



Sulphate Reducing Medium (Twin Pack)

M800

Sulphate Reducing Medium is used for the cultivation and enumeration of sulphate reducing bacterium *Thiobacillus thioparus*.

Composition**

Ingredients	Gms / Litre
Part A	-
Dipotassium hydrogen phosphate	2.000
Magnesium sulphate heptahydrate	0.100
Calcium chloride	0.100
Ammonium sulphate	0.100
Ferric chloride	0.020
Part B	-
Sodium thiosulphate	10.000
Final pH (at 25°C)	7.8±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 2.32 grams of Part A and 10 grams of Part B in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

Sulphate Reducing Medium (*Thiobacillus thioparus*) is formulated as per APHA (1). This Sulphate Reducing Medium is suitable for enumeration of *Thiobacillus thioparus* (4) by an MPN technique. The single-celled aerobic sulphur-oxidizers of genus *Thiobacillus* are of most importance in the water and wastewater field along with other sulphate reducing bacteria. *Thiobacillus*, produce sulfuric acid which contributes to the destruction of concrete sewers and the acid corrosion of metals. *Thiobacillus* are found in environment containing H₂S. The *Thiobacillus* species cannot be identified by direct microscopic examination, so they are identified physiologically (2, 3). Growth of Thiobacilli produces elemental sulphur which sinks to the bottom with decrease in pH and turbidity of the medium.

Quality Control

Appearance

Part A : White to cream homogeneous free flowing powder Part B : White to cream homogeneous free flowing powder

Colour and Clarity of Prepared Medium

Colourless clear solution without any precipitate

Reaction

Reaction of medium (0.23% w/v of Part A + 1.0% w/v of Part B) at 25°C. pH : 7.8±0.2

pH

7.6-8.0

Cultural Response

M800: Cultural characteristics observed after an incubation at 25-30°C for upto 5 days.

Organism

Growth

Thiobacillus thioparus

luxuriant

ATCC 8158

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Greenberg A.E., Trussell R.R. and Clesceri L.S. (Eds.), 1985, Standard Methods for the Examination of Water and Wastewater, 16th ed., APHA, Washington D.C.
2. Hutchinson M., Johnstone K.I. and White D., 1965, J. Gen. Microbiol., 41:357.
3. Hutchinson M., Johnstone K.I. and White D., 1966, J. Gen. Microbiol., 44:373.
4. Starkey R.L., 1937, J. Bacteriol., 33:545.

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