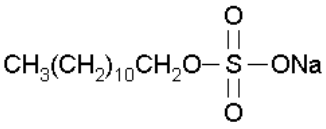
71725 / 71729 Sodium dodecyl sulfate

Synonyms: Dodecyl sulfate sodium salt
SDS
Sodium lauryl sulfate
Lauryl sulfate sodium salt
Dodecyl sodium sulfate



CAS number: 151-21-3

Product Description:
Molecular Formula: $C_{12}H_{25}NaO_4S$
Molecular Weight: 288.4 g/mol
Melting Point: 204-207 °C

The BioUltra grade SDS has trace element analysis performed. Trace element analysis is often important for experiments where tight control of elemental contamination is required (i.e. NMR, ICP atomic emission and purification steps). The molecular biology quality is additionally tested on the absence of DNases, RNases, Phosphatases and Proteases. For common biochemistry work the BioUltra quality is recommended.
SDS is an anionic detergent and wetting agent that is effective in both acid and alkaline solutions.[1]
SDS has a wide variety of applications, but is most often used as a protein and lipid solubilization reagent. As a general rule for the solubilization of proteins, SDS should be used at its critical micelle concentration.[2]
SDS is also a powerful protein denaturant. The effects of SDS on protein conformation has been published.[3,4]
Comparisons between SDS and other detergents for solubilization of lipids, proteins, and its effect on enzymes activity has been published.[2,5]
To remove SDS from protein samples, it is recommended to use Product No. 428698, Dowex® Retardation 11A8 Ion-Exchange Resin. This resin contains paired anion and cation exchange sites. Methods for SDS removal by ion exchange chromatography have been published.[6] Methylene blue can be used to determine the amount of SDS remaining following removal of SDS by ion exchange chromatography.[7]

Preparation Instructions:
This product can be dissolved in water (200 mg/ml), yielding a clear, colorless solution.

Storage/Stability:
SDS undergoes hydrolysis at elevated temperatures especially in acidic medium. Prolonged heating at 40°C or greater causes decomposition of alkyl sulfates into fatty alcohols and sodium sulfate.[8]

References:

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