

CM 22022 – MacCONKEY AGAR W/O CV, NaCl, W/ 0.5% SODIUM TAUROCHOLATE

INTENDED USE

For the selection and recovery of the Enterobacteriaceae and related enteric gram-negative bacilli from clinical, food and water samples.

PRODUCT SUMMARY AND EXPLANATION

MacConkey Agar is the earliest selective and differential medium for cultivation of enteric microorganisms from a variety of clinical specimens. Subsequently MacConkey Agar and Broth have been recommended for use in microbiological examination of foodstuffs and for direct plating / inoculation of water samples for coliform counts. These media are also accepted by the Standard Methods for the Examination of Milk and Dairy Products and pharmaceutical preparations. Original medium contains protein, bile salts, sodium chloride and two dyes.

The selective action of this medium is attributed to bile salts, which are inhibitory to most species of gram-positive bacteria. MacConkey Agar w/o CV, NaCl and W/ 0.5% Sodium taurocholate is a modification of the original formulation with the exclusion of crystal violet and inclusion of sodium taurocholate instead of bile salts. Lactose fermenting strains grow as red or pink and may be surrounded by a zone of acid precipitated bile. The red colour is due to production of acid from lactose, absorption of neutral red and a subsequent colour change of the dye when the pH of medium falls below 6.8. Lactose non-fermenting strains, such as Shigella and Salmonella are colourless and transparent and typically do not alter appearance of the medium. Yersinia enterocolitica may appear as small, non-lactose fermenting colonies after incubation at room temperature.

COMPOSITION

| Ingredients | Gms / Ltr |
|---------------------|-----------|
| Peptone | 20.000 |
| Lactose | 10.000 |
| Sodium taurocholate | 5.000 |
| Neutral red | 0.040 |
| Agar | 20.000 |

PRINCIPLE

The medium consists of peptone which supply nitrogenous and carbonaceous compounds. Gram-negative bacteria usually grow well on the medium and are differentiated by their ability to ferment lactose. Neutral red is the pH indicator. Agar act as a solidifying agent in the medium.

INSTRUCTION FOR USE

- Dissolve 55.0 grams of medium in 1000 ml purified/distilled water.
- Heat to boiling with gentle swirling to dissolve the agar completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. Avoid overheating. Cool to 45-50°C.
- Mix well and pour into sterile Petri plates. The surface of the medium should be dry when inoculated

QUALITY CONTROL SPECIFICATIONS



Appearance of Powder : Light yellow to pink homogeneous free flowing powder.
 Appearance of prepared medium : Orange red coloured clear to slightly opalescent gel forms in Petri plates.
 pH (at 25°C) : 7.4 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Recovery | Colour of colony | Incubation temperature | Incubation Period |
|-------------------------------------|-------|-------------------|-----------|----------|-----------------------------------|------------------------|-------------------|
| Salmonella Paratyphi B | 8759 | 50-100 | Luxuriant | >=70% | Colourless | 35-37°C | 18-24 Hours |
| Salmonella Typhi | 6539 | 50-100 | Luxuriant | >=70% | Colourless | 35-37°C | 18-24 Hours |
| Salmonella Enteritidis | 13076 | 50-100 | Luxuriant | >=70% | Colourless | 35-37°C | 18-24 Hours |
| Staphylococcus aureus subsp. aureus | 25923 | 50-100 | Fair-good | 20-40% | Pale pink to red | 35-37°C | 18-24 Hours |
| Staphylococcus aureus subsp. aureus | 6538 | 50-100 | Fair-good | 20-40% | Pale pink to red | 35-37°C | 18-24 Hours |
| Salmonella Paratyphi A | 9150 | 50-100 | Luxuriant | >=70% | Colourless | 35-37°C | 18-24 Hours |
| Escherichia coli | 25922 | 50-100 | Luxuriant | >=70% | Pink to red with bile precipitate | 35-37°C | 18-24 Hours |
| Escherichia coli | 8739 | 50-100 | Luxuriant | >=70% | Pink to red with bile precipitate | 35-37°C | 18-24 Hours |



| | | | | | | | |
|-----------------------|-------|--------|-----------|--------|------------------|---------|-------------|
| Enterococcus faecalis | 29212 | 50-100 | Fair-good | 20-40% | Pale pink to red | 35-37°C | 18-24 Hours |
| Shigella flexneri | 12022 | 50-100 | Fair-good | 20-40% | Colourless | 35-37°C | 18-24 Hours |
| Klebsiella aerogenes | 13048 | 50-100 | Luxuriant | >=70% | Pale pink to red | 35-37°C | 18-24 Hours |
| Proteus vulgaris | 13315 | 50-100 | Luxuriant | >=70% | Colourless | 35-37°C | 18-24 Hours |

PACKAGING:

In pack size of 100 gm and 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.




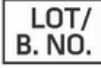








DISPOSAL

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

REFERENCES

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition
3. 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.
4. MacConkey, 1900, The Lancet, ii:20.
5. MacConkey, 1905, J. Hyg., 5:333.
6. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.
7. The United States Pharmacopoeia XXI and the National Formulary, 16th ed., 1985, United States Pharmacopoeial Convention, Inc., Washington, D.C.
8. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Products, 17th Ed., APHA Inc., Washington, D.C.



| | | | | | |
|--|--|---|---|---|--|
|  GMP Good Manufacturing Practices Certified |  IVD For In Vitro Diagnostic Use |  QTY. Quantity |  LOT/ B. NO. Lot / Batch Number |  REF Catalogue Number |  Manufacturer |
|  Temperature Unit |  EC REP Authorized Representative <small>MedNet GmbH Buckhorn 10 48163 Hünxville, Germany</small> |  European Conformity |  QR Code |  Consults Instructions for Use |  Best Before |

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

