

5X Laemmli Buffer

<u>Product Name</u>	<u>Product Code</u>	<u>Kit Packing</u>
5X Laemmli Buffer	ML121-5ML	5ml
	ML121-10ML	10ml

Introduction:

5X Laemmli Buffer is specifically used for protein sample preparation prior to loading on SDS-PAGE. It is added to each protein sample at 1:4 ratio and boiled for 1-5 min. The use of Laemmli sample buffer ensures optimal band resolution when preparing proteins for SDS-PAGE with Tris-glycine-SDS running buffer.

Description:

5X Laemmli Buffer is used as a protein sample loading buffer for use in SDS-PAGE and Western Blotting. This buffer contains bromophenol blue (BPB), SDS, glycerol and Tris-HCl. The Bromophenol blue serves as an indicator dye visually facilitating loading of samples into the wells of the gel. It also functions as a migration dye helping to monitor the dye front that runs ahead of the proteins. Glycerol in the Laemmli 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 results in convenient layering of the samples into the wells. The SDS detergent binds to the positive charges occurring on the proteins at a regular interval, thus giving each protein the same overall negative charge. Hence the proteins will separate based on size and not by charge. The SDS also denatures the proteins and subunits to help them separate on basis of their size, irrespective of shape.

Application:

5X Laemmli Buffer is specifically used for protein sample loading during SDS-PAGE. This buffer is mixed with the protein sample, heated and loaded on the gel.

Working Solution:

The provided 5X Laemmli Buffer should be diluted with 1M DTT (Dithiothreitol) (MB070) or β -Mercaptoethanol (MB041), as required by the user, before use.

Dilution with 1M DTT: To prepare 1X Laemmli Buffer, 2 parts of 5X Laemmli Buffer should be diluted with 7 parts of Protein Sample and 1 part of 1M DTT (Dithiothreitol).

NOTE - After dilution, the buffer should be frozen, but it must be warmed before use to ensure that the SDS is in solution. It is recommended to store the buffer in aliquots to avoid contamination while repeated handling.

OR

Dilution with β -Mercaptoethanol: To prepare 1X Laemmli Buffer, dilute the provided 5X Laemmli Buffer as mentioned below by adding β -Mercaptoethanol to a final concentration of 5% (v/v):

5X Laemmli buffer	- 40 μ l
Protein Sample	- 150 μ l
β -Mercaptoethanol	- <u>10μl</u> 200 μ l

Composition:

5X Laemmli Buffer is made from highly pure molecular biology grade bromophenol blue, SDS, glycerol and conveniently premixed to save time. It is supplied as ready to use solution.

Storage conditions:

The 5X Laemmli Buffer is to be stored at room temperature and after dilution should be stored at -20°C. Under recommended condition, the reagent is stable for 12 months.

Warning and Precautions

Not for Medicinal Use. Read the SDS carefully before beginning the protocol. Wear protective gloves/protective clothing/eye protection/face protection. Follow good clinical laboratory practices while handling clinical samples. Standard precautions should be followed as per established guidelines. Safety guidelines may be referred in safety data sheets of the product.

Performance and Evaluation

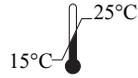
Performance of the solution is expected when the solution is stored at recommended temperature and within the expiry period.

Safety Information

The 5X Laemmli Buffer is for laboratory use only, not for drug, household or other uses. Take appropriate laboratory safety measures and wear gloves and safety goggles when handling. Not compatible with disinfecting agents containing bleach. Please refer the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

Technical Assistance

At HiMedia we pride ourselves on the quality and availability of our technical support. For any kind of technical assistance, mail at mb@himedialabs.com.



Storage temperature



Do not use if package is damaged



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