



FT-86489

Acrylamide 40% solution used for PAGE (polyacrylamide gel electrophoresis)

Product Description

Uptima provides high quality and economic acrylamides solutions for electrophoresis analysis of proteins and nucleic acids.

Standard ratios in a 40% concentrate - Biotechnology grade: *Purchase these solutions when standard ratios are needed*

Acrylamide/Bis-Acrylamide 19:1 Solution 40%

UP86489B, 500mL

contains 38.0% Acrylamide/2.0% bis-Acryl (w/v)

Acrylamide/Bis-Acrylamide 29:1 Solution 40%

UP864927, 500mL

contains 38.67% Acrylamide/1.33 bis-Acryl (w/v)

Acrylamide/Bis-Acrylamide 37.5:1 Solution 40%

UP864937, 500mL

contains 38.96% Acrylamide/1.04% bis-Acryl (w/v) (or 30:0.8 Solution)

Concentrate stock solutions - Biotechnology grade: *Purchase these solutions if a variable and/or custom concentration and ratio is needed.*

Acrylamide Solution 4X-40%

UP873376, 500mL

Bis-Acrylamide Solution 2%

UP864965, 500mL

Also exist as powders, 30% solutions, proteomic grade solutions.

Storage:

Store cold. Warm to room temperature before opening. ⁽¹⁾ Guaranteed stable for at least two years when properly stored.

Benefits and Features:

Safety:

Liquid acrylamide products replace powdered materials with convenient solutions.

These products eliminate inhalation hazards associated with handling Acrylamide and bis-Acrylamide powders. The product line includes Acrylamide and bis-Acrylamide concentrates as well 40% solutions in standard ratios of monomer to crosslinker.

Quality:

Our acrylamide solutions are biotechnology grade: they are prepared from Ultra Pure Grade components in deionized water. Our manufacturing process is unique to the industry and yields a low conductivity solution with controlled concentration and monomer/crosslinker ratio. Uptima microfilters each solution to eliminate physical barriers to the gelation process.

Consistency:

Our acrylamide solutions are rigorously tested. We have optimized both analytical and performance parameters that are confirmed with each lot manufactured. Additionally, the solutions are verified to be free of nuclease and protease contamination. These requirements combine to ensure highly reproducible gels with excellent band mobility and resolution.

Technical Information

A- Preparing solutions with acrylamide and bis-acrylamide concentrates: *Solutions for variable and/or custom concentration and ratio is needed.*

1/ Determine the Monomer and Crosslinker Content:

Monomer Content (MC): Desired ratio of acrylamide in a solution, expressed as a decimal. Cross linker Content (CC): Desired ratio of bis-acrylamide in a solution, expressed as a decimal. These factors are used to calculate the needed volumes

$$MC = \frac{\text{Parts Monomer}}{\text{Parts Monomer} + \text{Parts Crosslinker}}$$

$$CC = \frac{\text{Parts Crosslinker}}{\text{Parts Monomer} + \text{Parts Crosslinker}}$$

Typical MC and CC recommended by applications:

Acrylamide Ratio	Monomer Content (MC)	Crosslinker Content (CC)	Recommended Applications
19:1	0.950	0.050	DNA Sequencing, Nucleic Acid Separations
29:1	0.966	0.033	Nucleic Acid and Protein Separations
37.5:1	0.974	0.026	Protein Separations

2/ Determine the needed volume of Acrylamide 40% and bis-Acrylamide 2%

needed volume of Acrylamide 40% (mL) = (MC) X (Final gel concentration) X (Final gel volume)

needed volume of bis-Acrylamide 2% (mL) = (CC) X (Final gel concentration) X (Final gel volume)

3/ Prepare electrophoresis gel solution

see below step C

B- Preparing Solution with Acryl/Bis concentrate blends: Solutions when standard ratios are needed.

1/ Determine the needed volume of Acryl/Bis solution

needed volume of Acryl/bis 40% (mL) = (Final gel concentration) X (Final gel volume)

2/ prepare electrophoresis gel solution

see below step C

C- Preparing electrophoresis gel solution:

Prepare the gel solutions according to specific needs (i.e., including running buffer, urea, etc)

Resolving Gels :

Gel concentration of 12.5% in 0.25 M Tris-HCl pH 8.8

Reagent:	Volume (mL) to make 10mL gel
40% Acrylamide*	3.13
water (distilled)	4.2
1 M Tris-HCl pH 8.8	2.5
10% SDS	0.1
APS	0.05
TEMED (added last)	0.02

* = 19:1 - 38:1

w:w ratio of acrylamide to N,N'-methylene bis-acrylamide

Pour into glass plate assembly CAREFULLY.

Overlay gel with isopropanol to ensure a flat surface and to exclude air. Wash off isopropanol with water after gel has set polymerised (15-60 min).

Optional: additives can be used :

Peroxydisulphate 0.05% (in place of APS)

Taurin [#05566K](#) (improves the resolution)

Stacking Gels:

Gel concentration of 4.5% in 0.125 M Tris-HCl pH 6.8

Reagent:	Volume (mL) to make 10mL gel
40% Acrylamide*	1.125
water (distilled)	7.45
1 M Tris-HCl pH 6.8	1.25
10% SDS	0.1
APS	0.05
TEMED (added last)	0.02

Mix as before, then pour onto top of set resolving gel, insert comb avoiding bubbles trapping.

Allow to polymerize (15min), then remove comb.

The gel can then be assembled to electrophoresis tank, and the tanks filled with electrophoresis buffer.

Related Documents and Products

- Ammonium Persulfate (APS) [UP306098](#)

- TEMED [UP15413D](#)

- Urea [UP031903](#)

- Crosslinkers :PDA, DATD

- Acrylamide powders, 30% solutions [#GV3250](#), proteomic grade, ready-to-pour blends, pre-cast gels

- Other products for electrophoresis: buffers, loading dyes, markers, sequencing

- Other products used before electrophoresis: [immunoprecipitation](#), [protein assays](#) (BC Assay UP40840A)

- Other products used after electrophoresis: stains (coomassie based: Coomassie Brilliant Blue G250; silver based: Silver-Bullit, fluorescent based: Lumitein)

Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>.

For any information, please ask: Uptima / Interchim Hotline: +33 4 70 03 73 06

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