TM 933 – THAYER MARTIN MEDIUM BASE

INTENDED USE
For selective isolation of Gonococci from clinical samples.

PRODUCT SUMMARY AND EXPLANATION
Carpenter and Morton reported an improved medium to isolate gonococci in 24 hours. Later on the efficiency of GC medium supplemented with haemoglobin and yeast concentrate was demonstrated for isolating gonococci. Subsequently Thayer and Martin Medium was developed for the primary isolation of *Neisseria gonorrhoeae* and *Neisseria meningitidis* from specimens containing mixed flora collected from throat, vagina, rectum an d urethra. Thayer and Martin used Vancomycin, Colistin and Nystatin. Martin and Lester used an additional antibiotic Trimethoprim to make the medium selective. This medium may inhibit Haemophilus species. Some strains of *Capnocytophaga* species may grow on this medium when inoculated with oropharyngeal specimens.

COMPOSITION

Ingredients	Gms / Ltr
Peptone, special	23.000
Starch	1.000
Sodium chloride	5.000
Agar	13.000

PRINCIPLE
Special peptone provides nutrients to the organisms while starch neutralizes the toxic fatty acids if present in the agar. Haemoglobin provides the X factor whereas the V factor (N.A.D.) is provided by the added supplement. Supplement also supplies vitamins, amino acids, coenzymes etc. which enhances the growth of pathogenic *Neisseria*. Vancomycin and colistin inhibits gram-positive and gram-negative bacteria respectively. Nystatin inhibits fungi.

INSTRUCTION FOR USE
- Suspend 21.0 grams in 450 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.
- Aseptically add 50 ml of sterile lysed blood and rehydrated contents of one vial of Vitamino Growth Supplement and V.C.N Supplement or V.C.N.T Supplement. If desired GC Supplement with Antibiotics can be used as a single supplement. Mix well before pouring into sterile Petri plates.
- If Hemoglobin is used suspend 21.0 grams of Thayer Martin Medium Base in 250 ml distilled water.
  Heat to boiling to dissolve the medium completely. Prepare 250 ml of 2% hemoglobin solution. Sterilize separately by autoclaving at 15 psi pressure (121°C) for 15 minutes. Cool to 45°C. Mix both and add the supplements as above.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Basal Medium: Yellow coloured clear to slightly opalescent gel. After addition of haemoglobin or sterile lysed blood and supplements: chocolate coloured opaque gel forms in Petri plates.
pH (at 25°C)	: 7.0±0.2

INTERPRETATION

Cultural characteristics observed with added sterile lysed blood/Haemoglobin solution, Vitamino Growth Supplement and V.C.N. Supplement/V.C.N.T. Supplement after an incubation.

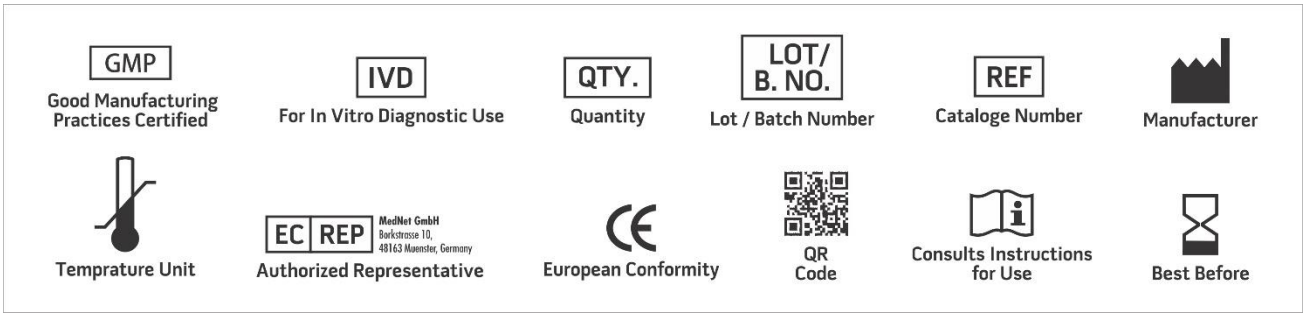
Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Escherichia coli	25922	>=10^3	Inhibited	0%	-	35-37°C	18-48 Hours
Neisseria gonorrhoeae	19424	50-100	Good-luxuriant	>=50%	Small, grayish-white to colourless, mucoid	35-37°C	18-48 Hours
Neisseria meningitidis	13090	50-100	Good-luxuriant	>=50%	Medium to large, bluegray, mucoid	35-37°C	18-48 Hours
Proteus mirabilis	25933	>=10^3	Inhibited	0%	-	35-37°C	18-48 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. Carpenter and Morton, 1947, Proc. N.Y. State Assoc. Public Hlth. Labs., 27:58.
2. Carpenter et al, 1949, Am. J. Syphil. Gonorrh. Vener. Dis., 33:164.
3. Martin, Billings, Hackney and Thayer, 1967, Public Hlth. Rep., 82:361.
4. Thayer J. and Martin J.E. Jr., 1966, Public Health Rep., 81:559.
5. Martin J.E. Jr. and Lester A., 1971, HSMHA Hlth. Service Rep., 86(1):30.
6. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.



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

***For Lab Use Only**

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