Microorganisms



Main sol. 404 Mineral solution 1 40.00 ml Minerals solution 40.00 ml $Fe(NH_4)_2(SO_4)_2 \times 7 H_2O (0.1\% w/v)$ 2.00 ml $NiCl_2 \times 6 H_2O (0.1\% \text{ w/v})$ 0.20 ml **Modified Wolin's mineral solution** 10.00 ml Na-acetate x 3 H₂O 3.00 g Yeast extract (OXOID) 1.00 g Trypticase peptone (BD BBL) 1.00 g Sodium resazurin (0.1% w/v) 0.50 ml NaHCO₃ 3.00 g Methanol (50% v/v) 10.00 ml Wolin's vitamin solution (10x) 1.00 ml L-Cysteine HCl x H₂O 0.30 q $Na_2S \times 9 H_2O$ 0.30 g Distilled water 900.00 ml

- 1. Dissolve ingredients (except bicarbonate, methanol, vitamins, cysteine and sulfide), then sparge medium with 80% $\rm H_2$ and 20% $\rm CO_2$ gas mixture for 30 45 min to make it anoxic. Add and dissolve bicarbonate and adjust pH to 7.0, then distribute under 80% $\rm H_2$ and 20% $\rm CO_2$ gas atmosphere into anoxic Hungate-type tubes or serum vials to 30% of their volume and autoclave. After sterilization add methanol (50% v/v), vitamins, cysteine and sulfide from sterile anoxic stock solutions prepared under 100% $\rm N_2$ gas atmosphere. Vitamins are sterilized by filtration. Adjust pH of complete medium to 7.0 7.2.
- 2. After inoculation, pressurize culture bottles with sterile 80% $\rm H_2$ and 20% $\rm CO_2$ gas mixture to 2 bar overpressure.