

Acrylamide/Bis-acrylamide Solution

Overview of Acrylamide/Bis-acrylamide Solution:

Polyacrylamide gels are prepared using acrylamide and bis-acrylamide, where bis-acrylamide is a cross-linking agent. But also acrylamide is a water soluble monomer which helps in forming a transparent stable insoluble gel.

Acrylamide/Bis-acrylamide solution has been used as a constituent in the preparation of stacking gel and resolving gel during sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) gel electrophoresis.

These acrylamide/bis-acrylamide solutions are available at the most common ratios for use in protein and nucleic acid electrophoresis. The concentration is based on the total weight of both the acrylamide and bis-acrylamide.

Each batch of gel solutions is gel electrophoresis tested in our quality control laboratory.

General Applications:

Acrylamide: Bis-Acry. Ratio	% T	% C	Applications
19:1	30	5	DNA Sequencing Peptide Separation
29:1	30	3.3	DNA Sequencing Protein Separation
37.5:1	30	2.6	High Molecular Weight Protein Separation
19:1	40	5	DNA Sequencing Peptide Separation
29:1	40	3.3	DNA Sequencing Protein Separation
37.5:1	40	2.6	High Molecular Weight Protein Separation

General Gel Preparation:

- Mix acrylamide/bis solution, buffer and water in separate beakers.
- Deoxygenate the solutions briefly (1 to 3 minutes).
- Add to separating gel solution: 10% SDS solution (w/v in water), TEMED and APS solution (w/v 10% of APS), swirl gently to mix without incorporating air into the mixture.
- Casting the separating gel: fill slab gel sandwich with separating gel solution up to approx. two thirds. The remaining volume for the stacking gel should refer to a separation distance of 1.5-fold of the depth of the wells of the comb to be used. Overlay with isopropanol immediately (0.1 ml), let polymerize (approx. 15 - 20 min.).
- Add 10 % SDS in water to the stacking gel solution, then TEMED and 10 % ammonium persulfate solution (APS), swirl gently to mix without incorporating air into the mixture.
- Casting the stacking gel: fill up the slab gel sandwich to the top and let polymerize.