TM 2151 – LIVER VEAL AGAR BASE, MODIFIED

INTENDED USE
For isolation of *Clostridium botulinum* in accordance with FDA BAM, 1998.

PRODUCT SUMMARY AND EXPLANATION
Anaerobic bacteria live in an oxygen-free environment. Some of the anaerobic bacteria die in presence of oxygen while others fail to grow and multiply. Liver Veal Agar Base, Modified is a modification of the medium formulated by Spray, 1936. It is recommended by the FDA Bacteriological Analytical Manual (BAM) for the growth of anaerobic organisms especially *Clostridium botulinum*. This may also be used in supplementation with 50% egg yolk. *Clostridium botulinum* is an anaerobic, rod-shaped spore forming bacterium that produces a protein with characteristic neurotoxicity. Under certain conditions, these organisms may grow in foods producing highly dangerous botulinum toxin(s). Botulinum toxin has been classified into botulinum A, botulinum B upto G. Among this all except F and G are known to cause animal botulism. Different strains are classified through antigenic characterization using appropriate antitoxins. They are also differentiated into general groups on the basis of cultural, biochemical, and physiological characteristics.

COMPOSITION

Ingredients	Gms / Ltr
Liver, infusion from	50.000
Veal, infusion from	500.000
Proteose peptone	20.000
Peptone, special	1.300
Tryptone	1.300
Dextrose (Glucose)	5.000
Starch, soluble	10.000
Sodium chloride	5.000
M-Protein, purified	2.000
Sodium nitrate	2.000
Gelatin	20.000
Agar	15.000

PRINCIPLE
This medium contains Liver infusion from, Veal infusion from, other peptones and gelatin which serve as sources of carbon, nitrogen, amino acids and various vitamins. Dextrose serves as the energy source. Starch enhances growth of anaerobic bacteria. Sodium chloride maintains the osmotic equilibrium of the medium. Agar acts as the solidifying agent.

INSTRUCTION FOR USE
- Dissolve 97.0 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15psi pressure (121°C) for 15 minutes. Cool to 45-50°C, aseptically add 80 ml Egg yolk emulsion,50%.

- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to brownish yellow homogeneous free flowing powder.

Appearance of prepared medium : Amber coloured clear to slightly opalescent gel forms in Petri plates, may have slight precipitate.

pH (at 25°C) : 7.3 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation with addition of Egg yolk emulsion (under the atmospheric requirement of organism).

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
Clostridium botulinum	25763	50-100	Luxuriant	>=70%	35-37°C	18-24 Hours
Clostridium tetani	10709	50-100	Luxuriant	>=70%	35-37°C	18-24 Hours
Neisseria meningitidis	13090	50-100	Luxuriant	>=70%	35-37°C	18-24 Hours
Streptococcus pneumoniae	6303	50-100	Luxuriant	>=70%	35-37°C	18-24 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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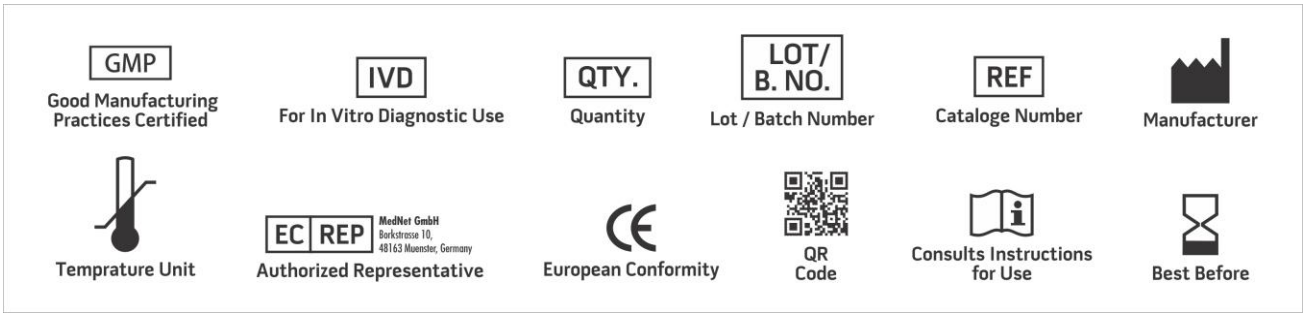

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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