

480: DESULFURELLA MEDIUM

This recipe contains strain-specific modifications for *Desulfurella multipotens* DSM 8415 *

Final pH: 6.8 - 7.0

Final volume: 1002 ml

NH ₄ Cl	0.33	g
CaCl ₂ x 2 H ₂ O	0.33	g
MgCl ₂ x 6 H ₂ O	0.33	g
KCl	0.33	g
KH ₂ PO ₄	0.33	g
Trace element solution SL-10	1.00	ml
Yeast extract	0.10	g
Sodium resazurin (0.1% w/v)	0.50	ml
Sulfur (powder)	10.00	g
Na-acetate	5.00	g
NaHCO ₃	2.50	g
Wolin's vitamin solution (10x)	1.00	ml
DL-Dithiothreitol	0.30	g
Na-butyrate	5.00	g
Distilled water	1000.00	ml

Dissolve ingredients (except sulfur, acetate, bicarbonate, vitamins, and dithiothreitol) and sparge medium with 80% N₂ and 20% CO₂ gas mixture for 30 - 45 min to make it anoxic. Adjust pH to 5.9, dispense under 80% N₂ and 20% CO₂ gas atmosphere into anoxic Hungate-type tubes or serum vials containing already the appropriate amount of sulfur and sterilize by heating for 2-3 hours in a boiling water bath on each of 3 successive days. Add acetate, vitamins, and dithiothreitol from sterile anoxic stock solutions prepared under 100% N₂ gas and bicarbonate from a sterile anoxic stock solution prepared under 80% N₂ and 20% CO₂ gas mixture. Solutions of vitamins and dithiothreitol are sterilized by filtration. Prior to using adjust the pH of the complete medium to 6.8 - 7.0, if necessary.

* Replace acetate with 5.00 g/l Na-butyrate.

Trace element solution SL-10 (from medium 320)

HCl (25%)	10.00	ml
FeCl ₂ x 4 H ₂ O	1.50	g
ZnCl ₂	70.00	mg
MnCl ₂ x 4 H ₂ O	100.00	mg
H ₃ BO ₃	6.00	mg
CoCl ₂ x 6 H ₂ O	190.00	mg
CuCl ₂ x 2 H ₂ O	2.00	mg
NiCl ₂ x 6 H ₂ O	24.00	mg

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Na ₂ MoO ₄ x 2 H ₂ O	36.00	mg
Distilled water	990.00	ml

First dissolve FeCl₂ in the HCl, then dilute in water, add and dissolve the other salts. Finally 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