

6X DNA Loading Dye & SDS Solution

Catalog Number R1151

Pub. No. MAN0013167 Rev. B.00



WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [thermofisher.com/support](https://www.thermofisher.com/support).

Contents and storage

Contents	Amount	Storage
6X DNA Loading Dye & SDS Solution	5 x 1 mL	at room temperature or at 4 °C for periods up to 12 months. For longer periods, store at -20 °C

Description

The 6X DNA Loading Dye & SDS Solution is recommended for preparation of DNA samples with high amounts of DNA binding proteins prior to loading on agarose and polyacrylamide gels. It is supplemented with 1 % SDS to eliminate DNA-protein interactions. Proteins have to be denatured to release DNA from DNA-protein complexes. Otherwise, the DNA binding proteins may alter electrophoretic DNA migration, because DNA samples to stick to gel wells or band shifts. SDS also prevents the annealing of DNA molecules via long cohesive ends and helps to avoid additional bands in electrophoresis.

The optimized 6X DNA Loading Dye & SDS Solution contains two electrophoresis tracing dyes: bromophenol blue and xylene cyanol FF. It also contains 100 mM EDTA that binds divalent metal ions, inhibits metal dependent enzymatic reactions and protects DNA from metal dependent nucleases, effectively inactivating enzymes and protecting DNA from nucleases.

Composition

0.03 % bromophenol blue, 0.03 % xylene cyanol FF, 60 % glycerol, 1 % SDS, 100 mM EDTA (pH 7.6, adjusted with Tris).

Usage Recommendations

- 1 Add 1 volume of 6X DNA Loading Dye & SDS Solution to 5 volumes of DNA sample.
- 2 Mix well.
- 3 Heat at 65 °C for 10 minutes.
- 4 Chill on ice, spin down and load.

Note

- In 1 % agarose gels bromophenol blue co-migrates with ~300 bp DNA, while xylene cyanol FF co-migrates with ~4000 bp DNA.
- The prepared sample can be stored at -20 °C. It can be subjected and is viable for several freeze-thaw cycles.

Limited product warranty

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For descriptions of symbols on product labels or product documents, go to [thermofisher.com/symbols-definition](https://www.thermofisher.com/symbols-definition).

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07 May 2021

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