# Acrylamide/Bis-acrylamide Solution 40% (19:1)

| Product Name | Product Code | Kit Packing |
|---|---|---|
| Acrylamide/Bis-acrylamide Solution 40% (19:1) | ML085-100ML<br>ML085-500ML | 100 ml<br>500 ml |

**Introduction**:

Acrylamide/Bis-acrylamide Solution 40% (19:1) is based upon the total weight of both the acrylamide and bis-acrylamide which are mixed in 19:1 ratio. The solution is provided in a ready-to-use form, reducing the dust, inhalation, and contact hazard associated with weighing and preparing acrylamide and bis-acrylamide powders and solutions.

**Description:**

SDS-PAGE is used for the separation of proteins through electrophoresis and it is based on the fact that charged molecules will migrate through a matrix upon application of an electrical field. The matrix for protein electrophoresis separation is polyacrylamide. Acrylamide is a potentially dangerous chemical compound that is mainly used to synthesize polyacrylamide which in turn is used in gel electrophoresis (SDS-PAGE). Polyacrylamide is a commonly used electrophoresis matrix for size separation of proteins and nucleic acids. The gel matrix is formed by free radical polymerization of Acrylamide and a crosslinker (Bis-acrylamide). *N, N'*-Methylenebisacrylamide is used as a reversible cross-linking reagent during the polymerization of polymers such as polyacrylamide. Acrylamide monomers polymerize into long chains by a reaction initiated by a free radical-generating system. These chains become cross-linked by *N, N'*-Methylenebisacrylamide and form a gel.

**Application:**

The Acrylamide/Bis-acrylamide solution is used in protein and nucleic acid electrophoresis. The solutions required for preparation of a 10 ml resolving gel for Tris-Glycine-SDS-PAGE are tabulated as follows:

| | 8% | 10% | 12% |
|---|---|---|---|
| 40% Acrylamide/Bis-acrylamide Solution (19:1) | 2 ml | 2.5 ml | 3 ml |
| 1.5 M Tris-SDS Buffer (pH 8.8) | 2.5 ml | 2.5 ml | 2.5 ml |
| 10% SDS | 0.1 ml | 0.1 ml | 0.1 ml |
| Water | 5.3 ml | 4.8 ml | 4.3 ml |
| 10% Ammonium persulfate | 100 ul | 100 ul | 100 ul |
| TEMED | 6 ul | 6 ul | 6 ul |



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The solutions required for preparation of a 5 ml stacking gel for Tris-Glycine-SDS-PAGE are tabulated as follows:

| | 5% |
|---|---|
| 40% Acrylamide/Bis-acrylamide Solution (19:1) | 0.625 ml |
| 1 M Tris Buffer (pH 6.8) | 0.625 ml |
| 10% SDS | 50 ul |
| Water | 3.65 ml |
| 10% Ammonium persulfate | 50 ul |
| TEMED | 4 ul |

*Note: Recommended Product Code: ML191 (1.5 M Tris Buffer pH 8.8)
ML190 (1 M Tris Buffer pH 6.8)

This Acrylamide/Bis-acrylamide solution can also be used along with HiMedia's ready to use Tris-SDS Buffer pH 8.8 (Product Code: ML039) and pH 6.8 (Product Code: ML040).

The solutions required for preparation of a 10 ml resolving gel using ML039 are tabulated as follows:

| | 8% | 10% | 12% |
|---|---|---|---|
| 40% Acrylamide/Bis-acrylamide Solution (19:1) | 2 ml | 2.5 ml | 3 ml |
| 2.5X Tris-SDS Buffer (pH 8.8) [ML039] | 4 ml | 4 ml | 4 ml |
| Water | 3.9 ml | 3.4 ml | 2.9 ml |
| 10% Ammonium persulfate | 100 ul | 100 ul | 100 ul |
| TEMED | 6 ul | 6 ul | 6 ul |

The solutions required for preparation of a 5 ml stacking gel using ML040 are tabulated as follows:

| | 5% |
|---|---|
| 40% Acrylamide/Bis-acrylamide Solution (19:1) | 0.625 ml |
| 5X Tris-SDS Buffer (pH 6.8) [ML040] | 1 ml |
| Water | 3.325 ml |
| 10% Ammonium persulfate | 50 ul |
| TEMED | 4 ul |

**Composition:**

Acrylamide/Bis-acrylamide Solution 40% (19:1) solution is prepared from highly pure nuclease free electrophoresis grade acrylamide and bis-acrylamide in ultrapure water and finally filtered through a 0.2 µm filter.

**Properties:**

| | | |
|---|---|---|
| Appearance | : | Colorless solution |
| Clarity | : | Clear and free of particles |
| DNase & RNase | : | None detected |
| Suitability test | : | This solution has been tested and is suitable for use in PAGE. |

**Storage conditions:**

Acrylamide/Bis-acrylamide Solution 40% (19:1) has to be stored at 2-8 °C and should be protected from light. Under recommended condition, the reagent is stable for 12 months.

**Warning and Precautions**

Not for Medicinal Use. Acrylamide is a neurotoxin. 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.

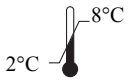
**Safety Information**

The Acrylamide/Bis-acrylamide Solution 40% (19:1), 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.

**Please refer disclaimer Overleaf.**

**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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