

## Rhodamine 3B Perchlorate

**Synonym:** N-[6-(diethylamino)-9-[2-(ethoxycarbonyl)phenyl]-3H-xanthen-3-ylidene]-N-ethyl-ethanaminium perchlorate

**Catalog No.:** 22168

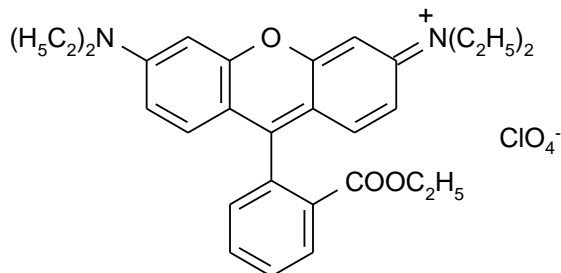
**CAS No.:** 23857-69-4

**MW:** 571.07

**Chemical Formula:** C<sub>30</sub>H<sub>35</sub>N<sub>2</sub>O<sub>3</sub>.ClO<sub>4</sub>

**Appearance:** Red green crystalline solid

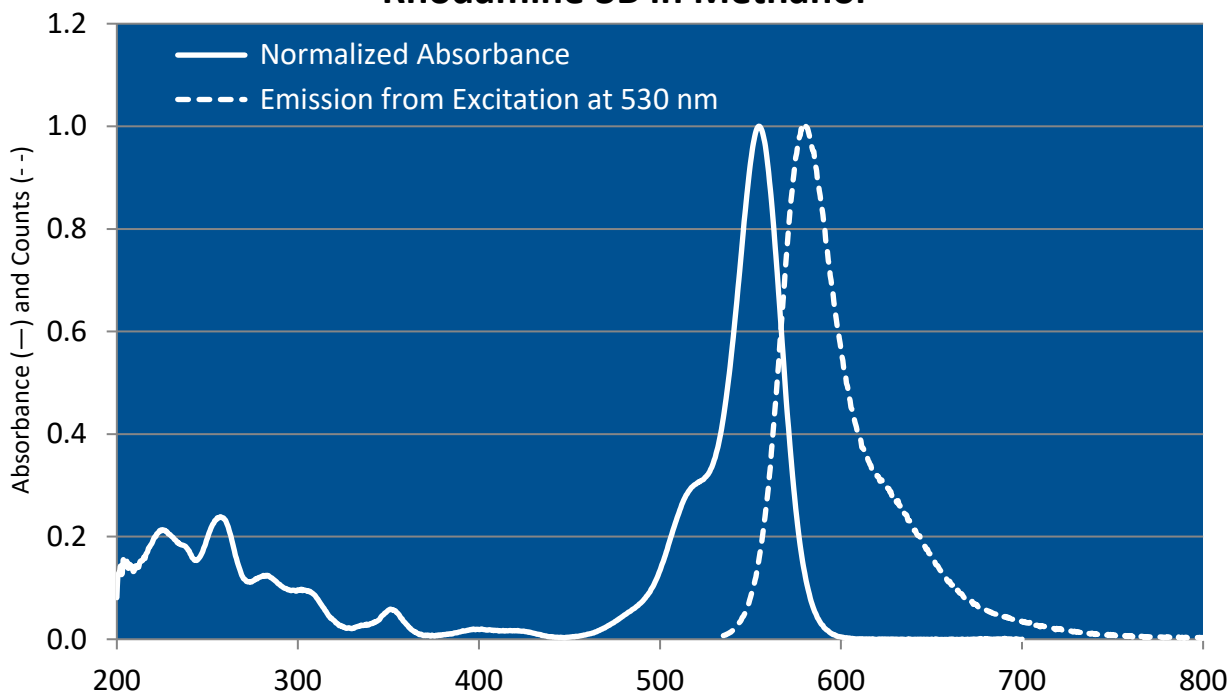
**Structure:**



<b>Max. (nm)</b>	<b>Range (nm)</b>	<b>Pump Source (nm)</b>	<b>Solvent</b>	<b>Concentration (molar)</b>	<b>Abs λ-max</b>	<b>FI λ-max</b>
595	530-620	XeCl(308) <sup>254</sup>	EtOH	1.29 x 10 <sup>-4</sup>	556 <sup>m</sup>	574 <sup>e</sup>
615	(bb)	FL, Nd:YAG(532) <sup>255</sup>	IAA		555 <sup>IAA</sup>	580 <sup>IAA</sup>
610	(bb)	FL <sup>27</sup>	HFIP		550 <sup>HFIP</sup>	
610	(bb)	FL <sup>27</sup>	TFE		550 <sup>TFE</sup>	
620	(bb)	FL <sup>27</sup>	EtOH		555 <sup>e</sup>	
630	(bb)	FL <sup>27</sup>	DMSO		566 <sup>s</sup>	

DMSO = dimethylsulfoxide; e = ethanol; EtOH = ethanol; HFIP = hexafluoroisopropanol; IAA = isoamyl alcohol; m = methanol; s = dimethylsulfoxide; TFE = trifluoroethanol

### Rhodamine 3B in Methanol



The information presented above is believed to be accurate but is not a specification. The customer is fully responsible for determining the suitability of this product for use in their application. Exciton, Inc. does not represent that the information is sufficient or complete for any specific application.

#### Quantum Yields and Lifetimes

Absorbance (nm)	Emission (nm)	Quantum Yield (max = 1.0)	Solvent	Lifetime (ns)	References, Notes
		0.51	Ethanol	2.4	R-2a
	580	0.45	Ethanol		R-8
		Fluorescent quantum yield relative to QSH (ff 0.55) at 25 degrees C; 2.48x10 <sup>-7</sup> M			
		0.58	Ethanol	0.79	R-14
555	580	0.78	Isoamyl Alcohol		R-15

#### REFERENCES:

27. What's Ahead in Laser Dyes, K.H. Drexhage, *Laser Focus*, 9(3), 35 (1973)
254. Molecular Structure Effects on the Lasing Properties of Rhodamines, F. López Arbeloa, A. Costela, and I. López Arbeloa, *J. Photochem. Photobiol. A: Chem.*, **55**, 97 (1990)
255. Peculiarities of Laser-Light Generation in Organic-Dye Solutions, A.N. Rubinov and V.A. Mostovnikov, *Bull. Acad. Sci. USSR, Phys Ser.* 32, 1348 (1968)
- R-2a. Characterization of the Lowest Excited Singlet State of Rhodamine 3B, Sulforhodamine B and Sulforhodamine 101, P.C. Beaumont, D.G. Johnson and B.J. Parsons, *J. of Chem. Soc., Faraday Trans.* 94(2), 195 (1998), <https://doi.org/10.1039/A705692C>
- R-8. Fluorescence Quantum Yields of Some Rhodamine Dyes, R.F. Kubin and A.N. Fletcher, *J. of Luminescence* 27, 455 (1982), [https://doi.org/10.1016/0022-2313\(82\)90045-X](https://doi.org/10.1016/0022-2313(82)90045-X)



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R-14. Molecular Structure Effects on the Lasing Properties of Rhodamines, F. López Arbeloa, A. Costela, and I. López Arbeloa, J. Photochem. Photobiol. A: Chem., 55, 97 (1990), [https://doi.org/10.1016/1010-6030\(90\)80022-P](https://doi.org/10.1016/1010-6030(90)80022-P)

R-15. Peculiarities of Laser-Light Generation in Organic-Dye Solutions, A.N. Rubinov and V.A. Mostovnikov, Bull. Acad. Sci. USSR, Phys Ser. 32, 1348

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