PRODUCT SPECIFICATION SHEET

Sulphate API Agar w/o Sodium Lactate (DM983)

Intended Use
Sulphate API Agar w/o Sodium Lactate (DM983) is recommended for detection and estimation of sulphate reducing bacteria.

Product Summary and Explanation
Sulfate-reducing bacteria are those bacteria and archaea that can obtain energy by oxidizing organic compounds or molecular hydrogen while reducing sulfate to sulfide which with the ferrous ion gives black colour. The insoluble sulphide results in plugging. These organisms in a sense "breathe" sulfate rather than oxygen in a form of anaerobic respiration. Sulphate-reducing bacteria cause corrosion of oil well systems resulting in perforations in the pipes. Sulphate API Agar w/o Sodium Lacatate is prepared according to the formulation described in the "American Petroleum Institute Recommended Practice"[1] for detection of sulphate reducing bacteria.

Principles of the Procedure
Sulphate API Agar w/o Sodium Lactate contains yeast extract which provides nitrogen and other nutrients necessary to support bacterial growth and metabolism. Ascorbic acid is a source of carbohydrate. Dipotassium Phosphate buffers the medium. Sodium chloride, magnesium sulphate and ferrous ammonium sulphate provide essential ions. *Desulfovibrio* oxidizes reduced substrates i.e. sodium lactate, further with stepwise reduction of sulfate to sulfide. These bacteria are detected and estimated on the basis of their ability to grow and produce sulphide in this medium. Appropriate dilutions of water samples are inoculated for the estimation.

Formula / Liter

Ingredients	Gms / Liter
Yeast extract	1.00
Magnesium sulphate	0.20
Dipotassium phosphate	0.01
Ferrous ammonium sulphate	0.10
Sodium chloride	10.00
Agar	14.00
Final pH: 7.4 ± 0.2 at 25°C	
Formula may be adjusted and/or supplemented as required to meet performance specifications	

Precautions
1. For Laboratory Use only.
2. IRRITANT. Irritating to eyes, respiratory system, and skin.

Directions
1. Suspend 25.41 grams of the medium in one litre of distilled water. Add 4 ml of sodium lactate.
2. Heat to boiling to dissolve the medium completely.
3. Dispense preferably in screw-capped tubes in 9 ml amounts.
4. Autoclave at 121°C, 15 psi pressure, for 15 minutes / validated cycle.
5. Close the caps immediately while the medium is still hot.

Quality Control Specifications

Dehydrated Appearance	Cream to yellow homogeneous free flowing powder
Prepared Medium	Light yellow coloured clear to slightly opalescent gel forms in Petri plates
Reaction of 2.54% w/v solution	pH : 7.4 ± 0.2 at 25°C

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(containing 0.4% v/v sodium lactate)	
Gel Strength	Firm, comparable with 1.4% Agar gel

Expected Cultural Response: Cultural characteristics observed after an incubation at 30°C for upto 1 week, under anaerobic condition.

Sr. No.	Organisms	Results to be achieved	
		Inoculum (CFU)	Growth
1.	*Desulfovibrio desulfuricans ATCC 13541*	50-100	good-luxuriant

The organisms listed are the minimum that should be used for quality control testing.

Test Procedure
Refer appropriate references for standard test procedures.

Results
Refer appropriate references and test procedures for interpretation of results.

Storage
Store the sealed bottle containing the dehydrated medium at 2 - 8°C. Once opened and recapped, place container in a low humidity environment at the same storage temperature. Protect from moisture and light.

Expiration
Refer to the expiration date stamped on the container. The dehydrated medium should be discarded if not free flowing, or if the appearance has changed from the original color. Expiry applies to medium in its intact container when stored as directed.

Limitations of the Procedure
1. For identification, organisms must be in pure culture. Morphological, biochemical and/or serological tests should be performed for final identification.
2. Consult appropriate texts for detailed information and recommended procedures.

Packaging
Product Name : Sulphate API Agar w/o Sodium Lactate
Product Code : DM983
Available Pack sizes : 500gm

References
1. American Petroleum Institute Recommended Practice 28, 1959, First ed.

Further Information
For further information please contact your local MICROMASTER Representative.

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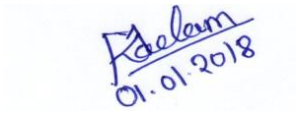	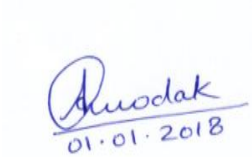	
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