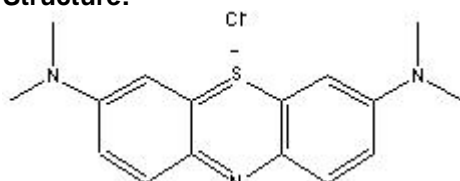


TECHNICAL INFORMATION

Catalog Number: 193998, 800663

Methylene Blue, trihydrate

Structure:



Molecular Formula: C₁₆H₁₈N₃SCl · 3H₂O

Molecular Weight: 373.90

CAS # : 61-73-4

Synonyms: Methylthionine chloride; C.I. 53015; Basic Blue 9; 3,7-Bis(dimethylamino) phenothiazin-5-ium chloride

Physical Description: Green crystalline powder

Recommended Storage: Room temperature

Solubility: Soluble in water (50 mg/ml), ethanol (70 mg/ml), methyl cellusolve (60 mg/ml), chloroform, alcohol; insoluble in ether

Description: Has been used as a stain in bacteriology and as an oxidation-reduction indicator. A sensitive stain for RNA and ribonuclease. An ethidium bromide alternative for the visualization of nucleic acids in gels:

- Gels are viewable in visible light
- Does not require a darkroom
- No UV induced DNA damage
- Gels can be stored for several days
- Only 30 minute destaining time for PAGE gels

In aqueous solutions, it is decolorized by Zinc dust and dilute H₂SO₄, but color is restored on exposure to air and more rapidly upon addition of NH₄OH. Forms double salts with many inorganic salts.

References:

- *Merck Index, 12th Ed.*, No. 6137
- Peacock, A.C., and Dingman, C.W., *Biochemistry*, v. 6, 1818 (1967).
- Wittekind, D.H., Gehring, T., *Histochem. J.*, v. 17, 263-289 (1985).
- Clark, G., *Staining Procedures, 4th Ed.*; Williams and Wilkins: Baltimore, 1981.