DATA SHEET

> SDS

cat. no.	amount	note
STS-SDS100	100g	powder
STS-SDS500	500g	powder
STS-SDS1000	1kg	powder

Sodium dodecyl sulfate (SDS) is an amphipathic ionic detergent and the most common dissociating agent used to denature native proteins to individual polypeptides. SDS has an anionic headgroup and a lipophilic tail. It binds non-covalently to proteins, with a stoichiometry of around one SDS molecule per two amino acids. When a protein mixture is heated to 100 °C in the presence of SDS, the detergent wraps around the polypeptide backbone. It binds to polypeptides in a constant weight ratio of 1.4 g/g of polypeptide. In this process, the intrinsic charges of polypeptides becomes negligible when compared to the negative charges contributed by SDS. Thus, polypeptides after SDS-treatment become a rod like structure possessing a uniform charge density where the intrinsic charge of a protein is masked. SDS-treated proteins have very similar charge-to-mass ratios, and similar shapes. During SDS-PAGE, all proteins migrate toward the anode (the positively charged electrode).
Without SDS, different proteins with similar molecular weights would migrate differently due to differences in mass charge ratio, as each protein has an isoelectric point and molecular weight particular to its primary structure.

Chemical Name
Sodium Dodecyl Sulphate

Formulation
$C_{12}H_{25}O_4SNa$

Molecular Weight
288,4

Purity
High purity >99%

Chloride (Cl) <0.001%
Phosphate [PO4) <0.01%
Heavy Metals <0.001%

Solubility
SDS is soluble in water.

Storage
Store at room temperature.

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