TM 2315 - S.T.A. AGAR BASE

INTENDED USE

For the isolation of *Brochothrix thermosphacta* from meat products.

PRODUCT SUMMARY AND EXPLANATION

Brochothrix thermosphacta is of concern as a food spoilage organism. *B. thermosphacta* is the predominant spoilage organism in chilled raw meats and processed meat products stored aerobically or under modified atmospheres. Spoilage is greatest in depleted aerobic conditions, often aided by increased carbon dioxide levels. Such conditions are common in vacuum packed products. As a facultative anaerobe, *B. thermosphacta* is well suited to grow under modified atmosphere environments. The successful spoilage of chilled products is mainly due to its psychrotrophic nature. It has a growth range of 0-30ºC, with an optimum of 20-25ºC. S.T.A. (Streptomycin Thallous Acetate) Agar Base was developed by Gardner and is used for the isolation and quantitative enumeration of *B. thermosphacta* from meat and meat products. Prepare homogenate of meat product to be tested by blending or in a stomacher. Prepare decimal dilutions of it in saline peptone water and spread on the whole plate or inoculate by streaking. Incubate at 22°C for 48 hours. After incubation observe white or semi-transparent convex colonies with or without an irregular margin which may be seen as masses of woven threads.

Occasional yeast and *Pseudomonas* colonies may grow. The latter may be confirmed by flooding oxidase reagent on the plate, blue colonies should be subtracted from the total.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	20.000
Yeast extract	2.000
Dipotassium hydrogen phosphate	1.000
Magnesium sulphate, heptahydrate	1.000
Agar	13.00

PRINCIPLE

Peptone and yeast extract provide nitrogenous and carbonaceous compounds, long chain amino acids, vitamin B complex and other essential growth nutrients. Phosphate buffers the medium. The supplement contains streptomycin, cycloheximide, thallous acetate which makes the medium selective by inhibiting most of the organisms.

INSTRUCTION FOR USE

- Dissolve 18.24 grams in 495 ml distilled water containing 7.5 gm glycerol.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of S.T.A. Selective Supplement.
- 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 : Light straw coloured clear to slightly opalescent gel forms in Petri plates.

pH (at 25°C) : 7.0±0.2

INTERPRETATION

Cultural characteristics observed after an incubation with added S.T.A. Supplement.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Brochothrix thermosphacta	11509	50-100	Good-luxuriant	>=50 %	20-25°C	48 Hours
Escherichia coli	25922	>=10^3	Inhibited	0%	20-25°C	48 Hours
Enterococcus faecalis	29212	>=10^3	Inhibited	0%	20-25°C	48 Hours
Pseudomonas aeruginosa	27853	50 -100	None-poor	0-10 %	20-25°C	48 Hours
Salmonella Enteritidis	13076	>=10^3	Inhibited	0%	20-25°C	48 Hours
Staphylococcus aureus	25923	>=10^3	Inhibited	0%	20-25°C	48 Hours
Canida albicans	10231	10 -100	None-poor	0-10 %	20-25°C	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

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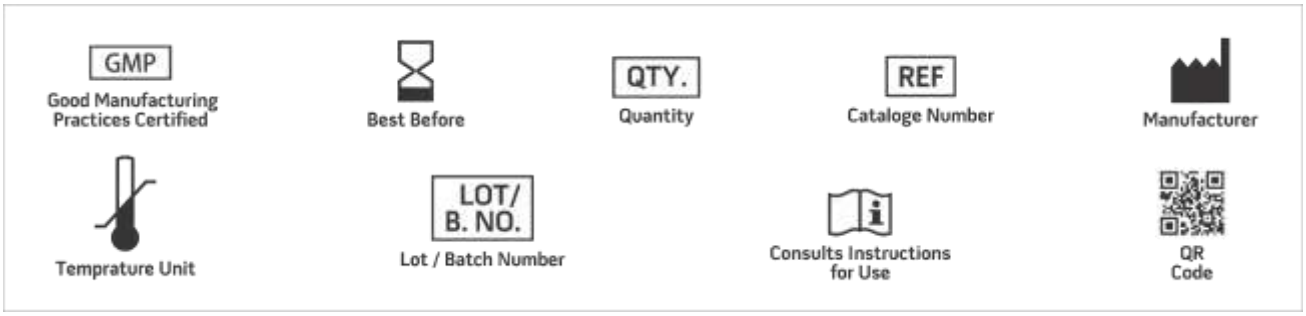

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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