SDS-PAGE Protein Sample Loading Buffer (5X, Odorless)

Cat. No. LB3-0005/LB3-0010/LB3-0050
Storage instruction Store at -20°C. Protected from light.

Introduction

This is a modified and safer, odorless, bromophenol blue-stained, 5X concentrated protein sample loading buffer.

Product Features

- **Enhanced Safety:** This product uses an odorless and more water-soluble stable reducing agent with similar reducing power, replacing the pungent dithiothreitol (DTT) or 2Mercaptoethanol. This ensures that the SDS-PAGE protein sample loading buffer remains odorless during normal use or heating, making the protein loading process safer and healthier.
- **Consistent Performance:** Besides being odorless, this product performs identically to conventional protein sample loading buffers. It can be used for routine SDS-PAGE protein sample loading. No significant differences have been observed in performance compared to traditional SDS-PAGE protein sample loading buffers.

Product Information

Name	Catalog	Size	Storage
SDS-PAGE Protein Sample Loading Buffer (5X, Odorless)	LB3-0005	1mL	Store at -20°C. Protected from light. Shelf life is 1 year.

Usage Instructions

1. Dissolve the SDS-PAGE Loading Buffer (5X) at room temperature or in a water bath not exceeding 37°C. After dissolving in the water bath, store immediately at room temperature and avoid prolonged exposure to the water bath.
2. Mix the protein sample and SDS-PAGE Loading Buffer (5X) in a ratio of 1 μL of loading buffer to 4 μL of protein sample.
3. Heat at 100°C or in a boiling water bath for 3-5 minutes to fully denature the proteins.

- **Note:** If the initial cell or tissue amount is large and the genomic DNA content is high, the solution may still be viscous or contain semi-transparent viscous substances after boiling for 3-5 minutes. In this case, continue boiling for an additional 5-10 minutes or add an appropriate amount of 1X diluted SDS-PAGE Loading Buffer and boil for another 3-5 minutes. Prolonged boiling helps to fully release proteins bound to genomic DNA and partially break down genomic DNA, reducing viscosity and thus not affecting subsequent sample loading.

4. After cooling to room temperature, load the sample directly into the wells of the SDS-PAGE gel.
5. Electrophoresis is typically stopped when the blue dye reaches the bottom of the gel.

Important Reminders

1. When using this product for protein denaturation, it is recommended to heat in a 95°C water bath or PCR machine for 5 minutes. Excessive temperature (e.g., 100°C) or prolonged heating (e.g., over 15 minutes) may lead to protein degra dation or abnormal coloring of the indicator in the loading buffer.
2. The SDS-PAGE Protein Sample Loading Buffer (5X, Odorless) does not contain highly toxic 2Mercaptoethanol or the pungent-smelling DTT, but offers the same reduction effect, ensuring consistent protein sample processing and electrophoresis results.
3. Ensure that the SDS-PAGE Protein Sample Loading Buffer (5X, Odorless) is fully dissolved before use.
4. This product is intended for scientific research use by professionals only and should not be used for clinical diagnosis or treatment, food or drug applications, or stored in residential areas.
5. For your safety and health, please wear a lab coat and disposable gloves while handling this product.