

5× SDS-PAGE Sample Loading Buffer

Catalogue number	Presentation
MB11701	5 x 1 mL

Description

5× SDS-PAGE Sample Loading Buffer is a convenient and ready-to-use loading buffer for SDS-polyacrylamide gel electrophoresis (SDS-PAGE). Formulated in a 5× stock, it enables a greater range of protein sample volumes to be used for electrophoresis. The buffer contains bromophenol blue, Sodium Dodecyl Sulfate (SDS), Dithiothreitol (DTT) and Glycerol.

Shipping & Storage Conditions

This product can be shipped at Room temperature. Upon receipt, store the product at -35 °C to -15 °C in a constant temperature freezer. The product will remain stable till the expiry date if stored as specified. In alternative, 5× SDS-PAGE Sample Loading Buffer can be stored at room temperature or at 2°C to 8°C for up to 12 months.

Components

COMPONENT	TUBES	VOLUME
5× SDS-PAGE Sample Loading Buffer	5	1 mL

Standard Protocol

1. Mix one volume of 5× SDS-PAGE Sample Loading Buffer with four volumes of protein sample (e.g., 5 µL 5× SDS-PAGE Sample Loading Buffer plus 20 µL of protein sample).
2. Boil the sample for 3-5 minutes.
3. Spin-down and cool the sample to room temperature.
4. Load the sample onto gel and perform the electrophoresis.
5. Stop electrophoresis when blue dye nears bottom of gel.
6. Remove gel from electrophoresis unit. To stain gel, wash, fix and stain according to usual procedures. To transfer proteins and tracking dye to nitrocellulose membrane, equilibrate the gel in transfer buffer and proceed with usual methods.

Technical Notes

- Bromophenol blue dye marks the front of the gel.
- DTT breaks disulfide bonds and destroys residual secondary structures.
- SDS denatures proteins, facilitating their separation based on molecular weight during electrophoresis.
- Glycerol ensures protein samples remain in the gel wells after loading.

Quality control assays

Functional assay

To check the viscosity and the pattern of the dye, 1 volume of 5× SDS-PAGE Sample Loading Buffer and 4 volumes of a protein sample are loaded onto a Tris-glycine SDS-PAGE.

For life science research only. Not for use in diagnostic procedures.