TM 1540 – FLUID SELENITE CYSTINE MEDIUM (DOUBLE PACK) (as per IP) (DOUBLE PACK)

INTENDED USE

For isolation of Salmonellae in foods, dairy products and materials of sanitary importance and clinical samples.

PRODUCT SUMMARY AND EXPLANATION

Selective inhibitory effects of selenite were first demonstrated by Klett. Guth used it to isolate *Salmonella* Typhi. Leifson studied selenite and formulated a medium. Fluid Selenite Cystine Medium is a modification of Leifsons formula with added cystine by North and Bartram. It is employed for the detection of Salmonellae in foodstuff, particularly egg products. It is included by APHA, IP.

Selenite Cystine Broth is useful for detecting *Salmonella* in the non-acute stages of illness when organisms occur in low numbers in test samples and for epidemiological studies to enhance the detection of low numbers of organisms from asymptomatic or convalescent patients.

COMPOSITION

Ingredients	Gms / Ltr
Part I	
Pancreatic digest of casein	5.000
Lactose	4.000
Sodium phosphate	10.000
L-Cystine	0.010
Part II	
Sodium hydrogen selenite	4.000

PRINCIPLE

The medium consists of Pancreatic digest of casein which provide nitrogenous substances. Lactose maintains the pH in medium as selenite is reduced by bacterial growth and alkali is produced. An increase in pH lessens the toxicity 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. Phosphate maintains a stable pH and also lessens the toxicity of selenite. L-cystine improves recovery of Salmonellae. Enriched broth is sub cultured on solid medium.

INSTRUCTION FOR USE

- Dissolve 4.0 grams of Part II in 1000 ml purified/ 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. Upon contact with skin, wash immediately with a lot of water.

QUALITY CONTROL SPECIFICATIONS

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

Appearance of prepared medium : Light yellow coloured, clear to slightly opalescent solution of complete medium.

pH (at 25°C) : 7.0 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation when sub cultured on MacConkey Agar.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of colony	Incubation Temperature	Incubation Period
Salmonella Choleraesuis	12011	50-100	Luxuriant	Colourless	35-37°C	18-24 Hours
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
Escherichia coli	25922	50-100	Little-none(no increase in numbers)	Pink with bile precipitate	35-37°C	18-24 Hours
Escherichia coli	8739	50-100	Little-none (no increase in numbers)	Pink with bile precipitate	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

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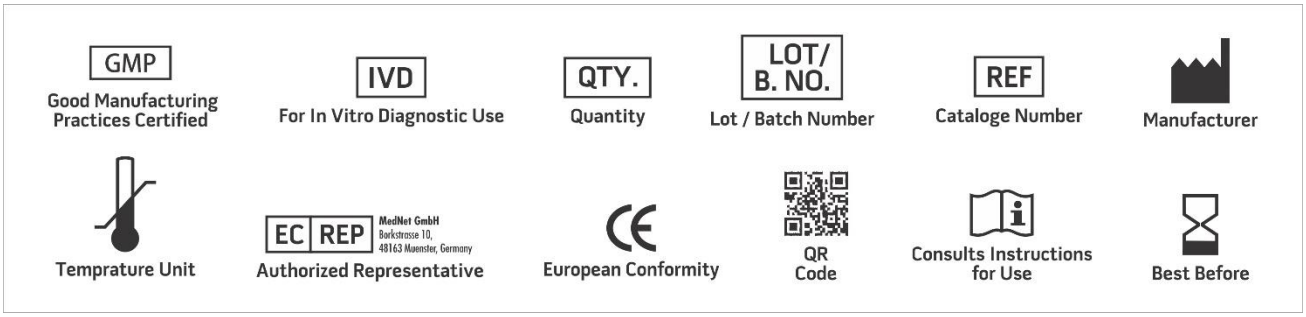

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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