TM 2063 – EGG YOLK AGAR BASE, MODIFIED

INTENDED USE

For identification of anaerobic bacteria by means of their egg yolk reaction.

PRODUCT SUMMARY AND EXPLANATION

Clostridium perfringens food poisoning is one of the most common types of human food borne illness. The foods usually involved are cooked meat or poultry products containing large numbers of viable cells. A heat- labile enterotoxin produced only by sporulating cells induces the major symptoms of diarrhea in perfringens poisoning.

Egg Yolk Agar Base, Modified is based on McClung and Toabe Agar Base for isolation and detection of *C. perfringens*. In Egg Yolk Agar Base, Modified, CDC Anaerobe Agar is used as a base to prepare the medium. CDC Anaerobe Agar is a non-selective, highly enriched medium for the cultivation of obligate anaerobes, developed by Center for Disease Control (CDC). The medium is made suitable for detection of lipase and lecithinase activity by the addition of egg yolk emulsion.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	15.000
Soya peptone	5.000
Yeast extract	5.000
Sodium chloride	5.000
L-Cystine	0.400
Hemin	0.005
Vitamin K1	0.010
Agar	20.000

PRINCIPLE

The medium consists of Tryptone and soya peptone which provide the essential nutrients along with carbonaceous and nitrogenous substances. Yeast extract supplies B-complex nutrients. Sodium chloride maintains the osmotic equilibrium. L-cystine is an amino acid which also acts as a reducing agent. Vitamin K1 and hemin help to enhance the growth of anaerobic organisms. Organisms producing lecithinase break down lecithin present in the egg yolk emulsion producing an insoluble opaque precipitate around the colonies. Lipase-producing organisms break down free fatty acids (in the egg yolk emulsion) forming an iridescent sheen on the surface of the colonies. Lipase activity may be delayed, therefore plates should not be discarded as negative before incubation for a week. Proteolytic activity is seen as clear zones around the colonies.

INSTRUCTION FOR USE

- Dissolve 50.41 grams in 900 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50° C and add 10 ml of sterile egg yolk emulsion per 90 ml of medium.
- 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 : Medium amber coloured clear to slightly opalescent gel .After addition of egg yolk emulsion- Yellow coloured opaque gel forms in Petri plates

pH (at 25°C) : 7.5 ± 0.2

INTERPRETATION

Cultural characteristics observed with added Egg yolk emulsion, after incubation (anaerobically). (*- Plates should be incubated up to 7 days before regarding them as negative)

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Lecithinase	Lipase activity*	Proteolytic activity	Incubation Temperature	Incubation Period
Clostridium perfringens	12924	50-100	Good-luxuriant	>=50%	Positive, opaque zone around the colony	Negative reaction, no irridescent sheen on the colony surface and medium	Negative, no clear zone surrounding colonies	35-37°C	48-72 Hours
Fusobacterium necrophorum	25286	50-100	Good-luxuriant	>=50%	Negative reaction	Positive, irridescent sheen on the colony surface and medium	Negative, no clear zone surrounding colonies	35-37°C	48-72 Hours
Clostridium sporogenes	11437	50-100	Good-luxuriant	>=50%	Negative reaction	Positive, irridescent sheen on the colony surface and medium	Positive, clear zone surrounding colonies	35-37°C	48-72 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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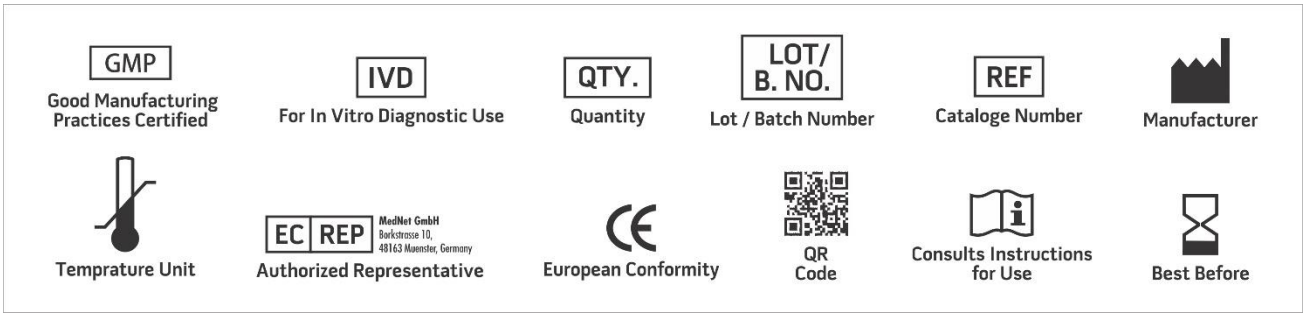
2. Duncan C. L., 1973, A. J. Bacteriol., 113:932.
3. Dowell and Hawkins, 1987, Laboratory Methods in Anaerobic Bacteriology, CDC Laboratory Manual, HHS Publication No. (CDC) 87-8272, Centers for Disease Control, Atlanta, Ga.
4. McClung and Toabe, 1947, J. Bacteriol., 53:139

5. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Ed.), 2003, Manual of Clinical Microbiology,8th Ed., American Society for Microbiology, Washington, D.C.

6. Labbe R., 1989, Clostridium perfringens, In Foodborne Bacterial Pathogens Ed., Doyle M. P., P.191, Marcel Dekker, New York , N.Y.



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

***For Lab Use Only**

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