TM 1095 - SULPHATE REDUCING MEDIUM (TRIPLE PACK)

INTENDED USE

For detection, differentiation and estimation of sulphate reducing bacteria *Thiobacillus thioparus.*

PRODUCT SUMMARY AND EXPLANATION

Sulphate Reducing Medium is formulated in accordance with APHA for enumeration of sulphate reducing bacteria. Sulphate reducing bacteria such as *Desulfovibrio* converts sulphate to sulphide which reacts with ferrous ions to give a black colour within 4 to 21 days at 20-30°C. *Thiobacillus* also produces sulphuric acid and hence is found in environment containing H2S.

COMPOSITION

Ingredients	Gms / Ltr
Part I	
Dipotassium phosphate	0.500
Peptone	2.000
Beef extract	1.000
Sodium sulphate	1.500
Magnesium sulphate, heptahydrate	2.000
Calcium chloride	0.100
Part II	
Ferric ammonium sulphate, hexahydrate	0.392
Sodium ascorbate	0.100
Part III	
Sodium lactate	3.500

PRINCIPLE

Peptone and Beef extract in the medium provide nitrogen and other nutrients necessary to support bacterial growth. Potassium phosphates buffer the medium. Sodium chloride and the sulphate salts provide essential ions. The tubes are filled completely to create anaerobic conditions. When sample volume is greater than 10 ml, sample is passed through a 0.45 um membrane filter and the filter is transferred to screw-capped test tubes containing medium.

INSTRUCTION FOR USE

- Dissolve 7.10 grams of Part I in 900 ml distilled water.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes. On the day of use prepare solution of Part II by suspending 0.49 grams of Part II in 100 ml distilled water.
- Sterilize by filtration through a 0.45 µm membrane filter and aseptically add this 100 ml solution to 900 ml Part I medium.
- Then separately sterilize the 3.50 grams Part III by autoclaving at 15 psi pressure (121°C) for 15 minutes and aseptically add to the mixture of Part I and II.
- Mix well and aseptically transfer the complete medium to sterile screw capped tubes filling them completely.

QUALITY CONTROL SPECIFICATIONS

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

Appearance of prepared medium : Light yellow coloured clear to slightly opalescent solution in tubes.

pH (at 25°C) : 7.5±0.3

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Desulfovibrio desulfuricans	13541	50-100	Luxuriant	20-30°C	Upto 4-21 days
Thiobacillus thiooxidans	19377	50-100	Good-luxuriant	20-30°C	Upto 4-21 days

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 2-8°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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5. Jorgensen,J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015)
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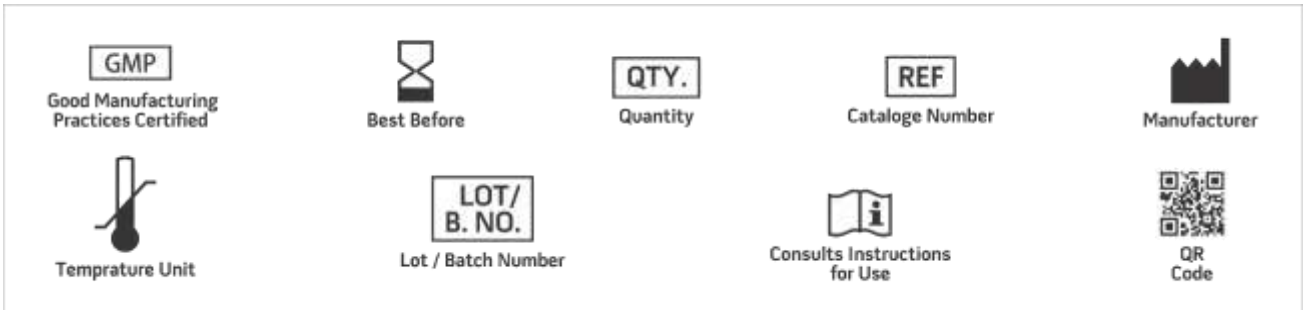

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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