

1098: ARCHAEOGLOBUS INFECTUS MEDIUM

Sea Salt (SIGMA)	35.00	g
NH ₄ Cl	0.10	g
KH ₂ PO ₄	0.05	g
Na-acetate	1.60	g
Yeast extract	0.10	g
Wolfe's mineral elixir	1.00	ml
Sodium resazurin (0.1% w/v)	0.50	ml
NaHCO ₃	2.00	g
2-Mercaptoethanesulfonic acid (coenzyme M)	0.14	g
Seven vitamins solution	1.00	ml
Na ₂ S ₂ O ₃ × 5 H ₂ O	2.50	g
DL-Dithiothreitol	0.30	g
Distilled water	1000.00	ml

1. Dissolve ingredients (except bicarbonate, coenzyme M, vitamins, thiosulfate, and dithiothreitol), then sparge medium with 80% H₂ and 20% CO₂ gas mixture for 30 - 45 min to make it anoxic. Dispense medium under the same gas atmosphere into anoxic serum vials (e.g., Balch-type tubes) to 30% of their volume and autoclave. Add coenzyme M, vitamins, thiosulfate, and dithiothreitol 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. The vitamin and dithiothreitol solutions should be sterilized by filtration. Adjust the pH of the complete medium to 6.5.

2. After inoculation pressurize culture vessels to 1.5 bar overpressure with sterile 80% H₂ and 20% CO₂ gas mixture.

Wolfe's mineral elixir (from medium 792)

MgSO ₄ × 7 H ₂ O	30.00	g
MnSO ₄ × H ₂ O	5.00	g
NaCl	10.00	g
FeSO ₄ × 7 H ₂ O	1.00	g
CoCl ₂ × 6 H ₂ O	1.80	g
CaCl ₂ × 2 H ₂ O	1.00	g
ZnSO ₄ × 7 H ₂ O	1.80	g
CuSO ₄ × 5 H ₂ O	0.10	g
AlK(SO ₄) ₂ × 12 H ₂ O	0.18	g
H ₃ BO ₃	0.10	g
Na ₂ MoO ₄ × 2 H ₂ O	0.10	g
(NH ₄) ₂ Ni(SO ₄) ₂ × 6 H ₂ O	2.80	g
Na ₂ WO ₄ × 2 H ₂ O	0.10	g
Na ₂ SeO ₄	0.10	g

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Distilled water	1000.00	ml
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First adjust pH to 1.0 with diluted H₂SO₄, then add and dissolve the salts.

Seven vitamins solution (from medium 503)

Vitamin B ₁₂	100.00	mg
p-Aminobenzoic acid	80.00	mg
D-(+)-biotin	20.00	mg
Nicotinic acid	200.00	mg
Calcium pantothenate	100.00	mg
Pyridoxine hydrochloride	300.00	mg
Thiamine-HCl x 2 H ₂ O	200.00	mg
Distilled water	1000.00	ml