

# 5X SDS-PAGE Loading Buffer

Product	Con.	Cat#	Size
SDS-PAGE Loading Buffer	5X	IBS-BS024	10ml
	2X	IBS-BS025	10ml

**Components :** Tris-HCl pH 6.8 60mM, Glycerol 25%, SDS 2%, 2-mercaptoethanol 14.4mM, BPB 0.1%  
IBS-BS025 - Tris-HCl pH 6.8 24mM, SDS 0.8%, 2-mercaptoethanol 5.76mM, Glycerol 10%,  
Bromophenol Blue 0.04%

**Storage Conditions :** Freeze

## Introduction :

SDS-PAGE loading buffer is especially formulated for protein sample preparation to be used in the SDS-PAGE system. 5X sample buffer is added to each protein sample at a 4:1 ratio, and is boiled (or heated) on a heating block for 1-5 min. The solution has a pH of approximately 6.8.

## Purpose of SDS-PAGE loading buffer

The SDS detergent binds to all the proteins positive charges which occur at a regular interval, thus giving each protein the same overall negative charge so that proteins will separate based on size and not by charge. The SDS also denatures the proteins and subunits to also help separate them based on size, not on shape. SDS binds to proteins at about 1.3g of SDS / g of protein.

Bromophenol blue serves as an indicator dye, and migration indicator where one can observe the dye front that runs ahead of the proteins. Bromophenol blue also functions to make it easier to see the sample during loading of the gel wells with protein sample. Glycerol in the loading buffer increases the density of the sample so that it will fall to the bottom of the well, minimizing puffing or loss of protein sample in the buffer, and layer in the sample well.

2-mercaptoethanol is present in many formulation to help reduce any disulfide S-S bonds that could provide secondary/tertiary structure and/or dimer formation. e and/or dimer formation.