CM 20688 – FERMENTATION MEDIUM BASE FOR C. PERFRINGENS

INTENDED USE

For determination of fermentation reaction of Clostridium perfringens with added carbohydrate.

PRODUCT SUMMARY AND EXPLANATION

Contamination of foods with clostridia islargelyderived from soil and is usually responsible for Clostridium perfringens food poisoning. A heat labile enterotoxin produced by sporulating cells induces the major symptoms of diarrhea in perfringens poisoning. Although the enterotoxin is not preformed in the foods, the foods in which conditions are favorable for sporulation may contain enterotoxin. Therefore, Clostridium are common food contaminants responsible for spoilage of canned foods, chill stored products etc.

Fermentation Medium base for C.perfringens was formulated by Spray and is recommended by APHA for determination of fermentation reaction of C.perfringens. This medium helps in identification of C.perfringens from other Clostridium species.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	10.000
Peptone, special	10.000
Sodium thioglycollate	0.250
Agar	2.000

PRINCIPLE

Themedium consists of Tryptone and peptone special which provide the necessary growth nutrients. Sodium thioglycollate creates low oxygen tension required in the medium to facilitate the growth of anaerobic organisms.

INSTRUCTION FOR USE

Dissolve 22.25 gramsin 1000 ml purified / distilled water.
Heat to boling to dissolve the medium completely.
Dispense 9 ml amounts in test tubes containing inverted Durhams tube.
Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
Before use heat in boiling water or free flowing steam for 10 minutes to remove dissolved oxygen and add 1 ml of 1% sterile Salicin and Raffinose solution in separate tubes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Light amber coloured, clear solution without any precipitate.
pH (at 25°C)	: 7.4 ± 0.2

INTERPRETATION

Culturalcharacteristics observed under anaerobic condition with added 1% Salicin and Raffinose solutions in 2 separate tubes containing media after incubation. (Acid production is tested by addition of 0.04% Bromothymol blue).

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Salicin (24 hours)	Raffinose (72 hours)	Incubation Temperature	Incubation Period
Clostridium paraperfringens	27639	50-100	Luxuriant	Acid and gas production	-	35-37°C	24-72 Hours
Clostridium perfringens	12924	50-100	Luxuriant	-	Acid production, yellow colour	35-37°C	24-72 Hours

PACKAGING:

Inpacksizeof500 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.

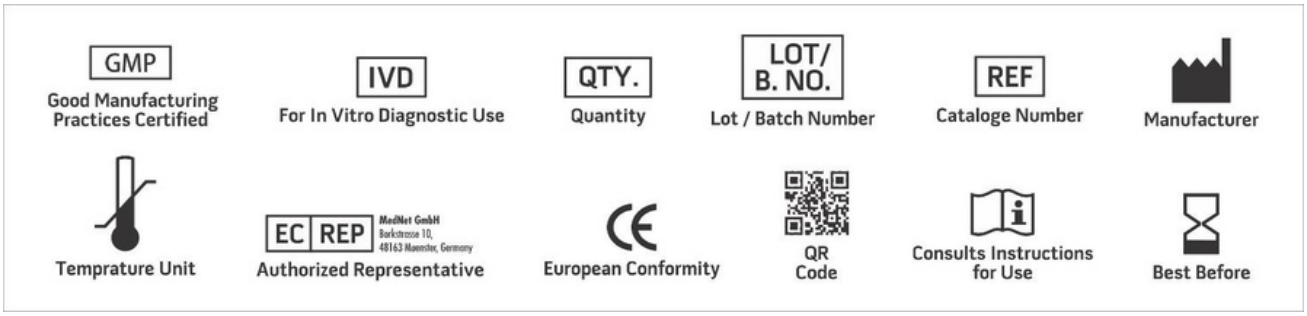
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

1.Craven S. E., Blankenship L. C. and McDonel J. L., 1981, Appl. Microbiol. 41:1184
2. Corry J. E. L., Curtis G. D. W. and Baird R. M., Culture Media for Food Microbiology, Vol. 34, Progress in Industrial Microbiology, 1995, Elsevier, Amsterdam.
3. Gibbs B. M. and Freame B., 1965, J. Appl. Bacteriol., 28, 95-111
4. Isenberg (Ed.), 1992, Clinical Microbiology Procedures Handbook, American Society for Microbiology, Washington, D.C.
5. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology,11th Edition. Vol. 1.
6. Naik H. S. and Duncan C. L., 1977, A. J. Food Safety., 1: 74.
7. Spray R. S., 1936, J. Bacteriol., 32:135.
8. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.



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

*For LabUse Only