

Product Data Sheet

FLUID SELENITE CYSTINE MEDIUM (DOUBLE PACK) (as per USP) (DOUBLE PACK)

Product No. GB-DCM-00218-1A

INTENDED USE

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

PRODUCT SUMMARY

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 Leifson's formula with added cystine by North and Bartram. The formulation corresponds to that of recommended by the AOAC for the detection of Salmonellae in foodstuff particularly egg products. It is included by APHA, USP. Recently ISO Committee also recommends this medium for the detection of Salmonellae. 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.

Product Specifications

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 selenite	4.000

PRINCIPLE

The medium consists of Pancreatic digest of casein which provide nitrogenous substances. Lactose is the fermentable source of carbohydrate and also 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 that maintain a neutral pH counters this. Phosphate too maintains a stable pH and is a good buffering agent. L-cystine imparts ambient redox potential, which enhances and improves recovery of Salmonellae and few Shigella sp which may be in small numbers in products to be tested. This medium to some extent prevents the growth of coliforms.

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 acid 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: Cream to light yellow homogeneous free flowing powder Part II :
Off-white - white homogeneous free flowing powder.

Appearance of prepared medium: Light amber coloured, clear solution in tubes.

pH (at 25°C) : 7.0±0.2

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Salmonella Typhimurium	14028	50-100	Good	35-37°C	18-24 Hours
Salmonella enterica subsp. enterica serovar Choleraesuis	12011	50-100	Good	35-37°C	18-24 Hours
Escherichia coli	8739	50-100	Partial inhibition	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Partial inhibition	35-37°C	18-24 Hours



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.

This product is for research use only.