

TM 2347 - β -STREPTOCOCCUS SELECTIVE AGAR BASE

INTENDED USE

For the isolation of beta-haemolytic Streptococci from clinical specimens heavily contaminated with other bacteria.

PRODUCT SUMMARY AND EXPLANATION

The majority of β -haemolytic streptococci causing infections in man belong to group A and are given the species name of *Streptococcus pyogenes*. This pathogen causes a variety of inflammatory and suppurative conditions such as sore throat, scarlet fever, cellulites, wound infections, erysipelas, impetigo, puerperal fever, otitis media, septicemia and necrotizing fasciitis. It is also found in the throat or nasal cavity. β -Streptococcus Selective Agar Base was described by Liebermeister and Braveny for isolating β -haemolytic *streptococci*. This medium proves to be a nutritionally limiting medium for the accompanying flora, so that their growth is markedly reduced. β -haemolytic *streptococci* also show reduced colony size but exhibit distinct β -haemolysis. This medium gives higher yields of β -haemolytic streptococci than the regularly used blood agar.

COMPOSITION

Ingredients	Gms / Ltr
Meat peptone	1.000
Meat extract	0.600
Yeast extract	0.500
L-Lysine	0.020
Sodium chloride	6.000
Disodium hydrogen phosphate	2.000
Agar	15.000

PRINCIPLE

The β -haemolysis of *streptococci*, producing a greenish discoloration is restricted on this medium. Yeast extract and lysine promote the haemolytic action of β -haemolytic *streptococci*. Meat extract and meat peptone serve as sources of carbon, nitrogen and essential growth factors. Sodium chloride maintains the osmotic equilibrium of the medium whereas disodium hydrogen phosphate buffers the medium.

INSTRUCTION FOR USE

- Dissolve 25.12 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45°C and add 7-10% sheep blood.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

- Appearance of Powder** : Cream to yellow homogeneous free flowing powder.
- Appearance of prepared medium** : Basal medium yields light amber coloured clear to slightly opalescent gel. On addition of 7-10% v/v sterile sheep blood cherry red coloured opaque gel forms in Petri plates.
- pH (at 25°C)** : 7.3±0.2



INTERPRETATION

Cultural characteristics observed after an incubation with added 7-10% v/v sterile defibrinated blood.

Microorganism	ATCC	Inoculum (cfu/ml)	Growth	Recovery	Beta-haemolysis	Incubation Temperature	Incubation Period
<i>Bacillus cereus</i>	11778	50-100	Fair-good	20-40 %	Positive	35-37°C	18-48 Hours
<i>Pseudomonas aeruginosa</i>	27853	50-100	Fair-good	20-40 %	Positive	35-37°C	18-48 Hours
<i>Enterococcus hirae</i>	8043	50-100	Fair-good	20-40 %	Negative	35-37°C	18-48 Hours
<i>Streptococcus agalactiae</i>	13813	50-100	Fair-good	20-40 %	Negative	35-37°C	18-48 Hours
<i>Staphylococcus aureus</i>	25923	50-100	Fair-good	20-40 %	Negative	35-37°C	18-48 Hours
<i>Streptococcus pyogenes</i>	12344	50-100	Fair-good	20-40 %	Positive	35-37°C	18-48 Hours
<i>Enterococcus faecalis</i>	11700	50-100	Fair-good	20-40 %	Negative	35-37°C	18-48 Hours

PACKAGING:

In pack size of 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.

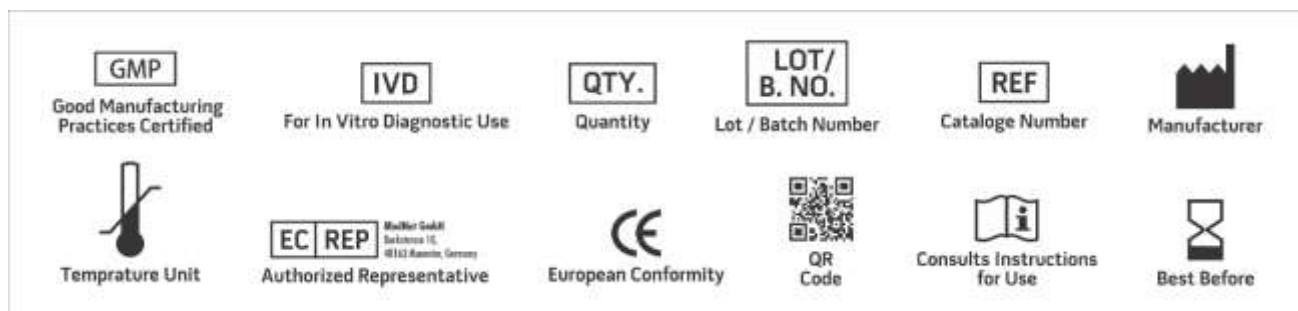
DISPOSAL

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



REFERENCES

1. Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 14th Edition, 1996, Churchill Livingstone
2. Bernheimer A. W., Rodbart M., 1948, J. Exp. Med, 88; 149
3. Liebermeister K., Braveny J., 1971 Z. med. Mikrobiol. u. Immunol, 156, 149 -1534. Okamoto H., Kyoda S., Ito R., 1939, Jap. J. Med. Sci, VI Pharmacol, 12, 167.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**
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