



PRODUCT SPECIFICATION SHEET

Tryptose Phosphate Broth (DM681)

Intended Use

Tryptose Phosphate Broth (DM681) is recommended for cultivation of fastidious microorganisms

Product Summary and Explanation

Tryptose Phosphate Broth is an infusion-free buffered medium, prepared as recommended by APHA⁽¹⁾ for the cultivation of fastidious aerobic bacteria especially *Streptococcus* species, *Listeria* and pathogenic *Neisseria* species. It is also used for antibiotic sensitivity testing by tube method.⁽²⁾ This medium with the addition of agar and sodium azide is used for the isolation of pathogenic Streptococci, *Neisseria* and other fastidious microorganisms from blood, dairy products⁽⁴⁾ and clinical specimens. Tryptose Phosphate Broth with added agar can also be used for emulsification of cheese before isolation of *Bruceella* species⁽⁵⁾ and is also recommended by Diagnostic Procedures and Reagents.⁽³⁾ Tryptose Phosphate Broth is valuable in tissue culture procedures, as shown by Ginsberg, Gold, and Jordan.⁽⁶⁾ Tryptose Phosphate Broth is specified for cell culture procedures.

Principles of the Procedure

Tryptose Phosphate Broth contains tryptose which provides nitrogen, vitamins, and carbon sources and other essential growth nutrients for the growth of microorganisms. Dextrose is the fermentable carbohydrate. Dipotassium phosphate is the buffering agent. Sodium chloride maintains the osmotic balance of the medium. The addition of 0.1 - 0.2% agar to Tryptose Phosphate Broth facilitates anaerobic growth, and aids in dispersion of reducing substances and CO₂ formed in the environment. The low agar concentration provides suitable conditions for aerobic growth in the upper zone, and microaerophilic and anaerobic growth in the lower zone.

Formula / Liter

Ingredients	Gms / Liter
Tryptose	20.00
Dextrose	2.00
Sodium chloride	5.00
Disodium phosphate	2.50
Final pH: 7.3 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions

1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions

1. Suspend 29.5 grams of the medium in one liter of distilled water.
2. Add 0.1% agar, if desired.
3. Heat if necessary to dissolve the medium completely.
4. Dispense into desired containers.
5. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Yellow coloured clear solution without any precipitate
Reaction of 2.95% Solution	pH : 7.3 ± 0.2 at 25°C
Gel Strength	Not Applicable





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Expected Cultural Response: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth w/o blood
1.	<i>Neisseria meningitidis ATCC 13090</i>	50 - 100	good-luxuriant
2.	<i>Staphylococcus aureus ATCC 25923</i>	50 - 100	good-luxuriant
3.	<i>Streptococcus pneumoniae ATCC 6303</i>	50 - 100	good-luxuriant
4.	<i>Streptococcus pyogenes ATCC 19615</i>	50 - 100	good-luxuriant
5.	<i>Staphylococcus epidermidis ATCC 12228</i>	50 - 100	good-luxuriant

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure

Refer to appropriate references for standard procedures.

For blood culture work aseptically add 10 ml of sterile defibrinated blood to 150 ml of sterile medium in 300 ml Erlenmeyer flask. Incubate and subculture on other media.

Results

Refer to appropriate references and test procedures for interpretation of results.

Storage

Store the sealed bottle containing the dehydrated medium at 10 - 30°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration

Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure

1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging

Product Name : Tryptose Phosphate Broth

Product Code : DM681

Available Pack sizes : 100gm/ 500gm

References

1. American Public Health Association , 1976, Standard Methods for the Examination of Dairy Products, 14th ed., APHA Inc., New York.
2. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
3. American Public Health Association, 1953, Diagnostic Procedures and Reagents, 4th ed., APHA Inc., New York.
4. Newman R.W., 1950, J. Milk Food, Tech., 13 : 226.
5. American Public Health Association, 1953, Standard Methods for the Examination of Dairy Products, 10th ed., APHA Inc., New York.
6. Ginsberg, Gold, and Jordan. 1955. Proc. Soc. Exp. Biol. Med. 89:66.





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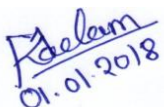


Further Information

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