

Catalog Number: 190319

CHAPS**Structure:****Molecular Formula:** $C_{32}H_{58}N_2O_7S$ **Molecular Weight:** 614.9**CAS # :** 75621-03-3**Synonyms:** 3-[(3-Cholamidopropyl)-dimethylammonio]-1-propane sulfonate; N,N-Dimethyl-N-(3-sulfopropyl)-3-[[[(3a,5b,7a,12a)-3,7,12-trihydroxy-24-oxocholan-24-yl] amino]-1-propanaminium inner salt**Physical Appearance:** White crystalline powder**Critical Micelle Concentration (CMC):** 6-10 mM (Detergents with high CMC values are generally easy to remove by dilution; detergents with low CMC values are advantageous for separations on the basis of molecular weight. As a general rule, detergents should be used at their CMC and at a detergent-to-protein weight ratio of approximately ten.^{15,16}**Aggregation Number (0-0.1 M Na⁺):** 4-14**Description:** A nondenaturing zwitterionic detergent for solubilizing membrane proteins and breaking protein-protein interactions.^{1,11} Combines the useful properties of both the sulfobetaine-type and the bile salt detergents. Commonly used for protein solubilization in isoelectric focusing and two-dimensional electrophoresis^{6,13}, especially for non-denaturing (without urea) isoelectric focusing. CHAPS has been shown to give excellent resolution of some subcellular preparations^{2,12} and plant proteins.⁸ Concentrations between 1-4% (v/v) are typically used in an isoelectric focusing gel.^{3,4} A commonly used isoelectric focusing sample solution consists of 8 M urea, 4% CHAPS, 50-100 mM dithiothreitol (DTT) and 40 mM Tris.⁴ Its small micellar molecular weight (6150) and high CMC (6-10 mM) allow it to be removed from samples by dialysis. Can be used as a non-toxic stabilizing agent for growth factors.¹⁰**Solubility:** Soluble in water (100 mg/ml - clear, colorless to slightly yellow solution).

When preparing solutions of CHAPS, it is preferable to avoid stirring and/or shaking. For a 10% solution, i.e., 1 g CHAPS solid into beaker followed by 9 g of water. Cover beaker with watch glass and allow it to sit at room temperature for 30-60 minutes. Solutions of up to 1 M (60%) can be made in this way.

Availability:

in sizes;

1gm
5gm
25gm
100gm

References:

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