829. DESULFUROBACTERIUM MEDIUM

Sea Salts (SIGMA) 30.00 g
NH₄Cl 1.00 g
KH₂PO₄ 0.35 g
MES [2-(N-morpholino) ethane sulfonic acid] 1.95 g
Trace element solution SL-10 (see medium 320) 1.00 ml
Selenite-tungstate solution (see medium 385) 1.00 ml
Na-Resazurin solution (0.1% w/v) 0.50 ml
Sulfur, powdered 10.00 g
Na₂CO₃ 0.50 g
Vitamin solution (see medium 503) 1.00 ml
Growth-stimulating factors (see below) 1.00 ml
Na-dithionite (Na₂S₂O₄) 20.00 mg
Distilled water 1000.00 ml

Dissolve ingredients (except sulfur, carbonate, vitamins, growth-stimulating factors and dithionite), boil medium for 1 min, then cool to room temperature under 80% H₂ and 20% CO₂ gas atmosphere. Adjust pH to 6.0 and dispense under 80% H₂ and 20% CO₂ gas atmosphere into anoxic Hungate-type tubes or serum vials which contain already the appropriate amount of sulfur. Autoclave at a temperature of 110°C for 20 min! Add vitamins, growth-stimulating factors and dithionite from sterile anoxic stock solutions prepared under 100% N₂ gas and carbonate from a sterile anoxic stock solution prepared under 80% N₂ and 20% CO₂ gas atmosphere. Vitamins and dithionite are sterilized by filtration. Adjust pH of the complete medium to 6.0, if necessary. After inoculation use 1 bar overpressure of sterile 80% H₂ and 20% CO₂ gas mixture.

Growth-stimulating factors:
Isobutyric acid 5.00 g
Valeric acid 5.00 g
2-Methylbutyric acid 5.00 g
3-Methylbutyric acid 5.00 g
Caproic acid 2.00 g
Succinic acid 6.00 g
Distilled water 1000.00 ml

Dissolve ingredients, adjust pH to 9.0 with NaOH, then autoclave under 100% N₂ gas.

For DSM 16661 and DSM 21157 omit growth-stimulating factors and pressurize vials after inoculation to 2 bar with sterile 80% H₂ and 20% CO₂ gas mixture.