



A Quarterly Newsletter Featuring Product Information Published By AMRESCO Inc.

Proteomics

Featured Products

Peroxide-Free Detergents

Minimize protein oxidation with AMRESCO's peroxide-free, non-ionic detergents.

see page 2

Protease Inhibitor Cocktails

Available in 4 formulations

- Standard
- Bacterial
- Mammalian
- Plant

see page 3

BlueStep™ Molecular Weight Markers

Prestained, ready-to-use markers for SDS-PAGE.

- Available in 3 size ranges
- Multiple shades of blue for easy band identification

see page 4

NEXT GEL™

Ready-to-pour SDS-PAGE Electrophoresis System

- No Stacking Gel
- High Resolution
- Fast Running
- In-gel Fluorescent Staining

see page 6-7

Products for Proteomics Research



Proteomics Grade Reagents

- Optimized for Proteomic Applications
- Stringently Tested
- Protease-Free

Protein Activity

Cell Lysis & Protein Purification

- Detergents
- Reducing and Chelating Reagents
- Stabilizing Reagents
- Protease Inhibitors

see pages 2-3

Protein Interactions

Protein Identification

- SDS-PAGE Reagents
- NEXT GEL™ SDS-PAGE Systems
- Silver Staining Products

see pages 4-7

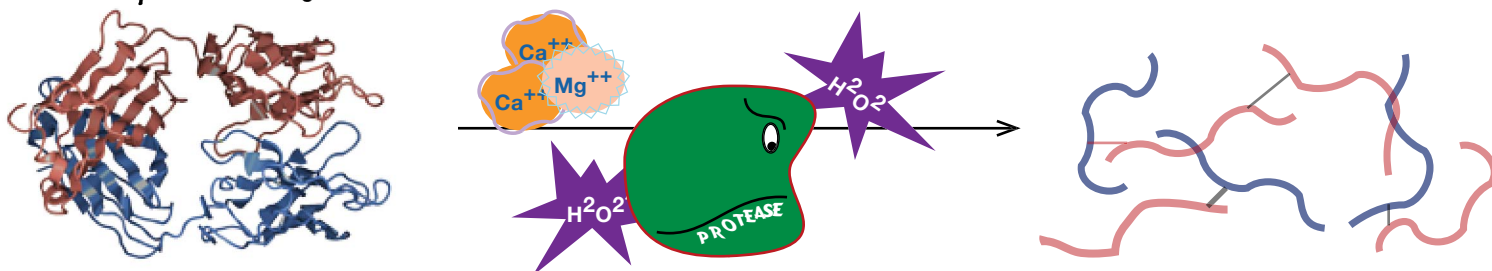
Protein Identification



Proteomics

Cell Lysis and Protein Analysis

Slash protein degradation and denaturation with AMRESCO Proteomic Grade Products



Exceptionally pure and stringently-tested, AMRESCO proteomic grade reagents stabilize native structure and function during lysis, purification and analysis of complex protein preparations.

Reduce oxidation > Peroxide-free detergents

Minimize denaturation > Chelating and reducing agents

Stop proteolysis > Protease inhibitors

Non-ionic Detergents

Essential for cell lysis and for solubilization of membrane proteins, AMRESCO offers an extensive selection of superior quality detergents. Non-ionic detergents are rigorously tested for protease activity and guaranteed protease-free.

Triton® X-100

- Solubilization of a variety of membrane proteins

Tween® 20

- Solubilization of peripheral membrane proteins

n-Octyl-β-D-glucopyranoside

- Solubilization of membrane proteins
- Improve protein resolution in 2D electrophoresis

n-Octyl-β-D-thioglucopyranoside

- Solubilization of complex membrane proteins

Spotlight

Peroxide-Free Non-ionic Detergents for Oxidation-sensitive Proteins

- <1 µg peroxide/ml
- Packed in sealed vials under nitrogen
- Ready-to-use concentrations
- Long-term stability

The following are available as 10% solutions

Tween® 20
Triton® X-100
Triton® X-114
Brij®35

Try all 4 in AMRESCO's convenient trial kit.



Reducing and Chelating Agents

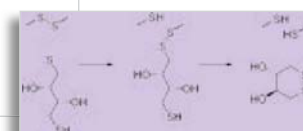
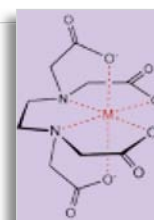
Prevent aggregation and proteolysis during cell lysis and protein purification.

EDTA > A chelating agent that binds and sequesters di- and trivalent cations. It is widely used as an inhibitor of metalloproteases.

DTT > A strong reducing agent widely used to prevent intramolecular and intermolecular disulfide bond formation between cysteine residues.

TCEP-HCl > An odorless, stable reducing agent ideal for quantitative reduction of disulfide bonds.

β-mercaptoethanol > A strong reducing agent widely used to prevent intramolecular and intermolecular disulfide bond formation between cysteine residues.



Protease Inhibitors

AMRESCO offers a comprehensive selection of protease inhibitors that suppress the activity of a broad spectrum of proteolytic enzymes.

[Individual inhibitors](#) > Broad range of specificities available

[Cocktails](#) > General or targeted to specific types of organisms including bacteria, plant and mammalian

[Animal-free inhibitors](#) > Available for research and production applications requiring reagents from non-animal sources

PRODUCT DESCRIPTION	CODE	SIZE
Detergents - Peroxide Free		
Brij® 35, 10% Solution	M238-10ML-5PK	5 pack
Triton® X-100, 10% Solution	M236-10ML-5PK	5 pack
Triton® X-114, 10% Solution	M237-10ML-5PK	5 pack
Tween® 20, 10% Solution	M228-10ML-5PK	5 pack
Detergent Sampler Pack	M248-4PK	4 pack
<i>Contains one 10 ml ampoule of each of the following</i>		
Brij® 35, 10% Solution		
Triton® X-100, 10% Solution		
Triton® X-114, 10% Solution		
Tween® 20, 10% Solution		
Detergents - Non-ionic		
Triton® X-100	M143-1L	1 L
	M143-4L	4 L
Tween® 20	M147-1L	1 L
	M147-4L	4 L
n-Octyl-β-D-glucopyranoside	M129-500MG	500 mg
	M129-1G	1 g
	M129-5G	5 g
n-Octyl-β-D-thioglucopyranoside	M130-100MG	100 mg
	M130-1G	1 g
Reducing and Chelating Agents		
EDTA Disodium Salt Dihydrate	M101-500G	500 g
	M101-1KG	1 kg
	M101-2.5KG	2.5 kg
DL-Dithiothreitol (DTT)	M109-5G	5 g
	M109-25G	25 g
TCEP-HCl	K831-2G	2 g
	K831-10G	10 g
β-mercaptoethanol	O482-100ML	100 ml
	O482-250ML	250 ml



Protease Inhibitor Cocktails

All cocktails are supplied as pre-measured powders that reconstitute into 100X solutions when resuspended according to supplied instructions.

Standard Protease Inhibitor Cocktail

AEBSF • Aprotinin • E-64 • Bestatin • Leupeptin

Standard Protease Inhibitor Cocktail with EDTA

AEBSF • Aprotinin • E-64 • Bestatin • Leupeptin • EDTA

Bacterial Inhibitor Cocktail

AEBSF • E-64 • Bestatin • Pepstatin • EDTA

Plant Protease Inhibitor Cocktail

AEBSF • Aprotinin • E-64 • Bestatin • Leupeptin • EDTA

Mammalian Protease Inhibitor Cocktail

AEBSF • E-64 • Bestatin • Leupeptin • Pepstatin • 1,10-phenanthroline



Stabilizing Agents

Maintain native structure and activity during protein purification with AMRESCO's ultra-pure, protease-free stabilizing agents.

[BSA](#) > Reduce dilution related yield and activity losses

[Glycerol](#) > Maximize protein stability during extended storage

PRODUCT DESCRIPTION	CODE	SIZE
Protease Inhibitor Cocktails		
Protease Inhibitor Cocktail, 100X	M221-1ML	1 ml
Protease Inhibitor Cocktail, 100X with EDTA	M222-1ML	1 ml
Protease Inhibitor Cocktail, Mammalian	M250-1ML	1 ml
Protease Inhibitor Cocktail, Bacterial	M306-5ML	5 ml
Protease Inhibitor Cocktail, Plant	M307-1ML	1 ml
Stabilizing Agents		
Albumin, Bovine (BSA), Heat Shock Isolation	O332-25G	25 g
	O332-100G	100 g
Glycerol	O854-1L	1 L
	O854-4L	4 L
Glycerol, Sterile	E520-100ML	100 ml

Proteomics

SDS-PAGE Reagents

AMRESCO offers an extensive line of products for protein gel electrophoresis including gel matrices, buffer reagents, loading buffers and molecular weight markers.

Acrylamides

Powders

Quality > Ultra Pure Powder with acrylamide purity > 99%

Solubility > Produce haze-free solutions

Performance > Guaranteed protease-free

Blended Solutions

Safety > Eliminate handling of neurotoxic powders

Convenience > Available in 2 formulations optimized for protein analysis:

- Acryl/Bis™ 29:1
- Acryl/Bis™ 37.5:1

PRODUCT DESCRIPTION	CODE	SIZE
Acrylamide		
Acrylamide, Ultra Pure Powder >99.9% Pure	0341-100G	100 g
	0341-500G	500 g
	0341-1KG	1 kg
Acryl/Bis™ 29:1, 40% W/V Solution	0311-500ML	500 ml
Acryl/Bis™ 37.5:1, 40% W/V Solution	0254-500ML	500 ml
Running Buffers		
Sodium Dodecyl Sulfate (SDS), >99% Pure	M107-100G	100 g
	M107-250G	250 g
	M107-500G	500 g
	M107-1KG	1 kg
TG-SDS, 10X Liquid Concentrate	M148-1L	1L
	M148-4L	4 L
Molecular Weight Markers		
BlueStep™ Pre-Stained Protein Marker, Low Range	K972-0.5ML	0.5 ml
BlueStep™ Pre-Stained Protein Marker, High Range	K974-0.5ML	0.5 ml
BlueStep™ Pre-Stained Protein Marker, Broad Range	K973-0.5ML	0.5 ml

Running Buffers/Reagents

Ultra pure SDS, Tris and Glycine are available in a variety of forms including powders, convenient ready-packs and solutions.

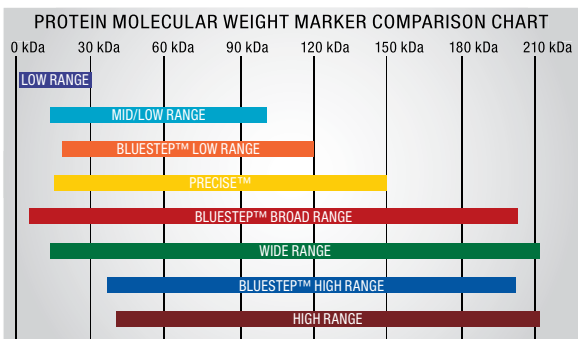
SDS > Purity > 99% for a variety of applications

TG-SDS, 10X Liquid Concentrate > Complete Laemmli running buffer.

Molecular Weight Markers

Variety > Different formulations for maximum versatility

Accuracy > Broad range of sizes for precise size estimation



Please consult the AMRESCO catalog or website at www.amresco-inc.com for complete information.

Spotlight

BlueStep™ Pre-Stained Protein Markers

Comprehensive > Available in 3 different size ranges

Convenient > Ready-to-use. Simply load and run gel

Easy Identification > Multiple color shades for easy band identification

BlueStep™ Low Range Protein Marker

MW	Protein
120 kDa	β-Galactosidase
94 kDa	Bovine Serum
47 kDa	Ovalbumin
37 kDa	Carbonic Anhydrase
28 kDa	Myoglobin
19 kDa	Lysozyme

BlueStep™ High Range Protein Marker

MW	Protein
200 kDa	Myosin
120 kDa	β-Galactosidase
91 kDa	Bovine Serum
48 kDa	Ovalbumin
34 kDa	Carbonic Anhydrase

BlueStep™ Broad Range Protein Marker

MW	Protein
200 kDa	Myosin
120 kDa	β-Galactosidase
91 kDa	Bovine Serum
62 kDa	Glutamate
46 kDa	Ovalbumin
38 kDa	Carbonic Anhydrase
26 kDa	Myoglobin
19 kDa	Lysozyme
9 kDa	Aprotinin

Silver Staining

Ultra-sensitive protein detection for 1-D and 2-D SDS-PAGE

Silver BULLit™ Silver Stain Kit

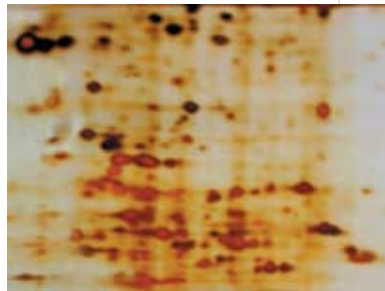
Sensitivity > Detection of subnanogram quantities

Quality > Very low background

Compatibility > Ideal for downstream applications

- Western Blotting
- MALDI Analysis
- Mass Spectroscopy

Silver BULLit™ staining of second dimension SDS-PAGE of Human Leukocyte Proteins. First dimension isoelectric focusing was performed on a pH 3-10 gradient in 8 M urea prior to resolution in the second dimension on a 10%-20% gradient SDS-PAGE gel.



Fast Staining Procedure - Band visualization in < 30 minutes!

30 Minute Staining Procedure

Fix 1

↓ 5 minutes

Fix 2

↓ 5 minutes

Sensitizer

↓ 2 minutes

Rinse 3X



Stain

↓ 10 minutes

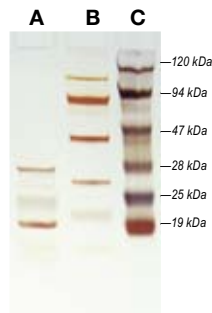
Rinse 3X



Develop

↓ 5 minutes

Stop



Fast Protocol Silver Staining of Molecular Weight Markers with Silver BULLit™ Silver Stain Kit. Molecular weight markers were resolved on 15% NEXT GEL™(Code:M258) and stained with the 30 Minute Fast Protocol. A) Low Range Protein Molecular Weight Marker (Code: K880-200ul); B) Mid/Low Range Protein Molecular Weight Marker (Code: J450-200ul) and C) Blue Step™ Low Range Protein Marker, Pre-Stained.

SILVER SUBTRACT™

Recover overstained or blotched silver stained gels with Silver Subtract™ destaining reagent.

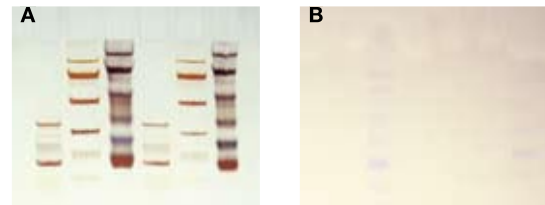
Silver Subtract™ removes common silver staining artifacts in as little as 5 minutes to improve band visibility and overall appearance. Gels can be restained without increase in background or loss of bands. Silver Subtract™ can be used with any commercial or homemade silver staining procedure.

Convenience > Simply dilute, mix and use.

Speed > Destain in < 5 minutes

Compatibility > Use with a variety of downstream applications:

- In-gel enzymatic digests inhibited by the presence of silver ions
- MALDI-MS analysis and mass spectrometry



Silver Subtract™ destaining of Silver BULLit™ silver stained molecular weight markers. A. Molecular weight markers were resolved on 15% NEXT GEL™ (Code:M258) and stained with the Silver BULLit™ 30 Minute Fast Protocol. B. The gel was then destained with Silver Subtract™ for five minutes.

Your Silver Stain/Destain Kit is really amazing....

Background is minimal, destaining is fast.

Dr. Anton Komar
Department of Biology, Geology and Environmental Sciences
Cleveland State University, Cleveland, OH

PRODUCT DESCRIPTION

Silver BULLit™ Silver Stain Kit

Sufficient reagent to stain 50 mini-gels

CODE

M227-1L-KIT

SIZE

1 Kit

Silver Subtract™

Includes: Silver Subtract Solution A, 25 X, 25 ml
Silver Subtract Solution B, 25 X, 25 ml

M322-KIT

1 Kit

Proteomics

NEXT GEL™ Protein Electrophoresis Systems

A REVOLUTION IN RESOLUTION

High Resolution SDS-PAGE in ready-to-pour kits - ideal for 1-D and 2-D Electrophoresis

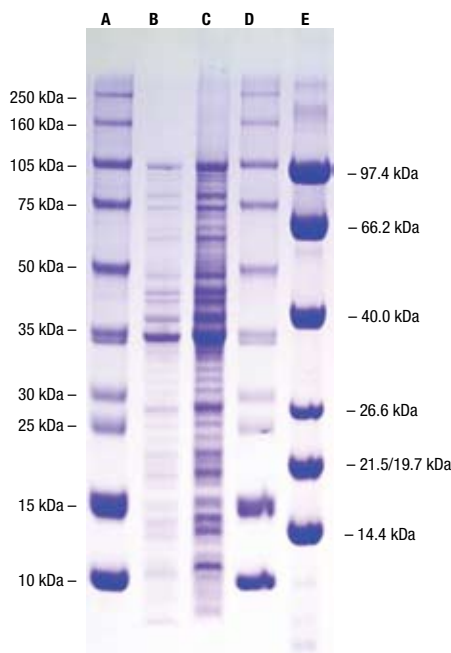
NEXT GEL™

Performance > Resolve 14.2 kDa protein from a 14.4 kDa protein on a mini-gel

Convenience > Pour and polymerize gels in 20 minutes. No stacking gel needed!

Stability > Premixed solutions are room temperature stable for 1 year

Value > No hazardous shipping fees



SDS-PAGE with 10% NEXT GEL™. Lane A and D: GE Healthcare Rainbow™ Molecular Weight Marker. Lane B: 50 μg *E. coli* lysate. Lane C: 100 μg *E. coli* lysate. Lane E: AMRESCO® Mid/Low Range Protein Molecular Weight Marker (Code: J450).

NEXT GEL™ is a ready-to-pour pre-mixed solution of acrylamide, bisacrylamide, gel buffer and SDS that enables ultra-fine resolution of protein bands. It ensures batch-to-batch consistency for reliable, reproducible results on each gel run. It is available in a range of acrylamide concentrations from 5% through 15%.

NEXT GEL™ may be used with all standard SDS-PAGE equipment and all common staining procedures. It is compatible with most downstream applications including 1-D and 2-D gels, Western blotting, protein sequencing and MALDI analysis.

PRODUCT DESCRIPTION	CODE	SIZE
NEXT GEL™ 5% Solution*	M254-100ML	100ml
Includes: NEXT GEL™ Running Buffer, 20X	M254-500ML	500ml
Separation Range: 30 kDa-500 kDa		
NEXT GEL™ 7.5% Solution*	M255-100ML	100ml
Includes: NEXT GEL™ Running Buffer, 20X	M255-500ML	500ml
Separation Range: 20 kDa-300 kDa		
NEXT GEL™ 10% Solution*	M256-100ML	100ml
Includes: NEXT GEL™ Running Buffer, 20X	M256-500ML	500ml
Separation Range: 10 kDa-200 kDa		
NEXT GEL™ 12.5% Solution*	M257-100ML	100ml
Includes: NEXT GEL™ Running Buffer, 20X	M257-500ML	500ml
Separation Range: 3.5 kDa-100 kDa		
NEXT GEL™ 15% Solution*	M258-100ML	100ml
Includes: NEXT GEL™ Running Buffer, 20X	M258-500ML	500ml
Separation Range: 2.5 kDa-100 kDa		
NEXT GEL™ Trial Kit*	M261-KIT	1 KIT
Includes:		
Each NEXT GEL™ concentration, 30 ml		
NEXT GEL™ Running Buffer, 20X		
Sample Loading Buffer, 1 ml		

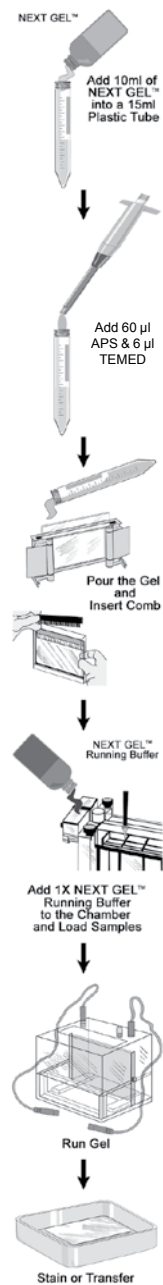
* Each 7.5 ml will prepare a 10 cm x 10 cm x 0.75 mm mini-gel

Each 100 ml kit includes 2 bottles of 20X Running Buffer Solution, 100 ml each

Each 500 ml kit includes 2 bottles of 20X Running Buffer Solution, 500 ml each

NEXT GEL™ products are patent pending.

NEXT GEL™ Protocol



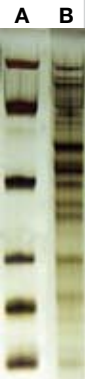
NEXT GEL™ Protein Electrophoresis Systems

A REVOLUTION IN RESOLUTION

Ultra-fast SDS-PAGE!

SPRINT NEXT GEL™

Run a mini-gel in < 30 minutes



Fast Casting Time > Cast a mini-gel in less than 15 minutes.

Fast Running Time > Run your mini-gel in less than 30 minutes.

Fast Western Blotting > Cast, run and transfer a gel plus develop a blot in one day.

10% SPRINT NEXT GEL™. Gel was run at 300 V for 30 min. **Lane A:** AMRESCO Mid/Low Range Protein MW Marker (Code: J450). **Lane B:** Total E. coli lysate, 50 µg.

Turbo NEXT GEL™



Run large format gels in < 3 hours



Fast pouring, fast running SDS-PAGE system optimized for 16 x 16 cm or larger SDS-PAGE gels. Turbo NEXT GEL™ is compatible with a variety of downstream applications including Western blotting, 2D-Electrophoresis, MALDI analysis and mass spectrometry.

SDS-PAGE on Turbo NEXT GEL™. 16 x 16 cm x 1 mm 10% acrylamide gel run at 300 volts for 3 hours. **Lane A:** GE Healthcare Rainbow™ Molecular Weight Markers. **Lane B:** Total E. coli lysates (100 µg).

Fluorescent SPRINT NEXT GEL™



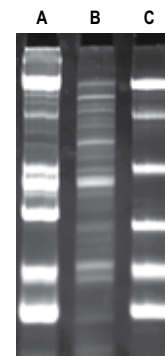
All the great features of SPRINT NEXT GEL™

Instant band visualization with an in-gel fluorescent stain!

Quick band visualization > Bright fluorescent bands within 5 minutes of illumination with UV light

Sensitivity > Comparable to Coomassie® Blue

Compatibility > Ideal for downstream applications including Western blotting and 2-D Electrophoresis



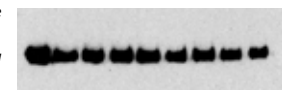
Instant band visualization of a 12.5% Fluorescent SPRINT NEXT GEL™. Gels were run at 300 volts for 30 minute. Bands were visualized by exposure to UV light for 3 minutes. **Lane A:** AMRESCO Wide Range Protein Molecular Weight Marker (Code: K494). **Lane B:** Total E. coli lysate. **Lane C:** AMRESCO Mid/Low Range Protein Molecular Weight Marker (Code: J450).



Western blot results in 4 hours with Fluorescent SPRINT NEXT GEL™!

Cast gel ▶ Polymerization ▶ Run gel ▶ Visualize bands ▶ Transfer ▶ Probe blot ▶ Develop blot
2 mins 15 mins 30 mins 5 mins 30 mins 2.5 hrs 1 min

Western blot of corneal proteoglycans - Courtesy of Dr. Eric Carlson, Case Western Reserve University, Cleveland, OH. Extracts were resolved on 10% Fluorescent SPRINT NEXT GEL™ and transferred to membrane prior to development with ECL™.



PRODUCT DESCRIPTION	CODE	SIZE
Turbo NEXT GEL™ 7.5% Solution	M323-100ML	100 ml
Includes: NEXT GEL™ Running Buffer, 20X	M323-500ML	500 ml
Separation Range: 10 kDa-200 kDa		
<i>Each 30 ml will prepare a 16 cm x 16 cm x 1.00mm gel</i>		
Turbo NEXT GEL™ 10% Solution	M313-100ML	100 ml
Includes: NEXT GEL™ Running Buffer, 20X	M313-500ML	500 ml
Separation Range: 10 kDa-200 kDa		
<i>Each 30 ml will prepare a 16 cm x 16 cm x 1.00mm gel</i>		
Turbo NEXT GEL™ 12.5% Solution	M310-100ML	100 ml
Includes: NEXT GEL™ Running Buffer, 20X	M310-500ML	500 ml
Separation Range: 10 kDa-200 kDa		
<i>Each 30 ml will prepare a 16 cm x 16 cm x 1.00mm gel</i>		

Each 100 ml kit contains 2 Ready-Packs™ of NEXT GEL™ Running Buffer
Each 500 ml kit contains 4 Ready-Packs™ of NEXT GEL™ Running Buffer
Each Ready-Pack™ makes 500 ml of 20X Buffer

PRODUCT DESCRIPTION	CODE	SIZE
SPRINT NEXT GEL™ 10%	M312-100ML	100ml
Includes: NEXT GEL™ Running Buffer, 20X	M312-500ML	500ml
Separation Range: 10 kDa-200 kDa		
<i>Each 7.5 ml will prepare a 10 cm x 10 cm x 0.75 mm mini-gel</i>		
SPRINT NEXT GEL™ 12.5%	M311-100ML	100ml
Includes: NEXT GEL™ Running Buffer, 20X	M311-500ML	500ml
Separation Range: 3.5 kDa-100 kDa		
<i>Each 7.5 ml will prepare a 10 cm x 10 cm x 0.75 mm mini-gel</i>		
Fluorescent SPRINT NEXT GEL™ 10%	M317-KIT-100ML	100ml
Includes: NEXT GEL™ Running Buffer, 20X	M317-KIT-500ML	500ml
Separation Range: 10 kDa-200 kDa		
<i>Each 7.5 ml will prepare a 10 cm x 10 cm x 0.75 mm mini-gel</i>		
Fluorescent SPRINT NEXT GEL™ 12.5%	M318-KIT-100ML	100ml
Includes: NEXT GEL™ Running Buffer, 20X	M318-KIT-500ML	500ml
Separation Range: 3.5 kDa-100 kDa		
<i>Each 7.5 ml will prepare a 10 cm x 10 cm x 0.75 mm mini-gel</i>		

Each 100 ml kit includes 2 bottles of 20X Running Buffer Solution, 100 ml each
Each 500 ml kit includes 2 bottles of 20X Running Buffer Solution, 500 ml each



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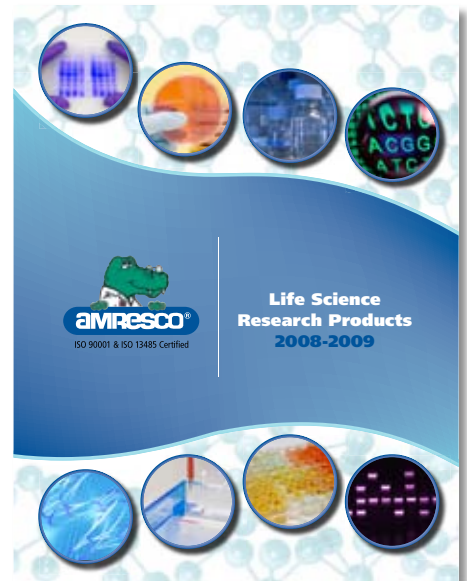
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