1210a. THERMOSULFURIMONAS MEDIUM

NaCl 18.00 g
MgCl₂ x 6 H₂O 4.00 g
KCl 0.33 g
CaCl₂ x 2 H₂O 0.33 g
(NH₄)₂SO₄ 0.50 g
Trace element solution SL-10 (see medium 320) 1.00 ml
Selenite-tungstate solution (see medium 385) 1.00 ml
NaHCO₃ 2.50 g
KH₂PO₄ 0.33 g
Vitamin solution (see medium 141) 1.00 ml
Na-acetate 1.50 g
Na₂S₂O₅ x 5 H₂O 3.50 g
Yeast extract 0.20 g
Distilled water 1000.00 ml

Dissolve ingredients except bicarbonate, hydrogenphosphate, vitamins, acetate, thiosulfate and yeast extract, then sparge medium with 80% H₂ and 20% CO₂ gas mixture for 30 – 45 min to make it anoxic. Dispense medium under same gas atmosphere into anoxic Hungate-type tubes or serum vials and autoclave. Add hydrogenphosphate, vitamins, acetate, thiosulfate and yeast extract from sterile anoxic stock solutions prepared under 100% N₂ gas and bicarbonate from a sterile anoxic stock solution prepared under 80% N₂ and 20% CO₂ gas mixture. Stock solutions of thiosulfate and vitamins should be sterilized by filtration. The pH of the complete medium should be at 6.5 – 6.8.

For DSM 29363 prepare medium without acetate, thiosulfate and yeast extract. Supplement medium after autoclaving with 2.50 g/l Fe(III)-citrate added from a sterile anoxic stock solution (10% w/v) prepared under 100% N₂ gas atmosphere. Adjust pH of complete medium to 6.0.

For DSM 100025 supplement medium with 0.50 g/l Na-pyruvate and replace thiosulfate with 0.50 g/l sodium pyrosulfite (Na₂S₂O₅) added after autoclaving from freshly prepared anoxic stock solutions sterilized by filtration.

For DSM 100275 and DSM 102941 prepare medium without acetate, thiosulfate and yeast extract. Supplement medium after autoclaving with 1.00 g/l KNO₃ added from a sterile anoxic stock solution prepared under 100% N₂ gas and 5.00 g/l sulfur (powdered) sterilized separately by steaming for 3 hours on each of 3 successive days.