



3050 Spruce Street
Saint Louis, Missouri 63103 USA
Telephone 800-325-5832 • (314) 771-5765
Fax (314) 286-7828
email: techserv@sial.com
sigma-aldrich.com

Product Information

Sudan IV

Product Number **S 4261**
Store at Room Temperature

Product Description

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

Molecular Weight: 380.5

CAS Number: 85-83-6

λ_{max} : 520, 355, 242 nm (chloroform)¹

Synonyms: Oil Red IV, Fat Ponceau, Cerotin Ponceau 3B¹

This product is certified by the BSC (Biological Stain Commission) for use as a fat stain.

Sudan IV is a lysochrome (fat soluble dye) predominantly used for staining triglycerides in frozen sections, but which may also stain some protein bound lipids in paraffin sections.¹ It is less popular than Oil Red O as it has a more orange shade. 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 A saturated solution in isopropanol is prepared for use as a fat stain in animal tissue.³

Precautions and Disclaimer

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

Preparation Instructions

This product is soluble in chloroform (10 mg/ml). Saturated solutions can be prepared in isopropanol.

References

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

CMH/RXR 1/03

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.