



SIGMA-ALDRICH

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 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

$\lambda_{max}$ : 520 nm, 357 nm (toluene)<sup>1</sup>

Synonyms: Oil Red IV, Fat ponceau, Cerotin ponceau 3B<sup>2</sup>

This red  $\beta$ -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.<sup>1,2</sup> 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.<sup>1</sup> Procedures using either isopropanol or ethanol as stock solutions have been reported.<sup>3</sup>

#### 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.<sup>1</sup>

#### Storage/Stability

Procedures using either isopropanol or ethanol as stock solutions have been reported.<sup>3</sup> 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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