

Product Data Sheet

Product Name: Reactive Red 180

Cat. No.: GF03703

Chemical Properties

Cas. No. 98114-32-0

Formula $C_{29}H_{24}N_3NaO_{17}S_5$

M.Wt 869.83

Solubility

Storage Store at RT

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Reactive Red 180 is a vinyl sulfone dye that can be used in antibody engineering to induce antibody maturation and produce cross-reactive antibodies^[1]. Reactive Red 180 is a high-performance reactive dye suitable for dyeing cellulose fibers with high fixation rate, making it an ideal choice for the textile printing and dyeing industry^[2]. Reactive Red 180 contains water-soluble groups such as sulfonic acid groups, which ensure good water solubility and dyeing performance^[3]. Reactive Red 180 is a monoazo textile dye that can be adsorbed on single-walled carbon nanotubes (SWCNTs) through electrostatic interactions to achieve residual dye separation^[4, 5]. Reactive Red 180 can be

Caution: Product has not been fully validated for medical applications. For research use only.

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degraded by H₂O₂ solar-assisted photodegradation process (H₂O₂/sunlight)^[6]. A decolorizing strain *Citrobacter sp.* CK3 was isolated from activated sludge in a textile mill and showed significant decolorization ability for Reactive Red 180^[7].

References:

- [1]Schüchner S, Andorfer P, Mudrak I, et al. Anti-RAINBOW dye-specific antibodies as universal tools for the visualization of prestained protein molecular weight markers in Western blot analysis[J]. Scientific Reports, 2016, 6(1): 31363.
- [2]Yang J, Yang X, Wu C, et al. High fixation and low energy consumption in reactive dyeing of cotton through combining the dye molecule design and environment-friendly dyeing technique[J]. Cellulose, 2024, 31(6): 3907-3919.
- [3]Epolito W J, Lee Y H, Bottomley L A, et al. Characterization of the textile anthraquinone dye Reactive Blue 4[J]. Dyes and Pigments, 2005, 67(1): 35-46.
- [4]Kuriechen S K, Murugesan S, Raj S P, et al. Visible light assisted photocatalytic mineralization of Reactive Red 180 using colloidal TiO₂ and oxone[J]. Chemical Engineering Journal, 2011, 174(2-3): 530-538.
- [5]Orlette M. Synthesis and supporting of carbon dots onto titania, carbonized chitosan, silica spheres, hollow and solid carbon spheres for the removal of methyl orange from wastewater[D]. University of the Witwatersrand, Johannesburg (South Africa), 2021.
- [6]Raja R, Chakravarthi M H, Venis A R, et al. A study on decolourisation of Reactive Red-180 dye and dye effluent containing Reactive Red-180 using H₂O₂ solar assisted photodegradation process[J]. International Journal of Research and Analytical Reviews, 2019, 6(2): 818-825.
- [7]Wang H, Su J Q, Zheng X W, et al. Bacterial decolorization and degradation of the reactive dye Reactive Red 180 by *Citrobacter sp.* CK3[J]. International Biodeterioration & Biodegradation, 2009, 63(4): 395-399.

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