

## Instructions for 5× protein loading buffer (including DTT)

**Item No. :** P1040

**Specification:** 10mL/100mL

**Storage:** -20°C storage, it is recommended to separate frozen storage, avoid repeated freezing and thawing, valid for 1 year.

### Product Description:

This product is suitable for SDS-PAGE (SDS-denatured polyacrylamide gel electrophoresis) as a protein sample. Its main components are SDS, DTT, bromophenol blue, buffer salt solution and so on. SDS can be combined with protein to make the protein-SDS complex with a large number of negative charges, then the charge of the protein itself is completely covered by SDS, eliminating the difference in the charge of various proteins; SDS can also break the intramolecular and intermolecular hydrogen bonds and destroy the secondary and tertiary structures of protein molecules. DTT can break disulfide bonds between cysteine residues, destroying protein structures and eliminating differences between protein structures. In the final protein (subunit) without charge or structural difference, electrophoresis speed is only related to the size of its molecular weight. Bromophenol blue is used as an indicator during electrophoresis, giving an approximate indication of the end time of electrophoresis.

### Instructions for use (for informational purposes only) :

- 1、 Please use the ratio of 10μL loading buffer per 40μL protein sample (5 times dilution). If the protein sample concentration is too high, dilute it with double steaming water.
- 2、 After mixing, heat the 100°C water bath for 5-10 minutes to denature the protein.
- 3、 After cooling to room temperature, centrifuge at 10,000-14000rpm for 2-5 minutes, take the supernatant directly onto the sample for electrophoresis.

### Precautions:

- 1、 When the concentration of polyacrylamide gel is 8%, the position of the bromophenol blue indicator strip is about 30kd, when the glue concentration is 12%, about 20kd, and when the glue concentration is 15%, about 10kd. Please determine the electrophoretic time according to your own tape.
- 2、 This reagent is toxic because it contains DTT. For your safety and health, please wear a lab coat and disposable gloves.
- 3、 The protein loading buffer contains bromophenol blue indicator, and the PH value is affected by the storage temperature. The solution may appear dark brown in the cryogenic storage state, which does not affect the use of the product.

### Related Products:

- P1016 4×Protein Loading buffer (containing sulfhydryl reducing agent)*  
*P1018 2×Protein Loading buffer (containing DTT)*  
*P1017 4×non-denatured protein loading buffer*

*P0012*     *10×ponceau*  
*P1300*     *Coomassie Bright Blue Quick Dyeing Solution*  
*P1200*     *SDS-PAGE Gel preparation kit*

**Related literature:**

- [1] Zhihui Wang,Zhiquan Zhu,Zhong Lin,et al. miR-429 suppresses cell proliferation, migration and invasion in nasop -haryngeal carcinoma by downregulation of TLN1. *Cancer Cell International*. April 2019. (IF 3.439)
- [2] Ren Zhang,Ruolun Wei,Wei Du,et al. Long noncoding RNA ENST00000413528 sponges microRNA-593-5p to modulate human glioma growth via pololike kinase 1. *CNS Neuroscience & Therapeutics*. March 2019. (IF 3.394)

**Note: For more information on the use of this product, please refer to the official website of Pololike.**