OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Oxford
Range of
Laboratory Chemicals

TECHNICAL DATA SHEET

Sulphate Reducing Medium (Twin Pack)

Principle

Sulphate reducing medium (Starkey's medium) is formulated as per APHA (2005). Media is composed of tryptone, soya peptone, sodium chloride, magnesium sulphate, ferrous ammonium sulphate, and sodium lactate. Tryptone and soya peptone provides nitrogen, amino acids and long chain peptides for the growth of microorganisms. Sodium chloride maintains the osmotic balance. Magnesium sulphate and Ferrous ammonium sulphate provides essential ions for growth of sulphate reducing bacteria. Ferrous sulphate is source of sulphate. The sodium lactate is energy source, fermented under anaerobic conditions to produce hydrogen and carbon dioxide.

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

Contents*

Ingredients	Gram/Litre
Part A	
Tryptone	15.000
Soya Peptone	5.000
Sodium Chloride	5.000
Magnesium Sulphate	2.000
Ferrous Ammonium Sulfate	2.000
Part B	
Sodium lactate	4.00 ml
(60%) pH at 25˚C	7.3 ±0.1

*** Formula adjusted for optimum performance and parameters**

Directions: Dissolve 29.00 grams of part A in 996 ml distilled water, add 4 ml of 60% of Part B (sodium lactate) solution. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 min, cool it to 42-45 °C. To prevent oxygen saturation and moisture condensation covers media, with sterile absorbent tops for 10-15 minutes. Maintain the anaerobic conditions properly and inoculate test sample aseptically.

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Specimens' types analyzed

Soil samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Part A: Light beige colored free flowing, homogeneous powder Part B: Light colorless clear solution**
Reaction of 2.9% Part A & 0.4ml Part B	**7.3±0.1 at 25 ˚C**
pH	**7.20- 7.40**
Color and clarity of ready medium	**Light amber colored opalescent solution**
Growth Promotion properties	**Best at ≤ 100 CFU at 30±2°C for 6-7 days**
Indicative properties	**Optimum at ≤ 100 CFU at 30±2°C for 6-7 days**
Negative control	**Performed using sterile distilled water**

Different Microbial Response: Inoculate and incubate at 30 ± 2 ˚C for 6-7 days, under anaerobic condition.

Organism	Inoculum	Growth	Sulphate Reduction
***Desulfovibrio desulfuricans* (ATCC 13541)**	**50-100**	**Luxuriant**	**Blackening around the colonies**

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Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label.
Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. **Eaton A. D., Clesceri L. S. and Greenberg A. E., Rice E. W., (Eds.), (2005), *Standard Methods for the Examination of Water and Wastewater*, 21st Ed., APHA, Washington, D.C.**

Disclaimer:

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