



A Quarterly Newsletter Featuring Product Information Published By AMRESKO Inc.

## Cell Culture

### Featured Products

**NEW**

#### Stripping Buffers for Western Blots

- Save time and valuable samples
- Odor-free and easy-to-use

No more BME smell in the lab!!  
Yeah!

Dr. Karen McColl  
Case Western Reserve University,  
Cleveland Ohio  
[see page 6](#)

#### Reagents for Cell Culture

##### Bacterial Freezing Media

Ready-to-use media in convenient storage vials



**NEW**

##### Ultra-pure DMSO

Ideal for cryoprotection media.

**NEW**

##### SOC Media

Increase transformation efficiency in *E. coli* with ready-to-use SOC media

[see page 3](#)

**NEW**

#### Nucleic Acid Analysis

##### PCR Kits

Ready-to-use components for maximum flexibility in DNA amplification reactions.

##### Ready-to-use DNA Ladders

[see page 7](#)

### Animal-free Reagents

*LB Media • Peptone*

*Amino Acids • Protease Inhibitors*

- Improve safety
- Reduce costs
- Match the performance of conventional reagents

[see pages 4-5](#)



### Yeast Media

*General Growth Media • Nitrogen Bases*

- Homogenous high-quality powders
- Unsurpassed purity
- Reproducible lot-to-lot results

[see page 2](#)



## Media Components

### Yeast Media

- **Convenient** - Supplied as premixed, homogenous powders
- **High quality** - Reproducible lot-to-lot results

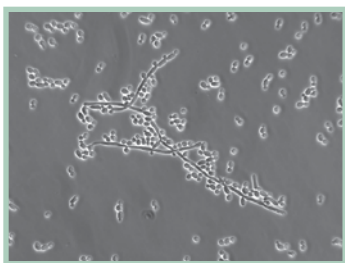
#### General Growth Media

##### YM Medium

Recommended for the cultivation of yeasts, molds and other aciduric microorganisms.

10 g YM Medium will prepare 1 liter of YM Broth

Components	Final Amount (g/L)
Yeast extract	0.36
D-Mannitol	8.92
Sodium Chloride	0.89
Magnesium Sulfate	0.17
Potassium Phosphate, Dibasic	0.45



##### YPD Medium

Use for the cultivation of yeasts, molds and other aciduric microorganisms

50 g of YPD Medium will prepare 1 liter of YPD broth.

Components	Final Amount (g/L)
Yeast extract	10.00
Peptone	20.00
D-Glucose	20.00

#### Technical Tip

##### Increase transformation efficiency in *A. tumefaciens* by YM Media

The transformation of *A. tumefaciens* with binary vectors such as pBI121 can generate more than  $10^6$  transformants per  $\mu\text{g}$  pBI121 if electroporated cells are allowed to recover in YM media for 3 hours prior to plating.

#### Yeast Nitrogen Bases

##### Bases for preparation of drop-out media

Nitrogen bases provide all essential nutrients (vitamins, salts and trace elements) except carbon sources for growth of auxotrophic yeast mutants. The media must be supplemented with the required carbon source prior to use.

AMRESCO bases are available in two formulations.

- Yeast Nitrogen Base w/o amino acids
- Yeast Nitrogen Base w/o amino acids and ammonium sulfate

**See page 5 for AMRESCO's complete line of amino acids to supplement base media.**

#### & Related Products

- Agar, Bacteriological, Code: J637
- Peptone, Code: J636
- Yeast Extract, Code: J850

AMRESCO offers a wide range of antibiotics, antimycotics and selection agents. Please visit our website at [www.amresco-inc.com](http://www.amresco-inc.com) or see our catalog for a complete listing.

PRODUCT DESCRIPTION	CODE	SIZE
YPD Broth	J903-100G	100 g
	J903-500G	500 g
YM Medium Broth	J904-100G	100 g
	J904-500G	500 g
Yeast Nitrogen Base w/o amino acids	J386-100G	100 g
	J386-500G	500 g
Yeast Nitrogen Base w/o amino acids and ammonium sulfate	J630-100G	100 g
	J630-500G	500 g

## Reagents for Cell Culture

### Bacterial Freezing Media

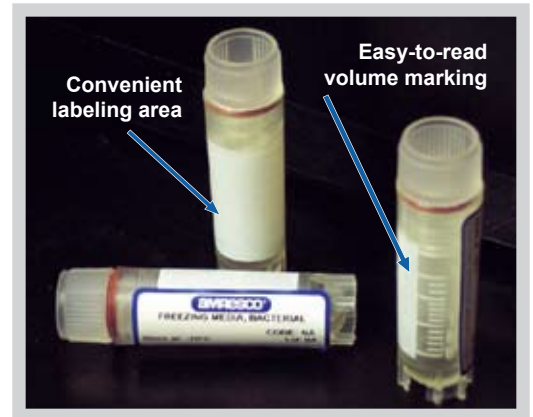
**Sterile, ready-to-use cryopreservation media for long-term storage of bacterial cultures**

- 25 x 2 ml cryotubes in convenient storage box
- 0.5 ml of LB broth (Miller) with 30% glycerol per tube
- 85% post-thaw viability of frozen cultures
- Easy-to-label vials

#### Usage:

1. Simply add 1 ml of saturated culture to the vial
2. Vortex well and store at -70°C
3. Thaw on ice and inoculate fresh growth media to start a new culture

PRODUCT DESCRIPTION	CODE	SIZE
Freezing Media, Bacterial	N400-25PK	25 x 0.5 ml



**Easy-to-fill/easy-to label vials.**

### **NEW** Ultrapure DMSO

**Sterile, high-purity DMSO suitable for molecular biology applications**

- **Quality** - >99.9% pure
- **Easy-to-use** - Each pack contains 5 x 10 ml tubes

PRODUCT DESCRIPTION	CODE	SIZE
DMSO, Ultrapure	N182-5x10ML	5 X 10 ml

### **NEW** SOC Media

**Rich media for increased transformation efficiency in *E. coli*.**

Used immediately after transformation, SOC maximizes cell recovery and expression of plasmid borne antibiotic resistance genes.

- **Ready-to-use** - Provided as sterile broth
- **Convenient** - Supplied in 100 ml bottles or in boxes of 6 x 5 ml tubes

PRODUCT DESCRIPTION	CODE	SIZE
SOC Media	N549-6x5ML	6 X 5 ml
	N549-100ML	100 ml

### Applications

- Excellent cryoprotective agent for human and animal cell lines
- Used as a component for cell fusion procedures.

### SOC Media

Components	Final Amount (g/L)
Tryptone/Casein, Peptone	2%
Yeast extract	0.5%
Sodium Chloride	8.5 mM
Potassium Chloride	2.5 mM
D-Glucose	20.0 mM
Magnesium Chloride, Hexahydrate	10.0 mM
Magnesium sulfate, Heptahydrate	10.0 mM

## Media Components

### Animal-free Reagents

Minimize risks and improve consistency in cell-culture and production applications with Non-Animal Origin (NAO) reagents

**NEW**

#### Animal-free LB Media

- **Superior performance** - Bacterial growth curves match or exceed those obtained in conventional media.
- **Safer** - Animal-free Peptone derived from soy meal
- **Convenient** - Each package prepares one liter of media

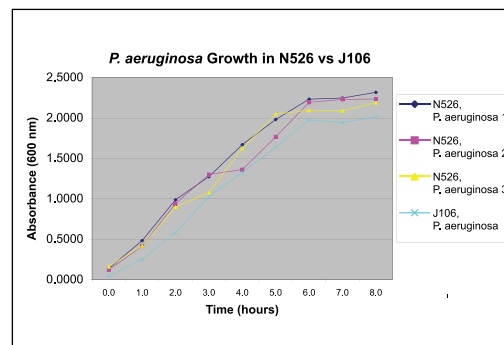
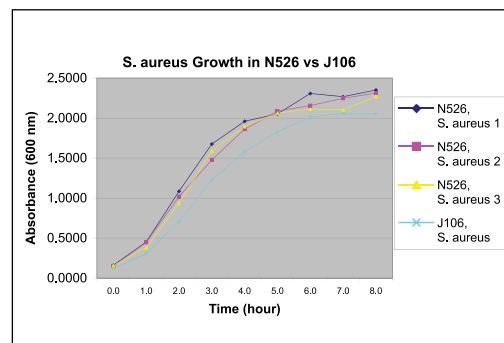
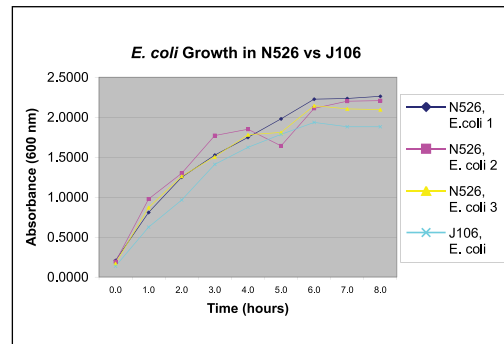
All components of AMRESCO's animal-free LB Media are derived from non-animal origins and have been extensively tested to ensure that growth matches or exceeds that in media containing peptones from conventional animal sources.

Supplied as a convenient, pre-mixed powder, animal-free LB media is a general purpose media for the growth of non-fastidious microorganisms. It may also be used as a base for enriched media when supplemented with additional growth requirements.

#### Animal-free LB Media

Components	Final Amount (g/L)
Soy Peptone, animal-free	10
Yeast extract	5
Sodium Chloride	5

Supplied as 5 individual packs per box. Each pack makes 1 L of media.



Comparison of Bacterial Growth in animal-free LB media (Code: N526) versus conventional LB media. Saturated cultures of E. Coli, P. aeruginosa, and S aureus were used to inoculate fresh cultures of either animal-free LB media or conventional LB media, (Miller Formulation, Code: J106), for 8 hours. Cultures were incubated at 37°C with shaking. Growth curves were obtained by determining OD<sub>600</sub> at hourly intervals.

**NEW**

#### Animal-free Peptone

Excellent source of essential nutrients for the culture of microorganisms.

Animal-free Peptone is a papaic/pancreatic digest of defatted soybean meal derived from sources free of genetic modifications. It is an ideal substitute for peptone derived from animal sources for all growth media including tissue culture, fermentation and agar plates.

PRODUCT DESCRIPTION	CODE	SIZE
LB Powder, Non-Animal Origin <i>Each pack prepares 1 liter of broth</i>	N526-5PK	5 Packs
Soy Peptone, Animal-free, GMO-free	N454-100G N454-500G	100 g 500 g

## Animal-free Products

Demand for animal-free reagents continues to rise in both research and production applications. Cell culture, therapeutics and production processes that must be free of contamination by transmissible pathogens such as bovine spongiform encephalopathy (BSE) increasingly require development with animal-free components. Elimination of animal derived products can confer substantial cost and logistic benefits including:

- Minimization of potential contamination by transmissible pathogens such as BSE
- Reduction of costs related to logistics of animal derived products
- Improvement of process consistency from pilot development to industrial production

AMRESCO offers a variety of high quality, cost effective animal-free reagents that can replace animal derived counterparts including amino acids, protease inhibitors and media components. The animal-free products are obtained from a range of sources including:

- Microbial fermentation
- Plants
- Synthetic processes

The purity and consistency of each product is ensured by rigorous quality control testing performed on all AMRESCO products.

### Animal-free amino-acids

*High Purity For Media Preparation*

Code	Product
0106	L-Alanine
0877	L-Arginine
94341	L-Asparagine
0192	L-Aspartic Acid
N554	L-Cysteine
0421	L-Glutamic Acid
0374	L-Glutamine
0167	L-Glycine
E806	L-Histidine
E803	L-Isoleucine
E811	L-Leucine
0437	L-Lysine
E801	L-Methionine
0991	L-Phenylalanine
E812	L-Proline
1B1103	L-Serine
E808	L-Threonine
E800	L-Tryptophan
N553	L-Tyrosine
1B1102	L-Valine

### Animal-free protease inhibitors

*Superior Quality • Excellent Value*

Code	Product
M182	AEBSF
M181	Antipain Dihydrochloride
M141	Benzamidine Hydrochloride
M179	Bestatin
M184	Chymostatin
M186	E-64
M101	EDTA
M180	Leupeptin
M183	Pepstatin
M135	1,10-Phenanthroline
M145	PMSF
M185	Phosphoramidon



Prices and specifications for the complete line of animal-free products offered by AMRESCO can be found in the current catalog or on our website at [www.amresco-inc.com](http://www.amresco-inc.com).

## Detection & Labeling

# Western Blot Stripping Buffers

**NEW**

## Gentle ReView™ Buffer

**Save time and valuable sample by stripping and reprobing the same membrane multiple times**

- Odor-free, room-temperature procedure - no hood needed!
- Convenient ready-to-use formulation
- Minimize loss of valuable antigen

I tried Gentle [Stripping Buffer] for 30 min at 37°C with shaking and I got 100% removal of both primary and secondary [antibodies]...

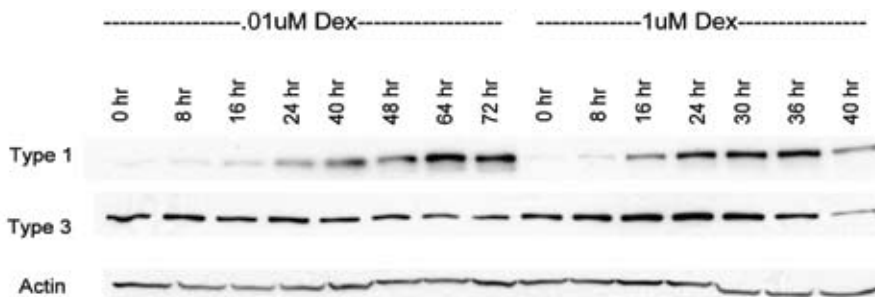
**I would love to use this for my regular projects!**

Samarjit Das, PhD  
Department of Pathology  
Johns Hopkins University  
Baltimore, Maryland

**Love the stripping buffer...  
It worked great!**

Stripping is really a nice option for us because all 3 subtypes of the IP3 Receptor are around the same molecular weight of 250-300 kD... We have been running three identical gels in order to do all three subtypes because the traditional BME stripping is so harsh that we don't get good results after the first antibody."

Karen McColl, Ph.D  
Department of Pharmacology  
Case Western Reserve University  
Cleveland Ohio



*Differential expression pattern of IP3 Receptor Type 1 and Type 3 in Dexamethasone (Dex) treated WEHI 7.2 mouse T cell lymphoma line. Courtesy of Dr. Karen McColl, Case Western Reserve University, Cleveland, Ohio. A single Western blot was used to analyse the expression of IP3 Receptor Type 1 and Type 3 during Dex treatment.. The blot was probed with antibodies to IP3 Receptor Type 1 and then stripped for 45 minutes with Gentle Stripping Buffer prior to reprobing with antibodies to IP3 Receptor Type 3. The different expression pattern obtained with each antibody demonstrates the effectiveness of the stripping and reprobing procedure. **Type 1:** expression increases with Dex treatment.. **Type 3:** expression remains constant with Dex treatment. **Actin:** Sample loading control.*

## ReView™ Buffer Solution - New odor-free formulation

**Robust stripping buffer for the removal of tightly bound primary and secondary antibodies from nitrocellulose or PVDF membranes.**

- Save money and time with multiple rounds of stripping and reprobing of a single blot
- Confirm images derived from the same or different antibodies in the same blot.

PRODUCT DESCRIPTION	CODE	SIZE
Gentle ReView™ Buffer, 1L	N552-1L	1 liter
ReView™ Buffer Solution, 1L	N166-1L	1 liter

## Technical Tip

### Analyzing antibody removal:

1. Wash blot with blocking buffer several times.
2. Incubate blot with secondary antibody.
3. Re-expose blot to chemiluminescent substrate. If no signal is detected, the primary antibody was effectively stripped off.
4. If a signal is detected, the blot must be stripped further. An increase in time or temperature can usually improve the effectiveness of the stripping process.

## DNA Amplification

**NEW** PCR Kits - 2 different kits for a variety of PCR needs

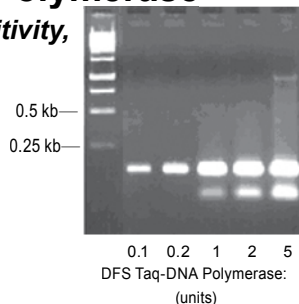
### PCR Kit with DFS Taq DNA Polymerase

**Amplify DNA templates with high sensitivity, DNA-free Taq Polymerase**

- **Comprehensive** - Includes all reagents for the amplification of DNA templates
- **Value** - Provides sufficient materials for 200 x 50 µl reactions
- **Sensitivity** - Amplify single copy and low abundance templates

#### Kit Includes:

10 mM dNTPs, 50X  
10X Reaction Buffer with MgCl<sub>2</sub>  
10X Reaction Buffer without MgCl<sub>2</sub>  
25 mM MgCl<sub>2</sub>  
Taq DNA Polymerase, 500 U  
Sterile, ultrapure water, 2 x 1.5 ml  
Sufficient material for 200 x 50 µl reactions



**DNA amplification with DFS Taq Polymerase.** PCR reactions were performed on the Eppendorf® Mastercycler® gradient machine on 10 ng primed human DNA templates.

### PCR Core Reagent Kit

**Compatible with a wide variety of Taq DNA polymerases for PCR reaction optimization**

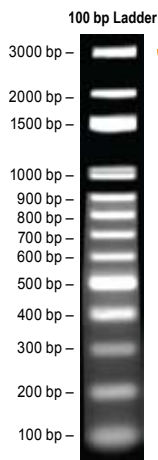
- **Versatile** - Optimize reactions for yield and fidelity
- **Value** - Sufficient reagents for 200 x 50 µl reactions
- **Quality** - Nuclease-free, high-purity reagents

#### Kit Includes:

10 mM dNTPs, 50X  
10X Reaction Buffer with MgCl<sub>2</sub>  
10X Reaction Buffer without MgCl<sub>2</sub>  
25 mM MgCl<sub>2</sub>  
Sterile, ultrapure water, 2 x 1.5 ml  
Sufficient material for 200 x 50 µl reactions

PRODUCT DESCRIPTION	CODE	SIZE
PCR Core Reagent Kit	N556-KIT	1 Kit
PCR Kit with DFS Taq DNA Polymerase	N555-KIT	1 Kit

**Analyze your amplified DNA fragments with AMRESCO's easy-to-use products for agarose gel electrophoresis**

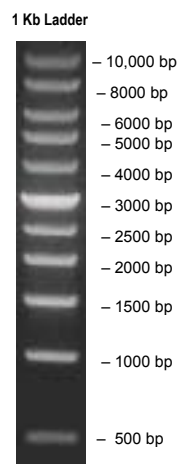


**NEW**  
**Ready Ladder™**

**Ready-to-use DNA Markers in Loading Buffer**

- Available in 2 different fragment ranges:
  - 100 bp ladder, 13 bands from 100-3000 bp
  - 1 Kb ladder, 11 bands from 500 bp to 10,000 bp
- **Easy-to-use** - Simply load 6 µl per lane
- **Quality** - Loading Buffer includes 15% Ficoll™ with 3 tracking dyes migrating at 10 bp, 600 bp and 4,000 bp on 1% agarose gels.

**Resolution of the 100 bp DNA Ladder on a TAE/2% Agarose I™ (Code: K180) gel.**



**Resolution of the 1 Kb DNA Ladder on a TAE/0.5% Agarose I™ (Code: K180) gel.**

PRODUCT DESCRIPTION	CODE	SIZE
Ready Ladder™ 100 bp DNA Marker, 100 bp ladder, 13 bands from 100-3000 bp Sufficient for 50 gel lanes	N550-300UL	300 ul
Ready Ladder™ 1 kb DNA Marker, 1 kb ladder, 11 bands from 500 to 10,000 bp Sufficient for 100 gel lanes	N551-600UL	600 ul

## & Related Products

- **EZ-Vision™ DNA Dye as Loading Buffer**  
A non-mutagenic alternative to Ethidium Bromide  
Codes: N472, N313, N473
- **Agarose I™**  
High purity, all purpose agarose  
Code: 0710
- **TBE Buffer**  
10X Liquid Concentrate  
Code: 0658-4L
- **TAE Buffer**  
25X Liquid Concentrate  
Code: 0796-1.6L

AMRESCO offers a wide selection of agaroses, running buffers, DNA ladders and stains for gel electrophoresis. Please visit our website at [www.amresco-inc.com](http://www.amresco-inc.com) or see our catalog for a complete listing.



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