



MICROBIOLOGY



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PhytoTechnology Laboratories® offers a line of media for the growth of bacteria and fungi. These media are manufactured with the same dedication and standards of quality that has made the PhytoTechnology Laboratories® plant tissue culture media so popular.

Most components used in the formulation of Microbiology Media are available as individual components. Check the Biochemicals Section on Page 15 for component product listings and more information.

Be sure to check www.phytotechlab.com frequently as we continue to expand this product line.

FOR MORE INFORMATION ON MICROBIOLOGY MEDIA

See "Phytopathology & Microbiology Media" on page 261 in the Technical Section.

A1272 - ANILINE BLUE

See Seed Testing Section for Complete Listing

B129 - BACTERIA SCREENING MEDIUM 523

See Phytopathology Section for Complete Listing

B1714 - BROMOTHYMOL BLUE

See Seed Testing Section for Complete Listing

C184 - CASEIN, ENZYMATIC HYDROLYSATE

See Biochemicals Section for Complete Listing

C1842 - CELLOBIOSE

See Seed Testing Section for Complete Listing

C1970 - CEPHALEXIN MONOHYDRATE

See Seed Testing Section for Complete Listing

C2112 - CEPHALEXIN SOLUTION (100 MG/ML)

See Seed Testing Section for Complete Listing

C442 - CORN MEAL AGAR

See Phytopathology Section for Complete Listing

C1830 - CRYSTAL VIOLET

See Seed Testing Section for Complete Listing

H276 - CTAB

See Molecular Biology Section for Complete Listing

H3818 - CTAB SOLUTION (100 MG/ML)

See Molecular Biology Section for Complete Listing

CZAPEX-DOX BROTH & AGAR

See Phytopathology Section for Complete Listing

H289 - HANAHAN'S BROTH

SOB Medium was developed by Hanahan (1983) for the cultivation of competent *E. coli* cells prior to transformation. This is a nutritionally rich medium to which 22 mM (0.4%) D-glucose is added for the final stage of transformation; this allows the *E. coli* cells to mend from transformation and replicate.

- Store at 2 to 6 °C
- Soluble in Water
- Use at 28.09 grams per liter

Components (mg/L)

Tryptone	20,000
Yeast Extract	5000
Magnesium Sulfate, Anhydrous	2400
Sodium Chloride	500
Potassium Chloride	186
Approximate pH at Room Temperature	7.0 ± 0.5

AVAILABLE PACKAGE SIZES

1L	100g	500g
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K5013 - KING'S B MEDIUM

See Seed Testing Section for Complete Listing

L5128 - LB AGAR, LENNOX L MODIFICATION

Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Lennox L (1955).

Also known as Lysogeny Agar or Luria-Bertani Agar

- Store at 2 to 6 °C
- Soluble in Water (Partially)
- Use at 32.00 grams per liter

Components (mg/L)

Sodium Chloride	5,000
Agar	12,000
Tryptone	10,000
Yeast Extract	5,000
Approximate pH at Room Temperature	6.9 ± 0.5

AVAILABLE PACKAGE SIZES


1L	500g	5Kg
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L465 - LB AGAR, MILLER MODIFICATION	
<p>Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Miller (1972). This is the most widely-used formulation of LB Broth, Stambrook (1989). Also known as Lysogeny Agar or Luria-Bertani Agar</p>	
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water • Use at 37.00 grams per liter 	
Components (mg/L)	
Agar	12,000
Sodium Chloride	10,000
Tryptone	10,000
Yeast Extract	5,000
Approximate pH at Room Temperature	7.0 ± 0.5
AVAILABLE PACKAGE SIZES	
1L	500g 5Kg

L5138 - LB BROTH, LENNOX L MODIFICATION	
<p>Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Lennox L (1955). Also known as Lysogeny Broth or Luria-Bertani Broth</p>	
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water • Use at 20.00 grams per liter 	
Components (mg/L)	
Sodium Chloride	5,000
Tryptone	10,000
Yeast Extract	5,000
Approximate pH at Room Temperature	6.75 ± 0.75
AVAILABLE PACKAGE SIZES	
1L	500g 5Kg

L5190 - LB BROTH, LENNOX L MODIFICATION (ADP FREE)	
<p>Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Lennox L (1955). Also known as Lysogeny Broth or Luria-Bertani Broth</p>	
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water • Free of Animal Derived Products (ADP) • Use at 24.0 grams per liter 	
Components (mg/L)	
Peptone, from Soy	14,000
Yeast Extract	5000
Sodium Chloride	5000
Approximate pH at Room Temperature	6.75 ± 0.75
AVAILABLE PACKAGE SIZES	
1L	500g

L475 - LB BROTH, MILLER MODIFICATION	
<p>Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Miller (1972). This is the most widely-used formulation of LB Broth, Stambrook (1989). Also known as Lysogeny Broth or Luria-Bertani Broth</p>	
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water • Use at 25.00 grams per liter 	
Components (mg/L)	
Sodium Chloride	10,000
Tryptone	10,000
Yeast Extract	5,000
Approximate pH at Room Temperature	7.0 ± 0.5
AVAILABLE PACKAGE SIZES	
1L	500g 5Kg

L585 - LB BROTH SOLUTION, LENNOX L MODIFICATION (1X)	
<p>Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Lennox L (1955). Also known as Lysogeny Broth or Luria-Bertani Broth</p>	
<ul style="list-style-type: none"> • Liquid • Store at 2 to 6 °C • Sterile Filtered • Miscible with water 	
	
Components (mg/L)	
Sodium Chloride	5,000
Tryptone	10,000
Yeast Extract	5,000
Approximate pH at Room Temperature	6.9 ± 0.5
AVAILABLE PACKAGE SIZES	
100mL	500mL 1L

L301 - LB BROTH SOLUTION, MILLER MODIFICATION (1X)

Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Miller (1972).

This is the most widely-used formulation of LB Broth, Stambrook (1989).

Also known as Lysogeny Broth or Luria-Bertani Broth

- Liquid
- Store at 2 to 6 °C
- Sterile Filtered
- Miscible with water



Components (mg/L)

Tryptone	10,000
Yeast Extract	5000
Sodium Chloride	10,000

AVAILABLE PACKAGE SIZES

100mL	500mL	1L
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L591 - LB BROTH SOLUTION WITH GLYCEROL

Contains the nutrients as described by Bertani (1951), and Luria & Burrows (1955). Formulation modified by Lennox L (1955).

Also known as Lysogeny Broth or Luria-Bertani Broth

- Liquid
- Store at 2 to 6 °C
- Sterile Filtered
- Miscible with water



Components (mg/L)

Glycerol	4.0 mL
Sodium Chloride	5,000
Tryptone	10,000
Yeast Extract	5,000
Approximate pH at Room Temperature	6.9 ± 0.5

AVAILABLE PACKAGE SIZES

100mL	500mL	1L
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L476 - LEIFERT & WAITES STERILITY TEST MEDIUM

See Phytopathology Section for Complete Listing

M474 - MALT EXTRACT

See Biochemicals Section for Complete Listing

M498 - MALT EXTRACT AGAR

- Store at Room Temperature
- Soluble in Water (Partially)
- Use at 48.00 grams per liter

Components (mg/L)

Agar	15,000
Malt Extract	30,000
Peptone from Meat	3,000
Approximate pH at Room Temperature	6.4 ± 0.5

AVAILABLE PACKAGE SIZES

500g	1Kg
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M5506 - MALT EXTRACT AGAR WITH GLUCOSE AND MALTOSE

Malt Extract Agar is a nutrient medium used for the isolation, detection, transformation and growth of yeasts and fungi in microbiology applications. Formulation as published by Thom & Church (1926).

- Store at 2 to 6 °C
- Soluble in Water
- Use at 30.0 grams per liter of medium

Components (mg/L)

Agar	15,000
D-Glucose, anhydrous	6000
Malt Extract	6000
Maltose	1800
Yeast Extract	1200

AVAILABLE PACKAGE SIZES

1L	100g	500g
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M484 - MALT EXTRACT BROTH

- Store at Room Temperature
- Soluble in Water
- Use at 20.00 grams per liter

Components (mg/L)

Malt Extract	17,000
Peptone from Meat	3,000
Approximate pH at Room Temperature	6.5 ± 0.5

AVAILABLE PACKAGE SIZES

1L	500g	1Kg
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M5516 - mD5A MEDIUM

See Seed Testing Section for Complete Listing

M567 - MEAT EXTRACT

See Biochemicals Section for Complete Listing

M5781 - METHYLENE BLUE

See Seed Testing Section for Complete Listing

M580 - MODIFIED MELIN-NORKRANS MEDIUM	
Used for the isolation of Fungi from mixed microbiological samples.	
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water (Partially) • Use at 20.82 grams per liter 	
Components (mg/L)	
Ammonium Phosphate, Monobasic	184.7
Calcium Chloride, Anhydrous	50
FeNaEDTA	20
Magnesium Sulfate	35.8
Potassium Phosphate, Monobasic, Anhydrous	500
Sodium Chloride	25
Agar	7,000
Malt Extract	3,000
Sucrose	10,000
Thiamine•HCl	0.1
Approximate pH at Room Temperature	6.5 ± 0.5
AVAILABLE PACKAGE SIZES	
1L	10L

INDEXING WITH MICROBIOLOGY MEDIA
See "Figure 20. Media Used in Indexing Explants" on page 248 in the Technical Section.

N601 - NUTRIENT AGAR	
<ul style="list-style-type: none"> • Store at Room Temperature • Soluble in Water (Partially) • Use at 23.00 grams per liter 	
Components (mg/L)	
Agar	15,000
Meat Extract	3,000
Peptone from Meat	5,000
Approximate pH at Room Temperature	7.0 ± 0.5
AVAILABLE PACKAGE SIZES	
1L	100g 500g

N611 - NUTRIENT BROTH	
<ul style="list-style-type: none"> • Store at Room Temperature • Soluble in Water • Use at 8.00 grams per liter 	
Components (mg/L)	
Meat Extract	3,000
Peptone from Meat	5,000
Approximate pH at Room Temperature	7.0 ± 0.5
AVAILABLE PACKAGE SIZES	
1L	500g

O606 - OAT MEAL AGAR
See Phytopathology Section for Complete Listing

P6737 - PCNB
See Seed Testing Section for Complete Listing


P777 - PENICILLIN G
See Biochemical Section for Complete Listing


P6767 - PENICILLIN G SOLUTION (10 MG/ML)
See Seed Testing Section for Complete Listing

P721 - PEPTONE, FROM SOYMEAL
See Biochemicals Section for Complete Listing

P780 - PEPTONE, GLYSATE
See Biochemicals Section for Complete Listing

P775 - PEPTONE, TYPE I
See Biochemicals Section for Complete Listing

P632 - PEPTONE WATER (1X)	
<ul style="list-style-type: none"> • Liquid • Store at 2 to 6 °C • Miscible with Water • Sterile Filtered 	
Components (mg/L)	
Peptone from Meat	10,000
Sodium Chloride	5,000
Approximate pH at Room Temperature	7.2 ± 0.5
AVAILABLE PACKAGE SIZES	
100mL	500mL

P732 - PEPTONE WATER, BUFFERED (1X)	
<ul style="list-style-type: none"> • Liquid • Store at 2 to 6 °C • Miscible with Water • Sterile Filtered 	
Components (mg/L)	
Peptone from Meat	10,000
Sodium Chloride	5000
Sodium Phosphate, Dibasic	3500
Potassium Phosphate, Monobasic	1500
Approximate pH at Room Temperature	7.2 ± 0.5
AVAILABLE PACKAGE SIZES	
100mL	500mL 1L

P6800 - PHYTOSELECT BASAL MEDIUM
See Seed Testing Section for Complete Listing

P6809 - POLYMYXIN B SULFATE
See Seed Testing Section for Complete Listing

P6719 - POLYMYXIN B SOLUTION (10 MG/ML)
See Seed Testing Section for Complete Listing

T760 - TERRIFIC BROTH

Terrific Broth is a nutrient media for use with the culture *Escherichia coli* for microbiology applications. Requires the addition of 4.0 mL of Glycerol (Product Number G381) per liter of broth.

- Powder
- Store at 2 to 6 °C
- Soluble in Water
- Use at 47.00 grams per liter

Components (mg/L)	
Tryptone	11,800
Potassium Phosphate, Dibasic, Anhydrous	9,400
Potassium Phosphate, Monobasic, Anhydrous	2,200
Yeast Extract	23,600
Approximate pH at Room Temperature	7.3 ± 0.5

AVAILABLE PACKAGE SIZES		
1L	500g	5kg

T754 - TERRIFIC BROTH SOLUTION WITH GLYCEROL (1X)

Terrific Broth is a nutrient media for use with the culture *Escherichia coli* for microbiology applications.

- Liquid
- Store at 2 to 6 °C
- Sterile Filtered
- Miscible with water



Components (mg/L)	
Glycerol	4.0 mL
Tryptone	11,800
Potassium Phosphate, Dibasic, Anhydrous	9400
Potassium Phosphate, Monobasic, Anhydrous	2200
Yeast Extract	23,600
Approximate pH at Room Temperature	7.3 ± 0.5

AVAILABLE PACKAGE SIZES		
100mL	500mL	1L

T7968 - TREHALOSE DIHYDRATE

See Seed Testing Section for Complete Listing

T752 - TRIS EDTA BUFFER SOLUTION, pH 8.0

See Molecular Biology Section for Complete Listing

T7900 - TRYPTIC SOY BROTH

Tryptic Soy Broth, Type I

- Store at Room Temperature
- Soluble in Water
- Use at 25.0 grams per liter of medium

Components (mg/L)	
Tryptone	15,000
Peptone from Soymeal	5000
Sodium Chloride	5000
Approximate pH at Room Temperature	7.0 ± 0.5

AVAILABLE PACKAGE SIZES		
1L	500g	1Kg

T8000 - TRYPTIC SOY BROTH, TYPE II

- Store at Room Temperature
- Soluble in Water
- Use at 30.0 grams per liter of medium

Components (mg/L)	
Tryptone	17,000
Peptone from Soymeal	3000
Sodium Chloride	5000
Potassium Phosphate, Dibasic	2500
D- Glucose	2500

AVAILABLE PACKAGE SIZES		
1L	500g	1Kg

T832 - TRYPTONE

See Biochemicals Section for Complete Listing

T848 - TRYPTOSE

See Biochemicals Section for Complete Listing

T8110 - TYROTHRIN

See Seed Testing Section for Complete Listing

T8020 - TYROTHRIN (10 MG/ML)

See Seed Testing Section for Complete Listing

W783 - WATER, PLANT TISSUE CULTURE GRADE

See Molecular Biology Section for Complete Listing

PRODUCT CATALOGUE & LABORATORY GUIDE

W887 - WILKINS-CHALGREN AGAR		
This medium is typically used to isolate and culture anaerobic bacteria. Formulation as described by Wilkens & Chalgren (1976).		
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Prepared medium should be stored at 2 to 6 °C in the dark. • Soluble in Water (Partially) • Use at 43.00 grams per liter 		
Components (mg/L)		
Agar	10,000	
L-Arginine (Free Base)	1,000	
D-Glucose	1,000	
Haemin	5.0	
Menadione	0.5	
Peptone, Glysate	10,000	
Pyruvic Acid	1,000	
Sodium Chloride	5,000	
Tryptone	10,000	
Yeast Extract	5,000	
Approximate pH at Room Temperature	6.9 ± 0.5	
AVAILABLE PACKAGE SIZES		
500g		
X8454 - XTS MEDIUM		
See Seed Testing Section for Complete Listing		
Y892 - YEAST EXTRACT		
See Biochemicals Section for Complete Listing		
NEW PRODUCT		
Y8575 - YEAST EXTRACT BEEF BROTH		
YEB Broth		
This medium has been used extensively to culture <i>Agrobacterium</i> species.		
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water • Use at 16.24 grams per liter 		
Components (mg/L)		
Magnesium Sulfate, Anhydrous	240	
Meat Extract	5000	
Peptone from Meat	5000	
D-Sucrose	5000	
Yeast Extract	1000	
pH at Room Temperature	3.5 ± 0.75	
AVAILABLE PACKAGE SIZES		
1L	10L	500g

Y8488 - YEAST MALT BROTH	
Also known as Yeast Mold Broth.	
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water • Use at 21.0 grams per liter 	
Components (mg/L)	
Peptone from Meat	5000
Yeast Extract	3000
D- Glucose, Anhydrous	10,000
Malt Extract	3000
AVAILABLE PACKAGE SIZES	
1L	500g
NEW PRODUCT	
Y8935 - YEAST MANNITOL AGAR	
Also known as YMA; Yeast Extract Mannitol Agar ; YEMA; YEM Agar; YM Agar	
Used for the cultivation, isolation and enumeration of <i>Rhizobium</i> spp. and other soil microorganisms.	
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water • Use at 27.7 grams per liter 	
Components (mg/L)	
Magnesium Sulfate, Anhydrous	98
Potassium Phosphate, Dibasic	500
Sodium Chloride	100
Agar	15,000
D-Mannitol	10,000
Yeast Extract	1000
Calcium Carbonate	1000
pH at Room Temperature	3.5 ± 0.75
AVAILABLE PACKAGE SIZES	
500g	1Kg

NEW PRODUCT	
Y8930 - YEAST MANNITOL BROTH	
Also known as YM Broth; Yeast Extract Mannitol Broth; YEM Broth; YEMB	
Used for the cultivation, isolation and enumeration of <i>Rhizobium</i> spp. and other soil microorganisms.	
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water • Use at 12.7 grams per liter 	
Components (mg/L)	
Magnesium Sulfate, Anhydrous	98
Potassium Phosphate, Dibasic	500
Sodium Chloride	100
D-Mannitol	10,000
Yeast Extract	1000
Calcium Carbonate	1000
pH at Room Temperature	3.5 ± 0.75
AVAILABLE PACKAGE SIZES	
500g	1Kg

Y8565 - YEP BROTH		
Also known as Yeast Extract Peptone Broth. This has been used to culture <i>Agrobacterium</i> as well as yeasts.		
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water • Use at 25.0 grams per liter 		
Components (mg/L)		
Peptone from Meat	10,000	
Yeast Extract	10,000	
Sodium Chloride	5000	
AVAILABLE PACKAGE SIZES		
1L	10L	500g

Y889 - YEP MEDIUM	
Also known as Yeast Extract Peptone Medium. This has been used to culture <i>Agrobacterium</i> as well as yeasts.	
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Water (Partially) • Use at 40.00 grams per liter 	
Components (mg/L)	
Agar	15,000
Peptone from Meat	10,000
Sodium Chloride	5,000
Yeast Extract	10,000
Approximate pH at Room Temperature	6.6 ± 0.5
AVAILABLE PACKAGE SIZES	
1L	500g

Y8480 - YEP MEDIUM (ADP FREE)	
Also known as Yeast Extract Peptone Medium. This has been used to culture <i>Agrobacterium</i> as well as yeasts.	
<ul style="list-style-type: none"> • Store at 2 to 6 °C • Soluble in Boiling Water • Free of Animal Derived Products (ADP) • Use at 45.0 grams per liter 	
Components (mg/L)	
Peptone from Soy	15,000
Yeast Extract	10,000
Sodium Chloride	5,000
Agar	15,000
AVAILABLE PACKAGE SIZES	
1L	500g