

ATCC medium: 2478 *Sulfurospirillum carboxydovorans* MV medium

Solution A:

NaCl.....	20.0 g
MgCl ₂ . 6H ₂ O	3.0 g
KCl.....	0.7 g
NH ₄ Cl	0.2 g
KH ₂ PO ₄	0.2 g
CaCl ₂ . 2H ₂ O	0.2 g
Distilled water.....	500.0 ml

Autoclave at 121C for 15 minutes. Cool solution under an 80% N₂, 20% CO₂ gas mixture.

Solution B:

NaHCO ₃	2.5 g
Trace Element Solution SL-10 (see below)	2.0 ml
NaSeO ₃ solution (1.0 mg/ml)	2.0 ml
NaWO ₃ (1.0 mg/ml)	2.0 ml
Wolfe's Vitamin Solution (see below).....	1.0 ml
Thiamin chloride (1.0 mg/ml).....	1.0 ml
Vitamin B12 (1.0 mg/ml).....	1.0 ml
Na ₂ S (0.5 M)	1.5 ml
HCl (1 M).....	0.75 ml
Distilled water.....	490.0 ml

Filter-sterilize Solution B under a CO₂ atmosphere.

When both solutions have cooled to room temperature, add Solution B to Solution A and adjust to final pH 7.2-7.4.

Use 10 mM of fumarate as substrate. Add to the medium from a sterile stock Solution (1 M).

Trace Elements Solution SL-10:

HCl (25%).....	10.0 ml
FeCl ₂ . 4H ₂ O	1.5 g
ZnCl ₂	70.0 mg
MnCl ₂ . 4H ₂ O	100.0 mg
H ₃ BO ₃	6.0 mg
CoCl ₂ . 6H ₂ O	190.0 mg
CuCl ₂ . 2H ₂ O	2.0 mg
NiCl ₂ . 6H ₂ O	24.0 mg
Na ₂ MoO ₄ . 2H ₂ O.....	36.0 mg
Distilled water.....	990.0 ml

Dissolve FeCl₂ in the HCl, dilute with water, add and dissolve the other salts; adjust pH to 6.0 with NaOH, and fill to 1.0 L with distilled water.

Wolfe's Vitamin Solution:

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

Biotin.....	2.0 mg
Folic acid.....	2.0 mg
Pyridoxine hydrochloride....	10.0 mg
Thiamine . HCl.....	5.0 mg
Riboflavin.....	5.0 mg
Nicotinic acid.....	5.0 mg
Calcium D-(+)-pantothenate...	5.0 mg
Vitamin B12.....	0.1 mg
p-Aminobenzoic acid.....	5.0 mg
Thioctic acid.....	5.0 mg
Distilled water.....	1.0 L