Acrylamide 30% solutions

Products Description

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

Standard ratios in a 30% concentrate – Biotechnology grade:
Purchase these solutions when standard ratios are needed

Acrylamide/Bis-Acrylamide 19:1 Solution 30%	**GV3250, 500 ml** **GV3251, 1L**
Acrylamide/Bis-Acrylamide 29:1 Solution 30%	**420124, 500 ml** **420125, 1L**
Acrylamide/Bis-Acrylamide 37.5:1 Solution 30%	**GV3240, 500 ml** **GV3241, 1L**

Storage: Store cold. Warm to room temperature before opening .(L)
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 30% 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.

DNase, RNase and Protease free

- **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 30 and bis-acrylamide concentrates:

Purchase these solutions if a 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

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

Typical MC and CC recommended by applications:

Acylamide 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 30% and bis-Acrylamide 2%**

needed volume of **Acrylamide 30%** (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

Purchase these solutions when standard ratios are needed

1/ Determine the needed volume of ACRYL/BIS™ solution

needed volume of **Acryl/bis 30%** (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 10 mL gel
30% Acrylamide*:	4.15
water (distilled)	3.18
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

FT-GV3250
Optional: additives can be used :
Peroxydisulphate 0.05% (in place of APS)
Taurin #05566K (improves the resolution)

Mix ingredients GENTLY! in the order shown above, ensuring no air bubbles form. 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).

Stacking Gels:

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

Reagent:	Volume (mL) to make 10 mL gel
30% Acrylamide*	1.5
water (distilled)	7.08
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:

See BioSciences Innovations catalogue and e-search tool
:
Ammonium Persulfate (APS) UP306098
TEMED UP15413D
Urea UP031903
Other acrylamide products: powders, 40% solutions UP86489A, proteomic grade, ready-to-poor blends, pre-cast gels
Other products for sequencing
Other products for electrophoresis: buffers, loading dyes, markers
Other products used before electrophoresis: immunoprecipiation kit, protein assays
Other products used after electrophoresis: stains (coomassie based: CooBlue UPG4265A; silver based: T08860, fluorescent based: LavaPurple 67433A)

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