbook of Stains, Dyes & Indicators, Green, F.J., ed., Aldrich Chemical Co. (Milwaukee, WI: 1990), p. 658.
2. Conn's Biological Stains, 9th ed., Lillie, R. D., Williams and Wilkins (Baltimore, MD: 1977), p. 169.
3. Staining Procedures, 4th ed., Clark G., ed., Williams and Wilkins (Baltimore, MD: 1981) pp.189, 194, 322.

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