

# TM 542 – PIKE STREPTOCOCCAL BROTH BASE

#### **INTENDED USE**

For selective enrichment & cultivation of Streptococci from throat swabs and other clinical samples.

#### PRODUCT SUMMARY AND EXPLANATION

*Streptococcus* is a genus of spherical, gram-positive bacteria having both pathogenic and commensal roles. Streptococci are subdivided into groups by antibodies that recognize surface antigens. These groups may include one or more species. The most important groupable streptococci are A, B and D. Individual species of *Streptococcus* are classified primarily based on their hemolytic properties (breakdown of red blood cells in a laboratory).

Pike Streptococcal Broth is prepared as per the formula described by Pike for selective enrichment and cultivation of haemolytic streptococci from throat swabs. This medium is also used to preserve *Streptococcus pyogenes, pneumococci* and *Haemophillus influenzae* from nose and throat swabs.

## COMPOSITION

Ingredients	Gms / Ltr	
Casein enzymic hydrolysate	10.000	
Tryptose	10.000	
Yeast extract	10.000	
Dextrose	0.200	
Sodium azide	0.065	
Crystal violet	0.002	

### PRINCIPLE

The medium consists of Casein enzymic hydrolysate, tryptose and yeast extract which provide nitrogenous nutrients, carbon, sulphur, vitamin B complex, trace elements for the growth of haemolytic streptococci. Dextrose acts as the energy source. Crystal violet inhibits gram-positive bacteria and sodium azide inhibits gram-negative rods and non-haemolytic streptococci.

#### **INSTRUCTION FOR USE**

- Dissolve 30.26 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in 100 ml amounts in flasks. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add 5% v/v sterile defibrinated rabbit blood.
- Mix well and dispense aseptically in 2 ml amounts in sterile tubes.
- Warning: Sodium azide has a tendency to form explosive metal azides with plumbing materials. It is advisable to use enough water to flush off the disposables.

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## QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.		
Appearance of prepared medium	: Yellow coloured clear solution without any precipitate.		
pH (at 25°C)	: 7.4 ± 0.2		

A- 902A, RIICO Industrial Area, Phase III, Bhiwadi-301019.



# INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	lnoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Escherichia coli	25922	>=10 <sup>3</sup>	Inhibited	35-37°C	24-48 Hours
Enterobacter aerogenes	13048	>=10 <sup>3</sup>	Inhibited	35-37°C	24-48 Hours
Enterococcus faecalis	29212	50-100	Good-luxuriant	35-37°C	24-48 Hours
Staphylococcus aureus	25923	>=10 <sup>3</sup>	Inhibited	35-37°C	24-48 Hours

# PACKAGING:

In pack size of 100 gm and 500 gm bottles.

## STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

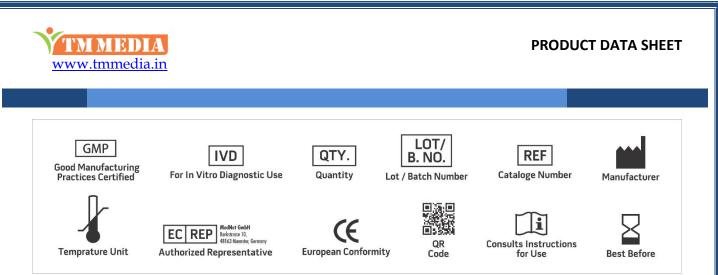
## DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

### REFERENCES

- 1. Pike R. M., 1944, Proc. Soc. Exptl. Biol. and Med., 57:186.
- 2. Pike R. M., 1945, Am. J. Hygiene, 41:211.
- 3. Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1996, 14th Edition, Churchill Livingstone
- 4. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore.





NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices. \*For Lab Use Only Revision: 08 Nov., 2019

