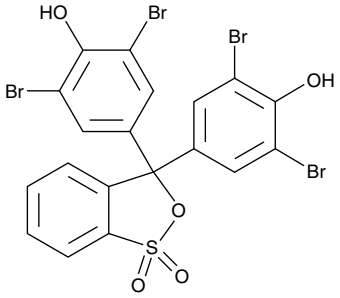
Product Information

Bromophenol Blue

Item No. 14331

CAS Registry No.:	115-39-9
Formal Name:	4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)*bis*-2,6-dibromo-phenol
Synonyms:	Albutest, NSC 7818
MF:	$C_{19}H_{10}Br_4O_5S$
FW:	670.0
Stability:	≥2 years at room temperature
Supplied as:	A crystalline solid
UV/Vis.:	λ_{max}: 206, 282, 424 nm



Laboratory Procedures

For long term storage, we suggest that bromophenol blue be stored as supplied at room temperature. It should be stable for at least two years.

Bromophenol blue is supplied as a crystalline solid. A stock solution may be made by dissolving the bromophenol blue in the solvent of choice. Bromophenol blue is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of bromophenol blue in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of bromophenol blue can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of bromophenol blue in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Bromophenol blue is commonly used as a pH indicator, a color marker to monitor the progress of agarose or polyacrylamide gel electrophoresis, and a dye to detect proteins and nucleic acids (absorbance at 610 nm), particularly when staining living tissues.[1-3] As an acid-base indicator its useful pH range is 3-4.6 where the color changes from yellow at pH 3.0 to purple at pH 4.6.[4]

References

1. Burford, G.D. and Pickering, B.T. The number of neurophysins in the rat. Influence of the concentration of Bromophenol Blue, used as a tracking dye, on the resolution of proteins by polyacrylamide-gel electrophoresis. *Biochem. J.* **128**, 941-944 (1972).
2. Harris, P. and Mazia, D. The use of mercuric Bromophenol Blue as a stain for electron microscopy. *J. Biophys. Biochem. Cytol.* **5(2)**, 343-346 (1959).
3. Morales, M.-C., Freire, V., Asumendi, A., *et al.* Comparative effects of six intraocular vital dyes on retinal pigment epithelial cells. *Invest. Ophthalmol. Vis. Sci.* **51(11)**, 6018-6029 (2010).
4. Suzuki, Y. Protein error of pH indicators in the presence of detergents. *Anal. Sci.* **23(6)**, 733-738 (2007).

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