

ATCC medium: 2401 *Geobacter bremensis* medium

NH₄Cl1.5 g
Na₂HPO₄0.6 g
KCl.....0.1 g
Sodium acetate.....0.82g
Wolfe's Trace Minerals Solution (see below)...10.0 ml
Wolfe's Vitamin Supplement (see below).....10.0 ml
Selenite-Tungstate Solution (see below).....1.0 ml
Resazurin.....0.5 mg
NaHCO₃ Solution (see below)50.0 ml
Distilled water.....980.0 ml

Dissolve ingredients (except NaHCO₃ Solution), bring to a boil, cool to room temperature while gassing the medium with 80% N₂, 20% CO₂. After autoclaving, cool under the same gas mixture. Add NaHCO₃ Solution and fumarate from an anaerobic filter-sterilized stock solution (16% w/v sodium fumarate; 0.5 ml/10 ml medium). Adjust to pH 6.8 +/- 0.2.

Wolfe's Trace Mineral Solution:

Available from ATCC as a sterile ready-to-use liquid (Trace Mineral Supplement, catalog no. MD-TMS).

Nitrilotriacetic acid.....1.5 g
MgSO₄ . 7H₂O3.0 g
MnSO₄ . H₂O0.5 g
NaCl.....1.0 g
FeSO₄ . 7H₂O0.1 g
CoCl₂ . 6H₂O0.1 g
CaCl₂.....0.1 g
ZnSO₄ . 7H₂O0.1 g
CuSO₄ . 5H₂O0.01 g
AlK(SO₄)₂ . 12H₂O.....0.01 g
H₃BO₃0.01 g
Na₂MoO₄ . 2H₂O.....0.01 g
Distilled water.....1.0 L

Add nitrilotriacetic acid to approximately 500 ml of water and adjust to pH 6.5 with KOH to dissolve the compound. Bring volume to 1.0 L with remaining water and add remaining compounds one at a time.

Wolfe's Vitamins Solution:

Available from ATCC as a sterile ready-to-use liquid (Vitamin Supplement, catalog no. MD-VS).

Folic acid.....2.0 mg
Pyridoxine hydrochloride....10.0 mg
Riboflavin.....5.0 mg
Biotin.....2.0 mg
Thiamine.....5.0 mg
Nicotinic acid.....5.0 mg
Pantothenic acid.....5.0 mg
Vitamin B12.....0.1 mg
p-Aminobenzoic acid.....5.0 mg
Thioctic acid.....5.0 mg
Distilled water.....1.0 L

Selenite/Tungstate Solution:

NaOH.....0.5 g
Na₂SeO₃ . 5H₂O.....3.0 mg
Na₂WO₄ . 2H₂O.....4.0 mg
Distilled deionized water....1.0 L

NaHCO₃ Solution:

Add 2.5 grams of NaHCO₃ to 50.0 ml of distilled deionized water. Filter-sterilize using pressure (syringe-filter unit) rather than suction.