CM 22155 -SELENITE BROTH (SELENITE F BROTH) (DOUBLE PACK)
(IS : 5887 (Part III) 1999, reaffirmed 2005)

INTENDED USE

For isolation and enrichment of Salmonella fromfaeces, urine or other pathological material.

PRODUCTS UMMARY AND EXPLANATION

Klett first demonstratedt heselectiveinhibitoryeffects of selenite and Guth used it to isolate Salmonella typhi. Leifson fully investigated selenite and formulated themedia. Enrichment media are routinely employed for detection of pathogens in faecal specimens as the pathogensare present in a very small number in the intestinal flora. Selenite 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 enhancethe detection of low number of organisms from asymptomatic or convalescent patients. It is recommended by BIScommittee under specification IS: 5887 (Part III) 1999, reaffirmed 2005.

COMPOSITION

Ingredients	Gms / Ltr
Part I	
Disodium hydrogen phosphate	9.500
Casein enzymatic hydrolysate	5.000
Lactose	4.000
Sodium dihydrogen phosphate	0.500
Part II	
Sodium acid selenite (Sodium hydrogen selenite)	4.000

PRINCIPLE

Casein enzymatic hydrolysateprovides nitrogenous substances and other essential ingredients. Lactose maintains the pH of medium. Selenite is reducedby bacterial growth and alkali is produced. Selenium toxicity to certain micro-organisms is not fully understood butitissuggested that it reacts with sulphur and sulphydral groups in critical cell components. An increase in pH lessens thetoxicity of the selenite and results in overgrowth of other bacteria. The acid produced by bacteria due to lactose fermentation serves to maintain a neutral pH. Sodium phosphate maintains a stable pH and also lessens the toxicity of selenite.Do not incubate the broth longer than 24 hours as inhibitory effect of selenite decreases after 6 - 12 hours of incubation.

INSTRUCTIONFOR USE

1. Dissolve 4.00gramsof Part II in 1000ml distilled water.
2. Add 19.0 gramsofPart I and mix well.
3. Warm to dissolvethe medium completely and distribute in sterile test tubes.
4. Sterilize in a boilingwater bath or free flowing steam for 30 minutes.

Note:

1. Do not autoclave.Excessive heating is detrimental. Discard the prepared medium if large amount of selenite is reduced (indicatedby red precipitate at the bottom of tube / bottle).
2. Sodium hydrogenselenite (Sodium biselenite) is very toxic and corrosive agent and causes teratogenicity. Handle with greatcare. If there is contact with skin, wash immediately with lot of water

QUALITY CONTROL SPECIFICATIONS

Appearance of Dehydrated powder		
Part I	:	Cream to yellow colour, homogeneous free flowing powder
Part II	:	White to cream colour, homogeneous free flowing powder
Appearance of Prepared medium	:	Light yellow coloured, clear to slightly opalescent solution
pH (at 25°C)	:	7.1± 0.2

INTERPRETATION

Culturalcharacteristics observed when sub-cultured on MacConkey Agar (TM 379) and incubated.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Appearance of colony	Incubation temperature	Incubation period
Salmonella Typhimurium	14028	50-100	Luxuriant	Colourless	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Luxuriant	Colourless	35-37°C	18-24 Hours
Salmonella choleraesuis	12011	50-100	Luxuriant	Colourless	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	None-Poor	Pink with bile precipitate	35-37°C	18-24 Hours
Escherichia coli	8739	50-100	None-Poor	Pink with bile precipitate	35-37°C	18-24 Hours

PACKAGING

In100&500gm packaging size.

STORAGE

Dehydratedpowder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°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.

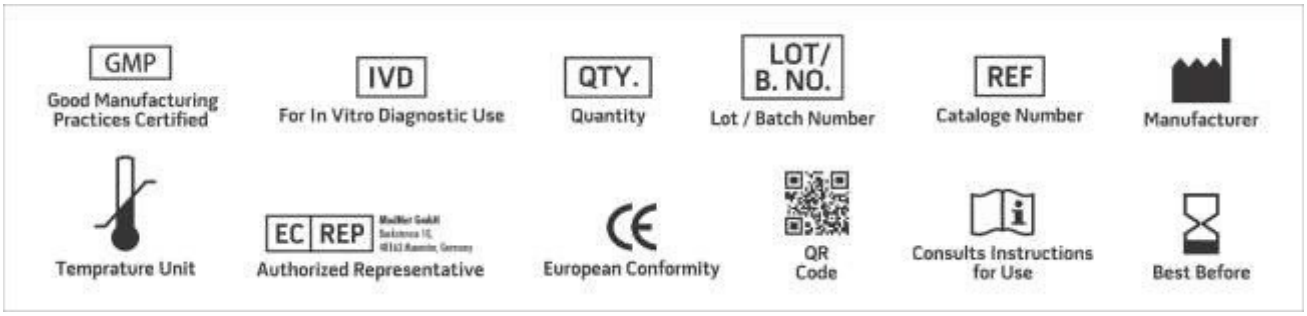
Product Deterioration: Do not use powder if they show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

DISPOSAL

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

REFERENCES

1. A. Klett, Zeitsch. für Hyg. und Infekt. 33, 137 (1900)
2. F. Guth, Zbl. Bakt. I. Orig. 77, 487 (1916)
3. Leifson, E. (1936). "New selenite selective enrichment medium for the isolation of typhoid and paratyphoid bacilli". Am. J. Hyg. 24: 423–432.
4. Weiss K. F., Ayres J. C. and Kraft A. A. (1965) J. Bact. 90. 857-862.
5. Rose M. J., Enriki N. K. and Alford J. A. (1971) J. Food Sci. 36. 590-593
6. Bureau of Indian Standards, IS :5887, (Part III) 1999 reaffirmed 2005



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