

# Product Information

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## Acrylamide/Bis-acrylamide, 40% solution (Mix Ratio 37.5:1)

Catalog Number **A7168**

Storage Temperature 2–8 °C

### Product Description

The Acrylamide/Bis-acrylamide solution is used in protein and nucleic acid electrophoresis. The solution concentration (40%) is based on the total weight of both the acrylamide and bis-acrylamide. The mix or feed ratio (w/w) of acrylamide:bis-acrylamide is 37.5:1. The solution is prepared from electrophoresis grade acrylamide and bis-acrylamide in ultrapure water. The product is passed through a 0.2 µm filter.

The product is suitable for electrophoresis.

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

### Storage/Stability

Store the product at 2–8 °C.

### Procedure

The following formula may be used to calculate the volume of stock solution required for a gel concentration of <40%:

$$V_r = \frac{c \times V_t}{40\%}$$

Where:

**V<sub>r</sub>** is the required volume of Acrylamide/Bis-acrylamide, 40% Solution

**c** is the final desired acrylamide concentration (%)

**V<sub>t</sub>** is the total volume of final solution to be prepared

To prepare gels for use in the Laemmli system, the following solutions may be combined as indicated in Tables 1 and 2.

Solution A - Acrylamide/Bis-acrylamide 40% Solution, Catalog Number A7168

Solution B - Combine:

|              | Catalog No. | Amount |
|--------------|-------------|--------|
| Trizma® Base | T6066       | 7.28 g |
| TEMED        | T9281       | 92 µl  |

Adjust the pH of the solution to 8.9 with 1 M HCl and add ultrapure water to 40 ml final volume.

Solution C - Combine:

|             |       |        |
|-------------|-------|--------|
| Trizma Base | T6066 | 1.21 g |
| TEMED       | T9281 | 92 µl  |

Adjust the pH of the solution to 6.9 with 1 M HCl and add ultrapure water to 20 ml final volume.

Solution D - Dissolve 1 g of Sodium Dodecyl Sulfate (Catalog Number L3771) in 10 ml of ultrapure water and filter.

Solution E - Dissolve 60 mg of Ammonium Persulfate (Catalog Number A3678) in 5 ml of ultrapure water. Prepare fresh each day.

See Tables 1 and 2 for mixing instructions.

**Table 1.**

Separating Gel Solution (Final volume = 20 ml)

| Component            | Final Acrylamide Concentration |      |      |     |     |     |     |     |     |      |
|----------------------|--------------------------------|------|------|-----|-----|-----|-----|-----|-----|------|
|                      | 5%                             | 6%   | 7%   | 8%  | 9%  | 10% | 11% | 12% | 15% | 20%  |
| Ultrapure Water (ml) | 11.3                           | 10.8 | 10.3 | 9.8 | 9.3 | 8.8 | 8.3 | 7.8 | 6.3 | 3.8  |
| Solution A (ml)      | 2.5                            | 3.0  | 3.5  | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 7.5 | 10.0 |
| Solution B (ml)      | 5.0                            | 5.0  | 5.0  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0  |
| Solution D (ml)      | 0.2                            | 0.2  | 0.2  | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2  |
| Solution E (ml)      | 1.0                            | 1.0  | 1.0  | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0  |

**Table 2.**

Stacking Gel Solution (Final volume = 8 ml)

| Component            | Final Acrylamide Concentration |
|----------------------|--------------------------------|
|                      | 3%                             |
| Ultrapure Water (ml) | 5.72                           |
| Solution A (ml)      | 0.60                           |
| Solution C (ml)      | 1.00                           |
| Solution D (ml)      | 0.08                           |
| Solution E (ml)      | 0.60                           |

**References**

1. Laemmli, U.K., Nature, **227**, 680 (1970).

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