28228 Sulfate Reducing Broth, Base

For the cultivation and enumeration of sulfate reducing bacteria such as *Thiobacillus thioparus*.

Composition:

Ingredients	Grams/Litre
Dipotassium phosphate	2.0
Magnesium sulfate	0.1
Calcium chloride	0.1
Ammonium sulfate	0.1
Ferric chloride	0.02
Final pH 7.8 +/- 0.2 at 25°C	

Store prepared media below 8°C, protected from direct light. Store dehydrated powder, in a dry place, in tightly-sealed containers at 2-25°C.

Directions:
Suspend 2.32 g in 1 litre distilled water and add 10 g of sodium thiosulfate (72049). Boil to dissolve the medium completely. Sterilize by autoclaving at 121°C for 15 minutes.

Principle and Interpretation:
Sulphate Reducing Broth is formulated as recommended by the APHA (1). The single-celled aerobic sulphur-oxidizers of genus *ThiobaciIIus* are of most importance in the water and wastewater field along with other sulphate reducing bacteria. *ThiobaciIIus*, produce sulfuric acid which contributes to the destruction of concrete sewers and the acid corrosion of metals. *ThiobacilIus* are found in environment containing H_2S. The *ThiobaciIIus* species cannot be identified by direct microscopic examination, so they are identified physiologically (2, 3). This Sulphate Reducing Broth is suitable for enumeration of *Thiobacillus thioparus* (4) by an MPN technique. Growth of ThiobacilIi produce elemental sulphur which sinks to the bottom with decrease in pH and turbidity of the medium.

Cultural characteristics after up to 5 days at 25-30°C.

Organisms (ATCC)	Growth
Thiobacillus thioparus (8158)	+++

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

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.