

5×SDS-PAGE Protein Loading Buffer

Product description

5×SDS-PAGE Sample Loading Buffer is a modified, 5-fold concentrated protein loading buffer with bromophenol blue as the tracking dye.

SDS binds to proteins, forming protein-SDS complexes that carry a large number of negative charges. This masks the intrinsic charges of the proteins, eliminating charge differences among various proteins. SDS also breaks intramolecular and intermolecular hydrogen bonds, disrupting the secondary and tertiary structures of proteins. DTT reduces disulfide bonds between cysteine residues, further disrupting protein conformation and eliminating structural differences among proteins. As a result, during electrophoresis, the migration rate of proteins depends primarily on their molecular weight. Bromophenol blue serves as an electrophoretic indicator, providing a visual estimate of when the electrophoresis is nearing completion.

This buffer is suitable for routine sample loading in SDS-PAGE.

Specifications

Cat NO.	20315ES05 / 20315ES20 / 20315ES76
Size	2×1 mL / 20×1 mL / 500 mL

Storage

Ship with ice packs. This product should be stored at -20°C for 1 year.

Notes

1. For safety and hygiene, wear a lab coat and disposable gloves when handling reagents.
2. The 5×SDS-PAGE Sample Loading Buffer contains a small amount of DTT, which may have a slight irritating odor, but does not contain highly toxic β -mercaptoethanol.
3. The 5×SDS-PAGE Sample Loading Buffer must be completely dissolved before use.

Instructions

1. Thaw the 5×SDS-PAGE Sample Loading Buffer at room temperature or in a water bath not exceeding 37°C. After thawing, immediately store at room temperature and avoid prolonged exposure to the water bath.
2. Mix protein sample with the 5×SDS-PAGE Sample Loading Buffer at a ratio of 1 μ L of loading buffer per 4 μ L of protein sample.
3. Heat the mixture at 100°C or in a boiling water bath for 3–5 minutes to fully denature the proteins.
4. Cool the sample to room temperature, then directly load onto the wells of an SDS-PAGE gel.
5. Electrophoresis is typically stopped when the blue dye front approaches the bottom edge of the gel.
6. This product is intended for research use only.