

The New Benchmark for Protein Research

KEY BENEFITS:

Purity of Reagents

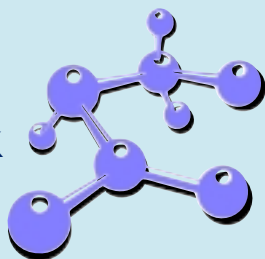
Consistency of Results

Convenience of Use

AMRESCO®

INTRODUCTION

Pro-Pure^E The New Benchmark for Protein Research.



Pro-Pure^E is the only name you need to know for investigating the world of proteomics. Starting with premium quality materials, we formulate and test our Proteomics Grade products for purity and performance. Demanding and rigorous testing methods assure you of the highest quality reagents, that are free of nuclease and protease activity.

In addition, Pro-Pure^E products are functionally tested, where applicable, to ensure maximum performance and reproducibility to meet your expectations.

Don't take chances with your valuable protein sample, use Pro-Pure^E Reagents for peace of mind when performing the following:

- Protein Electrophoresis Procedures
- Protein Staining Procedures
- Buffer and Detergent Blending
- Protease Inhibition



Acrylamide & bis-Acrylamide

Pro-Pure acrylamide powder has a purity of >99.9% and exhibits a high solubility with low conductivity. Together with bis-acrylamide (purity of >99.0%), these powders provide consistent and highly reproducible gels that permit good pore size control. Both powders have extremely low levels of contaminating acrylic acids and heavy metals; thereby reducing unwanted chain terminations during the polymerization process.



PAGE-PLUS^E Concentrate

PAGE-PLUS is a novel, patented acrylamide blend ideally suited for demanding separations and detection of proteins. This optimized blend of acrylamides and a proprietary cross-linker produces a unique gel matrix for superior separation of proteins. In addition, greater sensitivity for protein detection is observed when silver staining gels made with PAGE-PLUS because there is minimal background staining. For your convenience, the table below indicates our recommendations for protein separations in PAGE-PLUS. As a general rule, the migration rate for proteins in a PAGE-PLUS gel is slightly faster than in an acrylamide:bis-acrylamide gel. PAGE-PLUS Concentrate is offered in a convenient 40% (w/v) solution.

PAGE-PLUS	
Gel Concentration	MW Range (kDa)
8 – 10%	40 – 212
12 – 13%	14 – 98
16%	3 – 30

Pro-PAGE PLUS^E Products

These are ready-to-use denaturing gel pre-mixes containing our Proteomics Grade blend of acrylamides, a novel cross-linker and TG-SDS buffer. Available in 8%, 10%, and 12% acrylamide concentrations, these convenient all-in-one blends provide superior resolution of proteins in a safe, easy-to-use format. All formulations are supplied with the required 4% stacking gel pre-mix for use in discontinuous PAGE. Pro-PAGE-PLUS products yield gels with minimal background that can be stained in half the time of standard acrylamide:bis-acrylamide gels.



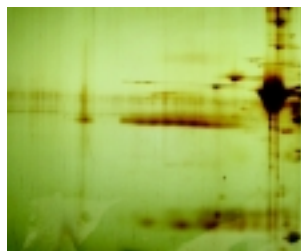
SDS-PAGE

SDS-PAGE, sodium dodecyl sulfate-polyacrylamide gel electrophoresis, is a separation technique for protein analysis that utilizes denaturing conditions. SDS is a negatively charged detergent that binds to proteins imparting a net negative charge resulting in the unfolding of the proteins. During electrophoresis, the negatively charged unfolded proteins, having identical charge:mass ratios, migrate in the direction of the positive electrode and separate according to size.

AMRESCO offers an unsurpassed line of Proteomics Grade gel matrices and reagents for protein separation.

Pro-PAGE^E Products

These are ready-to-use denaturing gel pre-mixes formulated using our Proteomics Grade acrylamide, bis-acrylamide, and TG-SDS buffer. These convenient all-in-one blends offer high resolution of proteins in a safe, easy-to-use format. Offered in 6%, 8%, 10%, and 12% acrylamide concentrations, these blends are suitable for general protein separations that do not require the superior resolution and enhanced staining properties of Pro-PAGE PLUS products. All formulations are supplied with the required 4% stacking gel pre-mix for use in discontinuous PAGE.



2-D Gel

Two different electrophoretic principles are at work here. Proteins are separated by net charge, using Isoelectric focusing (IEF) and molecular weight by SDS-PAGE.

2D Gel Electrophoresis

The first step in protein characterization requires the separation of your target protein. Presently, the method of choice for protein separation is two-dimensional gel electrophoresis. In the first dimension, Isoelectric focusing (IEF) is employed to separate proteins by their isoelectric point (the pH at which a specific protein has no net charge). The second dimension separates proteins according to their molecular weight by SDS-PAGE. This method has the ability to resolve > 1,000 proteins on a single gel. For successful results using 2-D electrophoresis, consistency and reproducibility are essential factors. Starting with high purity reagents and optimized formulations, then carefully manufactured to reduce lot-to-lot variability, Pro-Pure products are the first step in achieving your goals.

Prepare your IEF and PAGE gels using the following Pro-Pure reagents:

- Acrylamide Powder
- bis-Acrylamide Powder
- ACRYL/BIS 37.5:1, Powder
- ACRYL/BIS 37.5:1, 40% (W/V) Solution
- Pro-PAGE™-Denaturing Acrylamide Blends
- Pro-PAGE PLUS™-Denaturing Acrylamide Blends
- Ammonium Persulfate
- TEMED
- Molecular Weight Standards
- Silane

SYPRO^E Protein Gel Stains

SYPRO[®] protein gel stains are extremely versatile and rapid stains for high sensitivity detection of proteins in SDS gels. The staining procedure is fast, simple and sensitive and does not require destaining or the use of acids or organic solvents. The fluorescent intensity of SYPRO stained bands is linear with protein quantity over three orders of magnitude, a much broader range than either Coomassie Brilliant Blue (CBB) or silver staining can provide. Proteins stained with SYPRO dyes can be easily visualized using a standard UV or blue-light transilluminator, or a laser scanner.

AMRESCO provides a wide range of protein stains to meet your demanding requirements. Our offering of Pro-Pure[™] stains ranges from the extremely sensitive fluorescent SYPRO[™] stains to the traditional Coomassie Blue stains (Blue-BANDit[™] and Quick Coomassie[™] Kit) and silver staining method (Silver-PAGE[™] Kit).

Blue-BANDit^E

A Coomassie-based stain ready-to-use stain that is environmentally friendly and does not contain methanol or acetic acid. Blue-BANDit exhibits sensitivity below 20 ng of protein per band and only requires water for the prewashing and destaining steps. The simple hands-off staining/destaining procedure saves valuable time while reducing the handling of hazardous materials and solvent waste in your laboratory.

SilverPAGE^E Staining Kit

It is a rapid and easy-to-use method for achieving excellent silver staining of protein in polyacrylamide gels. The method requires only a one hour staining step, after fixing the gel, to obtain outstanding sensitivity with low background. (For the lowest possible background, try SilverPAGE with gels prepared using AMRESCO PAGE-PLUS[™] products).

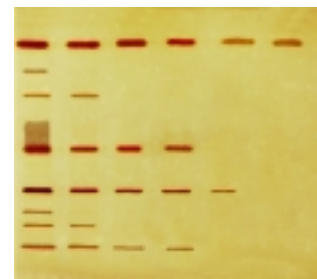
Additional Products

- Bradford Protein Assay
- Bromophenol Blue
- Coomassie Brilliant Blue[™] (G-250, R-250)
- Quick Coomassie[™] Staining Kit
- Silver Nitrate



Blue-BANDit[™]

Results of an 8% polyacrylamide gel loaded with serial dilutions of High Range Protein Marker (40 - 212 kDa) using 1X TG-SDS buffer and visualized with Blue-BANDit[™].



SilverPAGE[™] Staining Kit

Broad range MW markers were separated on a 12% PAGE-PLUS gel and subsequently stained with the SilverPAGE kit. Concentration of protein, expressed as ng/band, left to right: 200ng, 100ng, 50ng, 25ng, 10ng and 5 ng. Staining was carried out according to kit directions.

Electrophoresis Buffers



Tris-Glycine (TG) Tris-Glycine-SDS

Formulated with or without SDS, our Tris-Glycine Buffers are blended using Pro-Pure Reagents to provide the highest quality buffers for protein research.

1X TG Buffer Composition
0.025M Tris Base
0.192M Glycine
pH 8.3

TG Buffer is widely used for electroblotting proteins in Western blot procedures and is recommended for use with all nitrocellulose and nylon membranes.

1X TG-SDS Buffer Composition
0.025M Tris Base
0.192M Glycine
0.1% (w/v) SDS
pH 8.3

TG-SDS Buffer is a widely used running buffer for denaturing electrophoresis of proteins.

AMRESCO offers a complete line of Pro-Pure electrophoresis buffers in both liquid concentrate and Ready-Pack™ dry powder blends. Ideal for protein separations, these buffers are formulated using our Pro-Pure Tris powder to ensure exceptional purity and the absence of nuclease and protease activity.

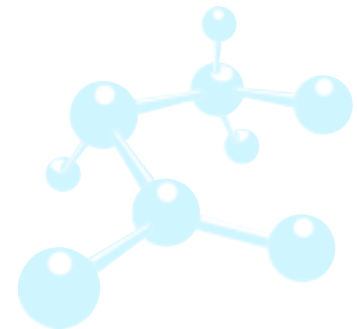


Tris-Tricine (TT) Tris-Tricine-SDS

Formulated with or without SDS, our Tris-Tricine Buffers are blended with the same high quality Pro-Pure Reagents as our TG Buffers. Useful for both non-denaturing and denaturing gel electrophoresis of proteins, TT and TT-SDS Buffers provide optimal resolution of lower molecular weight proteins and offer benefits over TG Buffers. TT Buffers do not interfere with membrane bound protein sequencing reactions and they eliminate the glycine front often found in gels utilizing TG buffer.

1X TT Buffer Composition
0.1M Tris Base
0.1M Tricine

1X TT-SDS Buffer Composition
0.1M Tris Base
0.1M Tricine
0.1% (w/v) SDS



Detergents



Detergent Products

- CHAPS
- CHAPSO
- CTAB
- Octyl-B-D-Glucopyranoside
- SDS
- Triton X-100^C
- Tween 20^C

AMRESCO offers an extensive line of Pro-Pure detergents (or surfactants) for applications in protein chemistry. Carefully purified and rigorously tested, our detergents are ideal for assisting in protein solubilization and re-crystallization techniques. Whether you are performing denaturing PAGE or MEKC, we can provide a surfactant appropriate for your research.

Protease Inhibitors



Protease Inhibitors

- AEBSF
- Antipain
- Aprotinin
- Benzamidine
- Bestatin
- Chymostatin
- E-64
- Leupeptin
- Pepstain

Our Pro-Pure™ line of protease inhibitor powders and inhibitor cocktails are rigorously tested for their ability to eliminate protease activity from the common serine protease, cysteine protease, aspartic acid protease, metalloprotease & amino-peptidase families. Our protease inhibitor products provide maximum protection to increase the yield of your protein purification procedures.

- 1,10-Phenanthroline
- Phosphoramidon
- PMSF
- Trypsin Inhibitor



General Reagents



General Reagents

- Ammonium Sulfate
- Boric Acid
- Dansyl Chloride
- Dithiothreitol
- EDTA, Disodium Salt
- Formaldehyde (37%)
- Glutaraldehyde (50%)
- Glycerol
- Glycine
- Guanidine HCL
- Imidazole

AMRESCO provides a premium line of proteomics grade reagents that are specially prepared for use in protein science applications. These reagents have been carefully developed from the highest purity materials available and thoroughly tested to meet the most stringent standards. Pro-Pure reagents are certified to be free of nuclease and protease activity for “worry-free” preparation of your valuable samples.

- Iodoacetic Acid
- B-Mercaptoethanol
- Phosphate Buffered Saline
- Phosphoric Acid
- Sodium Carbonate
- Sodium Hydroxide
- Sodium Thiosulfate
- Sucrose
- Tris
- Tris Buffered Saline
- Tris-HCl
- 1.5M Tris Solution, pH 8.8
- 0.5M Tris Solution, pH 6.8
- Urea

Ancillary Products for Proteomics Research:



Culture Media
Antibiotics / Antimycotics
Amino Acids

“Always striving to bring our customers the right product at the right time in the spirit of quality, innovation, and support.”

The AMRESCO logo consists of the word "AMRESCO" in a bold, white, sans-serif font, enclosed within a blue rounded rectangular border.

ABOUT THE COMPANY

AMRESCO continues a commitment of providing its global network of customers with the highest quality products and services that it has from day one. AMRESCO's strong foundation as a chemical company is key in terms of supplying research, bulk, and custom products to the following industries:

- Biotechnology
- Chemical
- Medical Diagnostics
- Biopharmaceutical

Whether you are performing new product development or large-scale production, our capabilities can be customized to meet your needs.

Our technical capabilities include a full range of analytical testing for more than 5,000 diverse materials. We have the ability to manufacture material to meet monograph grades (such as ACS, USP, BP, and FCC) or customer specific grades. For custom formulations and custom packaging, AMRESCO is the perfect choice.

Our capabilities include, but are not limited to, the following procedures:

- Blending and Milling
- Tableting and Pouching
- Ampouling
- Kit Assembly
- OEM and Private Labeling

AMRESCO is an ISO 9002 certified company, and all of our facilities comply with QSR standards. In addition, AMRESCO is regulated by the FDA for in vitro diagnostics manufacturing and the handling of pharmaceutical intermediates. By adhering to the guidelines set by these organizations, AMRESCO insures that its customers will receive the highest quality materials and superior service.



amresco-inc.com

E-MAIL: info@amresco-inc.com



AMRESCO Inc. • 30175 Solon Industrial Pky. • Solon, OH 44139
TEL: 800-366-2620 • FAX: 440-349-1182



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