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DATASHEET

Crystal Violet

Product overview

Name	Crystal Violet
Cat No	HB0742
Alternative names	Basic Violet 3, Gentian Violet, Hexamethylpararosaniline chloride, Methyl Violet 10B
Biological description	Cation dye. Used in Gram staining to distinguish between gram positive and negative bacteria. Interacts with aqueous form of KI-I ₂ during gram staining producing a chemical precipitate. Displays colour changes at different pHs (pH 0.0- yellow, pH 2.0- blue/violet). Also used to measure Cytostatic/cytotoxic effects on tumour cell lines.
Biological action	Dyes & stains
Description	Cation dye used in Gram staining

Images



Solubility & Handling

Storage instructions	Room temperature
Solubility overview	Soluble in water (50mg/ml, at 27 °C) or chloroform
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	Gentian Violet; Hexamethylpararosaniline chloride
Molecular Weight	407.99
Chemical structure	
Molecular Formula	C ₂₅ H ₃₀ N ₃ Cl
CAS Number	548-62-9
PubChem identifier	11057
SMILES	[Cl-].CN(C)C1=CC=C(C=C1)C(\C1=CC=C(C=C1)N(C)C)=C1/C=C\C(\C=C/1)=[N+](/C)C

References

Statins potentiate cytostatic/cytotoxic activity of sorafenib but not sunitinib against tumor cell lines in vitro.

Bil J *et al* (2010) *Cancer Lett* 288(1)

PubMedID [19632769](#)

Chemical mechanism of the Gram stain and synthesis of a new electron-opaque marker for electron microscopy which replaces the iodine mordant of the stain.

Davies JA *et al* (1983) *J Bacteriol* 156(2)

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Crystal violet as an i-motif structure probe for reversible and label-free pH-driven electrochemical switch.

Zhang XY *et al* (2014) *Anal Biochem* 455

PubMedID [24699211](#)
