# CM 20414 – CHO MEDIUM BASE (FERMENTATION BROTH)

## INTENDED USE

For studies of anaerobic fermentation by adding carbohydrates.

## PRODUCT SUMMARY AND EXPLANATION

Identification of anaerobes is basedon cellular morphology and colony characteristics on blood agar and confirmation by biochemical tests. Carbohydrate utilization patterns play a key role in the identification of anaerobes. Metabolism of anaerobes is less efficient and therefore they require auxiliary growth factors. For the anaerobic microorganisms, proper collection and transport of suspected specimens is of pivotal importance. Exposure of the specimens to air should be minimized to the possible extent and they should be promptly cultured in the laboratory under proper atmospheric conditions. CHO Medium Base is recommended for studying fermentation of anaerobic bacteria.

## COMPOSITION

| Ingredients | Gms / Ltr |
|---|---|
| Tryptone | 15.000 |
| Yeast extract | 7.000 |
| L-Cystine | 0.250 |
| Sodium chloride | 2.500 |
| Ascorbic acid | 0.100 |
| Sodium thioglycollate | 0.500 |
| Bromo thymol blue | 0.010 |
| Agar | 0.750 |

## PRINCIPLE

Tryptoneand ascorbic acid enhance growth of oxygen sensitive and fastidious anaerobes (3). Sodium chloride maintains the osmotic equilibrium of the medium. Yeast extract serves as a source of B-complex nutrients. L-Cystine and thioglycollate help in maintaining reduced atmosphere in the medium. Small amount of agar also aids in creating anaerobiosis. Bromothymol blue is the pH indicator.

## INSTRUCTION FOR USE

Dissolve 26.11 gramsin 1000 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.
Aseptically add 6.25 ml of 10% sterile carbohydrate solution.
Mix well and dispense in sterile tubes containing inverted Durhams tubes.

## QUALITY CONTROL SPECIFICATIONS

| | |
|---|---|
| Appearance of Powder | : Cream to light green homogeneous free flowing powder. |
| Appearance of prepared medium | : Light green coloured, clear to very slightly opalescent solution without any precipitate. |
| pH (at 25°C) | : 7.0±0.2 |

## INTERPRETATION

Cultural characteristics observed after incubation.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Fermentation w/Dextrose | Fermentation w/Lactose | Incubation Temperature | Incubation Period |
|---|---|---|---|---|---|---|---|
| Bacteroides melaninogenicus | 25611 | 50-100 | Luxuriant | Negative reaction, no colour change | Positive reaction, yellow colour | 35-37°C | Upto 7 Days |
| Bacteroides vulgatus | 8482 | 50-100 | Luxuriant | Negative reaction, no colour change | Negative reaction, no colour change | 35-37°C | Upto 7 Days |
| Bacteroides fragilis | 25285 | 50-100 | Luxuriant | Positive reaction, yellow colour | Positive reaction, yellow colour | 35-37°C | Upto 7 Days |
| Clostridium botulinum | 25763 | 50-100 | Luxuriant | Positive reaction, yellow colour | Negative reaction, no colour change | 35-37°C | Upto 7 Days |
| Clostridium perfringens | 12924 | 50-100 | Luxuriant | Positive reaction, yellow colour | Positive reaction, yellow colour | 35-37°C | Upto 7 Days |
| Escherichia coli | 35218 | 50-100 | Luxuriant | Positive reaction, yellow colour | Positive reaction, yellow colour | 35-37°C | Upto 7 Days |

## 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.

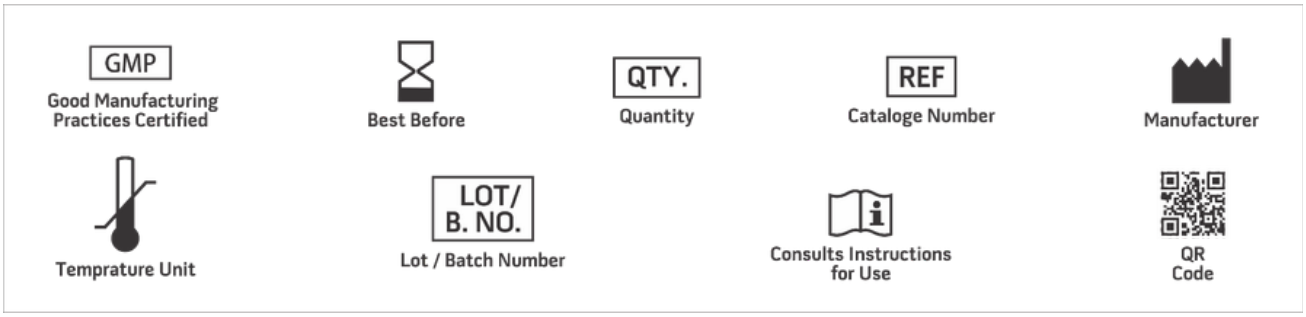
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

## DISPOSAL

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

## REFERENCES

1. Atlas, R. M., 2004, A Handbook of Microbiological Media, 3rd Ed, CRC Press.
2. Dowell V. R. Jr., Lombad G. L., Thompson F. S., Armfield A. Y., Media for Isolation, Characterization and Identification of Obligately Anaerobic Bacteria, USDHEW Atlanta, CA: Centers for Disease Control, 1977:22
3. Laboratory Methods in Anaerobic Bacteriology, 1974, CDC Laboratory Manual, U.S. Dept. HEW, Pub. No. 74-8262.
4. MacFaddin, J. F., 1985, (Ed), Media for Isolation-Cultivation-Identification of Medical Bacteria. Vol. I., Williams and Wilkins, Baltimore.
5. Washington J. A., Laboratory Procedures in Clinical Microbiology, Cd 2 New York: Springer-Verlag, 1985: 774, 801-802.




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

*For LabUse Only