

CM 21164 - SELENITE MANNITOL BROTH (MANNITOL SELENITE BROTH) (DOUBLE PACK)

INTENDED USE

For selective enrichment of Salmonellae from clinical samples.

PRODUCT SUMMARY AND EXPLANATION

Selenite-containing media for the enrichment of Salmonella was first described by Guth. This medium was further modified by Leifson for the enrichment and isolation of Salmonella from clinical specimens. Mannitol Selenite Broth is a selective enrichment medium, more or less similar to Leifson enrichment medium, described by Hobbs and Allison for the isolation of Salmonella. Typhi and Salmonella Paratyphi B from clinical specimens. Mannitol Selenite Broth can also be used for the selective enrichment of Salmonella from water and foodstuffs.

COMPOSITION

Ingredients	Gms / Ltr
Part I	
Peptic digest of animal tissue	5.000
Mannitol	4.000
Sodium phosphate	10.000
Part II	
Sodium hydrogen selenite (Sodium biselenite)	4.000

PRINCIPLE

Peptic digest of animal tissue provides amino acids and other nitrogenous substances to Salmonellae. Mannitol serves as fermentable carbohydrate, a sugar alcohol which also helps in maintaining a uniform pH along with sodium phosphate. Sodium phosphate also lessens the toxicity of selenite. Do not incubate longer than 24 hours as the inhibitory effect of selenite is reduced after 6-12 hrs incubation. Subculture broth from the upper third of the broth column to greater or lesser inhibitory selective agars.

INSTRUCTION FOR USE

Dissolve 4.0 grams of Part II in 1000 ml distilled water.

Add 19.0 grams of Part I. Warm to dissolve the medium completely.

Distribute in sterile test tubes and 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 the tube).

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QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Part I: Cream to yellow homogeneous free flowing powder Part II: White to cream homogeneous free flowing powder.

Appearance of prepared medium : Light yellow coloured clear to slightly opalescent solution of complete medium.
pH (at 25°C) : 7.1±0.2



INTERPRETATION

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

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Color of the colony	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Little-none	Pink with bile precipitate	35-37°C	18-24 Hours
Salmonella Enteritidis	13076	50-100	Good-luxuriant	Colourless	35-37°C	18-24 Hours
Salmonella Paratyphi B	8759	50-100	Good-luxuriant	Colourless	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	Colourless	35-37°C	18-24 Hours

PACKAGING:

In pack size of 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. Guth F., 1916, Zentralbl. Bakteriologie. Parasitenkunde. Infektionskrankheiten. Hygiene. Abt. 77:487 2. Leifson E., 1936, Am. J. Hyg., 24(2):423.
2. Hobbs B. C. and Allison V. D., 1945, Mon. Bull. Min. Health. Publ. Health. Lab. Serv., 4:12.
3. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams and Wilkins, Baltimore

