

# Molecular Biology Products

From PhytoTechnology Laboratories®

PhytoTechnology Laboratories® offers a wide range of products for plant molecular biology research. You can place orders and view our full listing of products at [www.phytotechlab.com](http://www.phytotechlab.com); including:

- ✦ Antibiotics
- ✦ Transformation Reagents
- ✦ Microbiology Media
- ✦ Buffers
- ✦ Surfactants
- ✦ Stains & Dyes
- ✦ And more...

Discover the difference *PhytoTech* Quality can make in your research.





# Antibiotics

PhytoTechnology Laboratories® offers more than 30 different antibiotics for plant molecular biology research, seed testing and more. Some of our more popular antibiotics are listed below. Please visit [www.phytechlab.com](http://www.phytechlab.com) for a complete listing of all of our antibiotics and our sterile filtered antibiotic solutions.

## A116 Ampicillin

D(-)- $\beta$ -Aminobenzylpenicillin. Ampicillin is a broad spectrum  $\beta$ -lactam antibiotic. It is a semi synthetic derivative of penicillin and has a similar mode of action to that of benzylpenicillin against gram-positive organisms; however, it is more effective against gram-negative bacilli such as *Haemophilus influenza* and Enterobacteriaceae such as *Escherichia coli*.



Gram  $\pm$



Water



-20 °C

Available Package Sizes: 5g 25g

## C346 Carbenicillin

$\alpha$ -Carboxybenzylpenicillin, Disodium Salt. Carbenicillin is a derivative of penicillin with a mode of action similar to benzylpenicillin. It is the most commonly used antibiotic for the elimination of *Agrobacterium tumefaciens* during plant transformation. Also available as a sterile filtered solution in a concentration of 100 mg/mL (product number C540).



Gram  $\pm$



Water



2 to 6 °C

Available Package Sizes: 5g 10g 25g 100g

## C380 Cefotaxime

(6R,7R)-3-[(Acetyloxy)methyl]-7-[[[(2Z)-(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic Acid. Cefotaxime is used in transformation research to eliminate *Agrobacterium tumefaciens*.



Gram  $\pm$



Water



2 to 6 °C

Available Package Sizes: 1g 5g 25g 100g

## C537 Cefotaxime Solution (100 mg/mL)

Sterile Filtered 100 mg/mL Solution. (6R,7R)-3-[(Acetyloxy)methyl]-7-[[[(2Z)-(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic Acid. Cefotaxime is used in transformation research to eliminate *Agrobacterium tumefaciens*. **This product ships via 1-Day Shipping on dry ice to ensure product integrity during shipping transit.**



Gram  $\pm$



Water



-20 °C

Available Package Sizes: 10mL 100mL

## C1880 Cefotaxime Solution (250 mg/mL)

Sterile Filtered 250 mg/mL Solution. (6R,7R)-3-[(Acetyloxy)methyl]-7-[[[(2Z)-(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic Acid. Cefotaxime is used in transformation research to eliminate *Agrobacterium tumefaciens*. **This product ships via 1-Day Shipping on dry ice to ensure product integrity during shipping transit.**



Gram  $\pm$



Water



-20 °C

Available Package Sizes: 10x1mL 10mL 25mL 100mL

## G570 Gentamicin Sulfate

Gentamycin Sulfate. Gentamicin sulfate is an aminoglycoside antibiotic that is effective against many gram-negative bacteria (e.g., Brucella, Escherichia, Enterobacter, Francisella, Yersinia, etc.) and some strains of staphylococci. Also available as a sterile filtered solution in a concentration of 50mg/mL (product number G3350) and 100 mg/mL (product number G3410).



Gram  $\pm$



Water



2 to 6 °C

Available Package Sizes: 5g 10g 25g



## H397 Hygromycin B

O-6-Amino-6-deoxy-L-glycero-D-galacto-heptopyranosylidene-(1-2-3)-O-β-D-talopyranosyl-(1-5)-2-deoxy-N3-methyl-D-Streptomine. Hygromycin B is effective against bacteria, fungi, and higher eukaryotic cells. Also available as a sterile filtered solution in a concentration of 100mg/mL in DI Water (product number H385) and 50 mg/mL in PBS Buffer (product number H370).



Selection

Water

2 to 6 °C

Available Package Sizes: 1g 5g

## K378 Kanamycin

O-3-Amino-3-deoxy-α-D-glucopyranosol-(1:6)-O-[6-amino-6-deoxy-α-D-glucopyranosyl-((1:4)-2-deoxy-D-Streptomine Monosulfate. Kanamycin is effective against gram-positive and gram-negative bacteria and is used to select for the *nptII* gene. Also available as a sterile filtered solution in a concentration of 50mg/mL (product number K586) and 100 mg/mL (product number K4751).



Gram ±

Water

RT

Available Package Sizes: 5g 10g 25g

## M5600 Meropenem Trihydrate

Meropenem is a broad spectrum antibiotic with activity against Gram-positive and Gram-negative bacteria. It is a beta-lactam antibiotic which inhibits bacterial wall synthesis and belongs to the sub-group of carbapenem.



Gram ±

Water

-20 °C

Available Package Sizes: 100mg 1g 5g

## T869 Timentin

Timentin is a mixture of ticarcillin and clavulanic acid and exhibits broad spectrum activity toward gram-negative bacteria. Timentin is used most commonly in the regeneration medium for elimination of the *Agrobacterium* post-transformation.



Gram -

Water

2 to 6 °C

Available Package Sizes: 2g 5g 10g 25g 100g

## T7869 Timentin Solution (50 mg/mL)

Sterile Filtered 50 mg/mL Solution. Timentin is a mixture of ticarcillin and clavulanic acid and exhibits broad spectrum activity toward gram-negative bacteria. Timentin is used most commonly in the regeneration medium for elimination of the *Agrobacterium* post-transformation. **This product ships via 1-Day Shipping on dry ice to ensure product integrity during shipping transit.**



Gram -

Water

-20 °C

Available Package Sizes: 10mL 25mL 100mL

## T767 Timentin Solution (100 mg/mL)

Sterile Filtered 100 mg/mL Solution. Timentin is a mixture of ticarcillin and clavulanic acid and exhibits broad spectrum activity toward gram-negative bacteria. Timentin is used most commonly in the regeneration medium for elimination of the *Agrobacterium* post-transformation. **This product ships via 1-Day Shipping on dry ice to ensure product integrity during shipping transit.**



Gram -

Water

-20 °C

Available Package Sizes: 10mL 25mL 100mL

## V870 Vancomycin Hydrochloride

Vancomycin is a glycopeptide antibiotic produced by *Streptomyces orientalis* that is effective against most Gram-positive bacteria by blocking bacterial cell wall synthesis. Also available as a sterile filtered solution in a concentration of 100 mg/mL (product number V8370).



Gram +

Water

-20 °C

Available Package Sizes: 1g 5g 10g 25g



Indicates whether the antibiotic is used against with Gram +, Gram -, or as a selection agent.



Indicates the solubility or miscibility of the antibiotic or antibiotic solution.



Indicates the storage temperature of the antibiotic. RT indicates room temperature.





PhytoTechnology Laboratories® provides a wide range of reagents and stains used in plant molecular transformation research. Listed below are some of our most popular products, visit [www.phytotechlab.com](http://www.phytotechlab.com) for a complete listing of all of our transformation reagents and products for molecular biology research.

## A104 Acetosyringone

3',5'-Dimethoxy-4'-hydroxyacetophenone. Acetosyringone is a naturally occurring compound secreted from wounded dicot plant tissues and is a chemotractant for *Agrobacterium* sp. It is generally used at 5µM to 200µM to enhance transformation in monocots. Acetosyringone should NOT be autoclaved. Also available as a sterile solution in a concentration of 100mM (product number A1104).



2478-38-8

DMSO

RT

Available Package Sizes: 1g 5g 25g

## D159 Dicamba

3,6-Dichloro-o-anisic Acid. Dicamba is an auxin-like herbicide that can act as a selection agent for plant cells expressing the DMO gene. Also available as a sterile filtered solution in a concentration of 1 mg/mL (product number D165).



1918-00-9

KOH

2 to 6 °C

Available Package Sizes: 100mg 500mg 1g 5g

## G345 Glyphosate

N-(phosphonomethyl)glycine. Glyphosate is a herbicide that can be used as a selection agent in plant cells containing the EPSP sythetase gene.



1071-83-6

Water

2 to 6 °C

Available Package Sizes: 1g 5g

## M649 β-Mercaptoethanol

2-mercaptoethanol, 2-Me, BMe, 2-thioethanol, 2-Hydroxyethyl-mercaptan. β-Mercaptoethanol is a disulfide reducing agent for proteins. Often supplemented to Plant DNA extraction buffers to limit oxidation of polyphenols.



60-24-2

Water

RT

Available Package Sizes: 100mL 250mL 500mL

## M565 MTT

3-[4,5-dimethylthiazol-2-yl]-2,5-diphenyltetrazolium Bromide; Thiazolyl Blue Tetrazolium Bromide. MTT is a tetrazolium dye that is often used to assess cell viability through redox enzymes in the mitochondria.



298-93-1

Water

2 to 6 °C

Available Package Sizes: 100g 500g

## M569 MUG

MUGluc; 4-Methylumbelliferyl β-D-glucuronide Trihydrate. MUG is a fluorescent β-Glucuronidase (GUS) substrate that excites at 360 nm and emits at 450 nm to measure GUS expression quantitatively.



881005-91-0

DMSO

2 to 6 °C

Available Package Sizes: 100mg 1g



## N604 ONPG

2-Nitrophenyl- $\beta$ -D-Galactopyranoside; o-Nitrophenyl- $\beta$ -D-Galactopyranoside. ONPG is a yellow yielding substrate indicator for  $\beta$ -Galactosidases,



369-07-3



DMSO



-20 to 0 °C

Available Package Sizes: 1g 5g 25g

## P717 Picloram

4-Amino-3,5,6-Trichloropicolinic Acid. Picloram is an auxin that has been used as a 2,4-D substitute.



1918-02-1



DMSO



RT

Available Package Sizes: 5g 10g

## N618 PNPG

4-Nitrophenyl- $\beta$ -D-Glucuronide, NPG.



10344-94-2



DMSO



-20 to 0 °C

Available Package Sizes: 250mg 1g

## X874 X-Gal

5-bromo-4-chloro-3-indolyl- $\beta$ -D-galactopyranoside. X-Gal is also known 5-Bromo-4-chloro-3-indolyl- $\beta$ -D-galactopyranoside and it is used to detect  $\beta$ -galactosidases. The lac Z gene encodes  $\beta$ -galactosidases which will cleave X-Gal to form an insoluble blue dimer. This is used in blue-white screening in *Escherichia coli*.



7240-90-6



DMSO/DMF



-20 to 0 °C

Available Package Sizes: 100mg 500mg 1g

## X877 X-Gluc, Monocyclohexyl Ammonium Salt

5-bromo-4-chloro-3-indolyl- $\beta$ -D-glucuronic Acid; Monocyclohexyl Ammonium Salt. X-Gluc is used to detect  $\beta$ -glucuronidase (GUS) activity in genetically modified plant tissue.  $\beta$ -glucuronidase is encoded by the gusA (uidA) gene found in *Escherichia coli*. In transformed cells,  $\beta$ -glucuronidase cleaves X-gluc, and forms an insoluble blue dimer.



114162-64-0



DMSO/DMF



-20 to 0 °C

Available Package Sizes: 100mg 500mg 1g 5g

## X8451 X-Gluc Solution (20 mg/mL)

5-bromo-4-chloro-3-indolyl- $\beta$ -D-glucuronic Acid; Monocyclohexyl Ammonium Salt. Sterile filtered 20mg/mL solution. X-Gluc is used to detect  $\beta$ -glucuronidase (GUS) activity in genetically modified plant tissue.  $\beta$ -glucuronidase is encoded by the gusA (uidA) gene found in *Escherichia coli*. In transformed cells,  $\beta$ -glucuronidase cleaves X-gluc, and forms an insoluble blue dimer.



129541-41-9



DMSO/DMF



-20 to 0 °C

Available Package Sizes: 5mL 25mL

## X871 X-Gluc, Sodium Salt

5-bromo-4-chloro-3-indolyl- $\beta$ -D-glucuronic Acid; Sodium Salt. X-Gluc is used to detect  $\beta$ -glucuronidase (GUS) activity in genetically modified plant tissue.  $\beta$ -glucuronidase is encoded by the gusA (uidA) gene found in *Escherichia coli*. In transformed cells,  $\beta$ -glucuronidase cleaves X-gluc, and forms an insoluble blue dimer.



129541-41-9



DMSO/DMF



-20 to 0 °C

Available Package Sizes: 100mg 500mg 1g 5g



Indicates the Chemical Abstracts Service (CAS) Number of the product.



Indicates the solubility or miscibility of the product.



Indicates the storage temperature of the product. RT indicates room temperature.



# LB Broths & Agars

## H289 Hanahan's Broth

Hanahan's Broth (SOB Medium) was developed by Douglas Hanahan (1983) for the cultivation of competent *Escherichia coli* cells prior to transformation. SOB Medium is a nutrient-rich, bacterial growth medium that is used for microbiological culture, generally of *E. coli*.



28.09 g/L



Water



2 to 6 °C

Available Package Sizes: 1L 100g 500g

## L5128 LB Agar, Lennox L Modification

Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Lennox L (1955). This rich medium supports the rapid growth of *Escherichia coli* for molecular biology applications.



32.0 g/L



Water



2 to 6 °C

Available Package Sizes: 1L 500g 5Kg

## L465 LB Agar, Miller Modification

3-[(3-Cholamidopropyl)dimethylammonio]-1-propanesulfonate. Non-denaturing zwitterionic detergent that is typically used to solubilize membrane proteins.



37.0 g/L



Water



2 to 6 °C

Available Package Sizes: 1g 5g 10g

## L5138 LB Broth, Lennox L Modification

Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Lennox L (1955). This rich medium supports the rapid growth of *Escherichia coli* for molecular biology applications.



20.0 g/L



Water



2 to 6 °C

Available Package Sizes: 1L 500g 5Kg

## L5190 LB Broth, Lennox L Modification, ADP-Free

Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). The Lennox L Modification (1955) has been adapted to be free of animal derived products. This rich medium supports the rapid growth of *Escherichia coli* for molecular biology applications.



24.0 g/L



Water



2 to 6 °C

Available Package Sizes: 1L 500g

## L475 LB Broth, Miller Modification

Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Miller (1972). This rich medium supports the rapid growth of *Escherichia coli* for molecular biology applications.



25.0 g/L



Water



2 to 6 °C

Available Package Sizes: 1L 500g 5Kg

## L585 LB Broth Solution (1x), Lennox L

Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Lennox L (1955). This rich medium supports the rapid growth of *Escherichia coli* for molecular biology applications.



1:1



Water



2 to 6 °C

Available Package Sizes: 100mL 500mL 1L



## L301 LB Broth Solution (1x), Miller Modification

Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Miller (1972). This rich medium supports the rapid growth of *Escherichia coli* for molecular biology applications.



25.0 g/L



Water



2 to 6 °C

Available Package Sizes: 100mL 500mL 1L

## L591 LB Broth Solution (1x) with Glycerol, Lennox L

Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Lennox L (1955). This rich medium supports the rapid growth of *Escherichia coli* for molecular biology applications. Modified to include 4.0 mL/L of Glycerol (product number G381).



1:1



Water



2 to 6 °C

Available Package Sizes: 100mL 500mL 1L

## N611 Nutrient Broth

Nutrient broth is typically used for the cultivation of various non-fastidious microorganisms. The American Public Health Association (APHA) suggests nutrient broth as a standard culture medium for use in water testing (1917).



8.0 g/L



Water



2 to 6 °C

Available Package Sizes: 1L 500g

## S657 SOC Medium Solution (1x)

Typically used in the recovery step of *Escherichia coli* competent cell transformations. Formulation as described by Hanahan (1983).



1:1



Water



2 to 6 °C

Available Package Sizes: 100mL 500mL 1L

## T760 Terrific Broth

This medium was developed by Tartoff and Hobbs (1987) to improve the growth of recombinant *Escherichia coli*. Requires supplementation of 4.0 mL/L of glycerol (product number G381).



47.0 g/L



Water



2 to 6 °C

Available Package Sizes: 100mL 500mL 1L

## T754 Terrific Broth Solution (1x) with Glycerol

This medium was developed by Tartoff and Hobbs (1987) to improve the growth of recombinant *E. coli*. This sterile solution include the required supplementation of glycerol (product number G381).



1:1



Water



2 to 6 °C

Available Package Sizes: 100mL 500mL 1L

## Y8930 Yeast Mannitol Broth

YMB; YM Broth; Yeast extract mannitol Broth; YEM Broth; YEMB. Used for the cultivation, isolation and enumeration of *Rhizobium spp.* and other soil microorganisms.



12.7 g/L



Water



2 to 6 °C

Available Package Sizes: 100mL 500mL 1L

## Y8565 YEP Broth

YEP broth has been used to culture *Agrobacterium* as well as yeasts.



25.0 g/L



Water



2 to 6 °C

Available Package Sizes: 500g 1Kg



Indicates the common or recommended usage of the product.



Indicates the solubility or miscibility of the product.



Indicates the storage temperature of the product. RT indicates room temperature.





PhytoTechnology Laboratories® buffers mixtures are manufactured in-house and in accordance to cGMP Guidelines and ISO standards of quality. PhytoTech™ buffers are manufactured from high quality, high purity biochemicals, meeting USP or ACS specifications as applicable. All buffers are intended for use in molecular biology research applications.

## B162 Bis-Tris

2,2-Bis-(hydroxymethyl)-2,2',2''-nitrilotriethanol.  
Plant Tissue Culture Tested.

pK<sub>A</sub>



6.5 @ 25°C

Water

RT

Available Package Sizes: 100g 500g 1Kg

## E316 Ethylenediaminetetraacetic Acid, Free Acid

EDTA; Edetic Acid. Used to chelate trace metals, which are known to damage nucleic acid.  
Plant Tissue Culture Tested.

pK<sub>A</sub>



n/a

Water

RT

Available Package Sizes: 100g 500g 1Kg

## G3300 Guanidine Thiocyanate

Guanidinium rhodanide; Guanidinium thiocyanate. Guanidine thiocyanate is a powerful denaturing and chaotropic agent. It is used to extract nucleic acids.

pK<sub>A</sub>



n/a

Water

RT

Available Package Sizes: 100g 500g 1Kg

## H326 HEPES

N-(2-Hydroxyethyl)Piperazine-N'-(2-Ethanesulfonic Acid); 4-(2-Hydroxyethyl)-1-Piperazineethanesulfonic Acid. One of the Good's Buffers used in molecular biology research.  
Molecular Biology Grade.

pK<sub>A</sub>



7.48 @ 25°C

Water

RT

Available Package Sizes: 100g 500g 1Kg

## M825 MES

2-(N-morpholino)ethanesulfonic Acid; Free Acid.  
One of the Good's Buffers used in molecular biology research.  
Plant Tissue Culture Tested.

pK<sub>A</sub>



6.1 @ 25°C

Water

RT

Available Package Sizes: 100g 500g 1Kg

## M631 MOPS, Free Acid

3-[N-Morpholino]propanesulfonic Acid, Free Acid.  
One of the Good's Buffers used in molecular biology research.

pK<sub>A</sub>



7.2 @ 25°C

Water

RT

Available Package Sizes: 500g 1Kg



## P711 HEPES

Piperazine-N,N'-bis(2-ethanesulfonic Acid), Sesquisodium Salt.  
One of the Good's Buffers used in molecular biology research.  
Plant Tissue Culture Tested.

pK<sub>A</sub>

6.5 @ 25°C



Water



RT

Available Package Sizes: 100g 500g 1Kg

## S844 Sodium Dodecyl Sulfate

SDS; Sodium Lauryl Sulfate. SDS is used to denature proteins with a fixed single negative charge per approximately 2 amino acids. This allows for relatively linear separation in electrophoresis, most often PAGE (polyacrylamide gel electrophoresis).

pK<sub>A</sub>

n/a



Water



RT

Available Package Sizes: 25g 100g 500g

## S716 SSC Buffer Solution

Nuclease-Free.

pH

7.0



Water



RT

Available Package Sizes: 500mL 1000mL

## S844 SSPE Buffer Solution (20x)

Saline-Sodium Phosphate EDTA Buffer Solution (20x); Nuclease-Free.

pH

7.4



Water



RT

Available Package Sizes: 100mL 500mL

## T769 TAE Buffer Solution (50x)

Tris Acetate EDTA (TAE) Buffer Solution (50x). Nuclease-Free.

pH

8.1-8.5



Water



RT

Available Package Sizes: 500mL 1000mL

## T773 TBE Buffer Solution (5x)

Tris Borate EDTA (TBE) Buffer Solution (5x).

pH

8.1



Water



RT

Available Package Sizes: 500mL 1000mL

## T838 Tris Base

2-Amino-2-Hydroxymethyl-1,3-Propanediol. Tris base is the conjugate base of Tris HCl and is often used as a buffer in aqueous solution with a pK<sub>A</sub> = 8.06 at 25°C.

pK<sub>A</sub>

8.06 @ 25°C



Water



RT

Available Package Sizes: 100g 500g 1Kg 5Kg

pK<sub>A</sub>

Indicates the pK<sub>A</sub> at 25°C or the pH of the product.



Indicates the solubility or miscibility of the product.



Indicates the storage temperature of the product. RT indicates room temperature.



## T831 Tris Borate EDTA Buffer

TBE Buffer.



17.02 g/L

Water

RT

Available Package Sizes: 100g 500g

## T855 Tris EDTA Buffer

TE Buffer.



1.58 g/L

Water

RT

Available Package Sizes: 100g 500g

## T752 Tris EDTA Buffer Solution (10x)

Nuclease-Free.

pH



8.0

Water

RT

Available Package Sizes: 500mL 1000mL

## T821 Tris Glycine SDS Buffer

Tris Glycine SDS; TG-SDS; TGS Buffer.



18.44 g/L

Water

RT

Available Package Sizes: 100g 500g

## T749 Tris Glycine SDS Buffer Solution

TG-SDS Buffer/Protein Running Buffer

pH



Water

RT

Available Package Sizes: 500mL 1000mL

## T858 Tris Hydrochloride

2-Amino-2-hydroxymethyl-1,3-propanediol Hydrochloride. Tris HCl is the acid form of Tris base and it is often used as a buffer in aqueous solution with a  $pK_A = 8.06$  at 25°C.

$pK_A$



8.06 @ 25°C

Water

RT

Available Package Sizes: 100g 500g 1Kg

## T764 Tris Hydrochloride Solution 1.0M

1.0 M Sterile Filtered Tris-HCl Solution. 2-Amino-2-hydroxymethyl-1,3-propanediol Hydrochloride.

pH



7.5

Water

RT

Available Package Sizes: 500mL 1000mL



Indicates the common or recommended usage of the product.



# Surfactants

PhytoTechnology Laboratories® offers several different surfactants, or surface active agents, that can be used as detergents or wetting agents for use in plant molecular biology research. The products listed below meet specifications necessary to be used in molecular biology research applications.

## C526 CHAPS

3-[[3-Cholamidopropyl]dimethylammonio]-1-propanesulfonate.  
Non-denaturing zwitterionic detergent that is typically used to solubilize membrane proteins.



75621-03-3

Water

RT

Available Package Sizes: 1g 5g 10g

## H276 CTAB

Hexadecyltrimethylammonium Bromide, HTAB, Centimide, Cetrimide, Cetrimonium bromide, N,N,N-trimethyl-1-hexadecanaminium bromide. A cationic detergent with bactericidal activity against both gram-positive and gram-negative organisms. Molecular Biology Grade.



57-09-0

Water

RT

Available Package Sizes: 100g 500g

## P720 Polyoxyethlenesorbitan Monolaurate; Tween® 20

Polysorbate 20. Tween® 20 is a non-ionic surfactant often used to lower the surface tension of aqueous explant disinfectant solutions.  
Plant Tissue Culture Tested.



9005-64-5

Water

RT

Available Package Sizes: 100mL 500mL 1L

## P738 Polyoxythylenesorbitan Monooleate; Tween® 80

Polysorbate 80. Tween® 80 is a non-ionic surfactant that can be used to lower the surface tension of aqueous explant disinfectant solutions or to stabilize protein solutions.  
Plant Tissue Culture Tested.



9005-65-6

Water

RT

Available Package Sizes: 100mL 500mL 1L

## S7777 Silwet® L-77

Alkoxyated trisilane. Silwet® L-77 is a non-ionic surfactant that is used in floral-dip transformation with *Agrobacterium tumefaciens*. It can also be used as a wetting agent since it reduces the surface tension of aqueous solutions. Silwet® is a registered trademark of OSi Specialities.



27306-78-1

Water

RT

Available Package Sizes: 100g 500g 1Kg

## T8100 Triton X-100

X-100; 4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol; t-Octylphenoxy polyethoxyethanol; Polyethylene glycol tert-octylphenyl ether. Triton X-100 is a nonionic surfactant that has been used most often to stabilize proteins in aqueous solution.



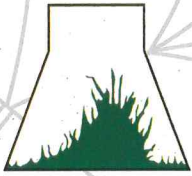
9002-93-1

Water

RT

Available Package Sizes: 10mL 25mL 100mL 500mL





**Phyto**Technology Laboratories

PO Box 12205  
Shawnee Mission, Kansas  
66282-2205  
913.341.5343  
sales@phytotechlab.com

w w w . p h y t o t e c h l a b . c o m

**SCIENCE CAN BE CHALLENGING.**

PRODUCTS FROM *PHYTOTECHNOLOGY* LABORATORIES CAN HELP YOU PRODUCE

**RELIABLE RESEARCH**

**QUALITY**

**INNOVATION**

**SERVICE**

More than just words, this is the backbone of our company culture. They are a part of our everyday decision making process from customer service to manufacturing to product development, as we strive to provide you with high-quality products that help you conduct *Reliable Research*. From innovative proprietary media, culture vessels, and chemicals, to custom media formulation and services, we provide the products and services you need, so that together, we can continue

*“Helping Build a Better Tomorrow Through Plant Science”™*