# CM 20708 - SELENITE CYSTINE BROTH (FLUID SELENITE CYSTINE BROTH) (VEG.) (DOUBLE PACK)

## INTENDED USE

An enrichment medium for isolation of Salmonella species from food, dairy and clinical samples.

## PRODUCT SUMMARY AND EXPLANATION

This medium is preparedby usingVeghydrolysate in place of Casein enzymic hydrolysate which makes the medium free from BSE/TSE risks. Selective inhibitory effects of selenite were first demonstrated by Klett. Guth used it to isolate Salmonella serotype Typhi. Leifson found that selenite inhibited feed Streptococci and coliforms, thereby allowing multiplication of Salmonella without identification from other intestinal flora. North and Baitiam modified Leifson selenite broth by adding cystine, which stimulated growth of Salmonella. Fluid Selenite Cystine Veg Medium is a modification of this medium. This medium is equivalent to the formulation recommended by the AOAC for the detection of Salmonellae in foodstuff, particularly egg products. Selenite Cystine Veg Broth is useful for detecting Salmonella in the nonacute stages of illness when organisms occur in the faeces in low numbers and for epidemiological studies to enhance the detection of low numbers of organisms from asymptomatic or convalescent patients.

## COMPOSITION

| Ingredients | Gms / Ltr |
|---|---|
| Part I | |
| Veg hydrolysate | 5.00 |
| Lactose | 4.00 |
| Disodium phosphate | 10.00 |
| L-Cystine | 0.01 |
| Part II | |
| Sodium hydrogen selenite | 4.00 |

## PRINCIPLE

FluidSelenite Cystine Veg Medium contains Veg hydrolysate as a source of nitrogen, carbon, vitamins and minerals. Lactose is the fermentable carbohydrate. Sodium acid selenite inhibits gram positive bacteria and most gram negative bacteria except Salmonella. Phosphate maintains a stable pH and also lessens the toxicity of selenite. L-Cystine is a reducing agent and improves recovery of Salmonella. Enriched broth is subcultured on solid medium. Do not incubate the broth longer than 24 hours as inhibitory effect of selenite reduces after 6 - 12 hours of incubation.

## INSTRUCTIONFOR USE

Dissolve 4.0 grams ofPart II in 1000 ml distilled water, add 19.01 grams of Part I.
Mix well, warm to dissolve the medium completely, distribute in sterile test tubes.
Sterilize in a boiling water bath or free flowing steam for 10 minutes, do not autoclave.
Excessive heating is detrimental. Discard the prepared medium if large amount of selenite is reduced (indicated by red precipitate at the bottom of tube / bottle).
CAUTION: Sodium Hydrogen Selenite (Sodium bi-selenite) is very toxic, corrosive agent and causes teratogenicity. Handle with great care. If there is contact with skin wash immediately with lot of water.

## QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Part I: Cream coloured, may have slightly greenish tinge, homogeneous, free flowing powder, Part II: White crystalline powder

Appearance of prepared medium : Cream coloured, clear to very slightly opalescent solution of complete medium.

pH (at 25°C) : 7.0 ± 0.2

## INTERPRETATION

Cultural characteristics observed after an incubation, when subcultured on MacConkey Veg Agar.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Color of the colony | Incubation Temperature | Incubation Period |
|---|---|---|---|---|---|---|
| Escherichia coli | 25922 | 50-100 | Little-none | Pink | 35-37°C | 18-24 Hours |
| Salmonella serotype Choleraesuis | 12011 | 50-100 | Luxuriant | Colourless | 35-37°C | 18-24 Hours |
| Salmonella serotype Enteritidis | 13076 | 50-100 | Luxuriant | Colourless | 35-37°C | 18-24 Hours |
| Salmonella serotype Typhi | 6539 | 50-100 | Luxuriant | Colourless | 35-37°C | 18-24 Hours |
| Salmonella serotype Typhimurium | 14028 | 50-100 | Luxuriant | Colourless | 35-37°C | 18-24 Hours |

## PACKAGING:

Inpacksizeof100 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.

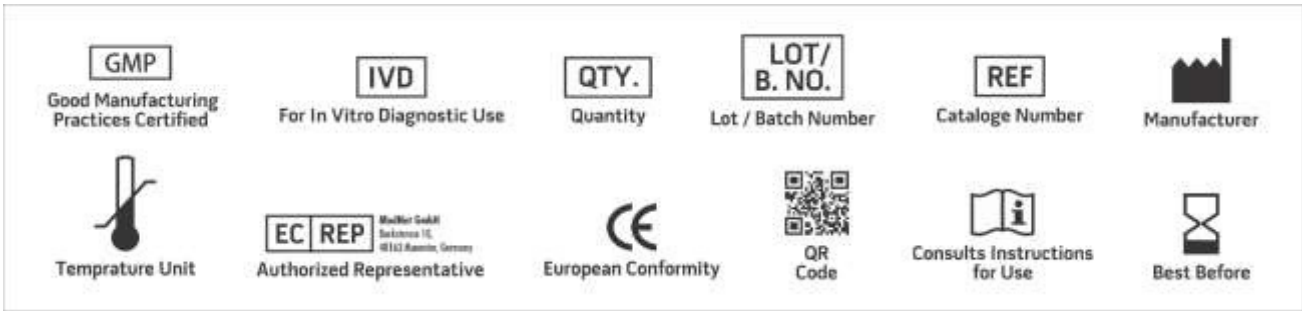
## DISPOSAL

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

## REFERENCES

1.KlettA.,1900,Zeitsch Fer Hyg. Und. Infekt, 33:137. 2. Guth F., 1916, Zbl. Bakt. I. Orig., 77:487.

2. Leifson E., 1936, Am. J. Hyg., 24(2):423.
3. North W.R. and Bartram M.T., 1953, Appl. Microbiol., 1:130.
4. AOAC, 1978, Bacteriological Analytical Manual, 5th ed., AOAC, Washington, DC.
5. Murray PR, Baron, Pfaller and Yolken 2003, Manual of Clinical Microbiology, 8th ed., ASM, Washington, D.C.
6. Chattopadhyay W. and Pilford J. N., 1976, Med.Lab. Sci., 33:191.




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

*For LabUse Only