TM 1422 – CPC AGAR BASE

INTENDED USE

For cultivation of *Vibrio* species from foods.

PRODUCT SUMMARY AND EXPLANATION

Vibrio species are natural inhabitants of brackish and salt water. Human disease is associated with ingestion of contaminated water or consumption of contaminated seafood. Wound and systemic infections develop following contact with contaminated water. CPC (Cellobiose, Polymyxin and Colistin) Agar Base formulated as per APHA is recommended for the cultivation and identification of *Vibrio* species from foods. CPC Agar is a selective and differential agar medium, designed to differentiate *Vibrio vulnificus* from other *Vibrios*. *Vibrio cholerae* strains except *V. cholerae* 01-classical biotype grow on CPC Agar while most *Vibrio parahaemolyticus* strains do not grow on CPC Agar.

Blend approximately 25 grams of food sample with 225 ml Alkaline Peptone Water. Transfer a loopful from the surface growth of either Alkaline Peptone Water or Gelatin Phosphate Salt Broth to the surface of the dried plates of CPC Agar. Streak in a manner that will yield isolated colonies. Incubate CPC Agar at 40 - 42°C for 18 to 24 hours. Typical colonies of *V. cholerae* on CPC Agar are small, smooth, opaque and green to purple in colour as CPC Agar contains two pH indicators viz. bromothymol blue and cresol red. A purple background will also develop in the CPC Agar upon extended incubation.

COMPOSITION

Ingredients	Gms / Ltr
Peptone	10.000
Beef extract	5.000
Cellobiose	15.000
Sodium chloride	20.000
Bromothymol blue	0.040
Cresol red	0.040
Agar	15.000

PRINCIPLE

CPC Agar contains beef extract and peptone, which supply the essential nitrogenous, carbonaceous compounds, long chain amino peptides, vitamins and other growth nutrients to *Vibrios*. Cellobiose is fermented by some *Vibrios* producing acid and is indicated by the pH indicator bromothymol blue, which turns yellow at acidic pH. Cresol red is the pH indicator of alkaline range, which turns red at alkaline pH. Alkaline pH of the medium enhances the recovery of *Vibrios*.

INSTRUCTION FOR USE

- Dissolve 32.54 grams in 500 ml of 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 aseptically add the rehydrated contents of 1 vial of CPC Supplement.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to light brown homogeneous free flowing powder.
Appearance of prepared medium : Olive-green to light brown coloured, clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C) : 7.6±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
Vibrio cholerae	15748	50-100	Good - luxuriant	>=50%	Green-purple	40±2°C	18-24 Hours
Vibrio parahaemolyticus	17802	>=10^3	Inhibited	0%	-	40±2°C	18-24 Hours
Vibrio vulnificus	27562	50-100	Good - luxuriant	>=50%	Yellow	40±2°C	18-24 Hours

PACKAGING:

In pack size of 100 gm bottles.

STORAGE

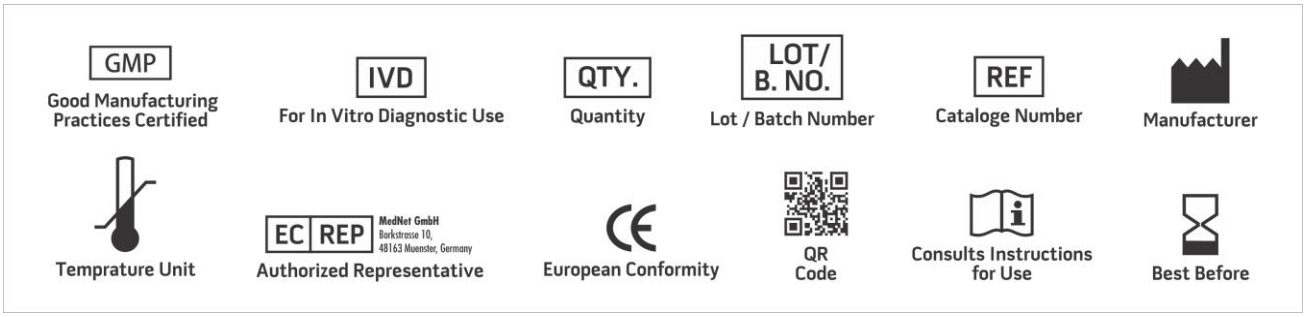
Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided 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. 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.
2. Vanderzant C. and Splittstoesser D. F., (Eds), 1992, Compendium of Methods for the Microbiological Examination of Foods, 3rd Ed., APHA, Washington DC.



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

***For Lab Use Only**

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