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Product Information

Hexadecyltrimethylammonium bromide

Catalog Number **H5882**
Store at Room Temperature

CAS Number: 57-09-0
Synonym: CTAB

Product Description

Molecular Formula: $C_{19}H_{42}BrN$
Molecular Weight: 364.5
Melting Point: 237-243 °C[1]
Critical Micelle Concentration (CMC): 0.92 to 1.0 mM (water)[2,3]
Aggregation number: 61 (water, 25 °C), 169 (13 mM KBr)[2,4]
pH: 6.0-7.5 (0.1 M H_2O, 0 °C).[5]

Hexadecyltrimethylammonium bromide is a bactericidal, cationic detergent. Its activity is neutralized by soaps and anionic detergents (i.e., SDS). Trimethylammonium bromide compounds form insoluble complexes with SDS.[3] It is active at alkaline pH against both Gram-positive and Gram-negative organisms.[6]

CTAB has been used for the isolation of plant high molecular weight DNA (by a rapid method)[7] as well as plant DNA for use in PCR analysis.[8,9] It has been used to precipitate nucleic acids.[7,8,10,11]

CTAB provides enhancement of Concanavalin A mediated agglutination.[12] It has been used for the determination of protein molecular weights in electrophoretic systems[13,14] and for determination of critical micelle concentration of detergents.[15] CTAB has also been used as a titrant for potentiometric titration of perchlorate[16] and as a phase-transfer catalyst in reduction of arenes and heterocyclic compounds.[17]

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

The product is soluble in water (100 mg/ml). It is freely soluble in alcohol; sparingly soluble in acetone. It is practically insoluble in ether and benzene.[1]

Storage/Stability

The product is stable in acid solution.[1]

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