

960: PELOTOMACULUM MEDIUM

This recipe contains strain-specific modifications for *Methanoregula formicica* DSM 22288 *

Final pH: 7.0

Final volume: 1002 ml

KH ₂ PO ₄	0.14	g
MgCl ₂ x 6 H ₂ O	0.20	g
CaCl ₂ x 2 H ₂ O	0.15	g
NH ₄ Cl	0.54	g
Trace element solution	1.00	ml
Sodium resazurin (0.1% w/v)	0.50	ml
Na ₂ CO ₃	1.50	g
Na pyruvate	2.20	g
Yeast extract (OXOID)	0.10	g
Wolin's vitamin solution (10x)	1.00	ml
L-Cysteine HCl x H ₂ O	0.30	g
Na ₂ S x 9 H ₂ O	0.30	g
Na acetate	0.10	g
Na-formate	2.72	g
2-Mercaptoethanesulfonic acid	0.08	g
Distilled water	1000.00	ml

1. Dissolve ingredients (except carbonate, pyruvate, yeast extract, vitamins, and reducing agents) and sparge medium with 80% N₂ 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 pyruvate, yeast extract, vitamins, cysteine, and sulfide 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. Stock solutions of vitamins and pyruvate should be sterilized by filtration. The pH of the complete medium should be 7.0.

2. Note: Use 10% (v/v) as inoculum.

* Replace pyruvate with 2.72 g/l Na-formate and 0.10 g/l Na-acetate. Supplement medium with 0.08 g/l coenzyme M (2-mercaptoethanesulfonic acid).

Trace element solution (from medium 318)

Nitrilotriacetic acid (NTA)	12.80	g
FeCl ₂ x 4 H ₂ O	1.00	g
MnCl ₂ x 4 H ₂ O	0.10	g
CoCl ₂ x 6 H ₂ O	0.03	g
CaCl ₂ x 2 H ₂ O	0.10	g
ZnCl ₂	0.10	g

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CuCl ₂	0.02	g
H ₃ BO ₃	0.01	g
Na ₂ MoO ₄ x 2 H ₂ O	0.03	g
NiCl ₂ x 6 H ₂ O	0.10	g
NaCl	1.00	g
Na ₂ SeO ₃ x 5 H ₂ O	0.03	g
Na ₂ WO ₄ x 2 H ₂ O	0.04	g
Distilled water	1000.00	ml

First dissolve NTA in 200 ml of distilled water and adjust pH to 6.5 with KOH, then dissolve mineral salts. Finally adjust pH to 6.5 with KOH and make up to 1000.00 ml.

Wolin's vitamin solution (10x) (from medium 120)

Biotin	20.00	mg
Folic acid	20.00	mg
Pyridoxine hydrochloride	100.00	mg
Thiamine HCl	50.00	mg
Riboflavin	50.00	mg
Nicotinic acid	50.00	mg
Calcium D-(+)-pantothenate	50.00	mg
Vitamin B ₁₂	1.00	mg
p-Aminobenzoic acid	50.00	mg
(DL)-alpha-Lipoic acid	50.00	mg
Distilled water	1000.00	ml