

641: DESULFOVIBRIO (MV) MEDIUM

NH ₄ Cl	1.00	g
Na ₂ SO ₄	2.00	g
Na ₂ S ₂ O ₃ x 5 H ₂ O	1.00	g
MgSO ₄ x 7 H ₂ O	1.00	g
CaCl ₂ x 2 H ₂ O	0.10	g
KH ₂ PO ₄	0.50	g
Trace element solution SL-10	1.00	ml
Selenite-tungstate solution	1.00	ml
Yeast extract	1.00	g
Sodium resazurin (0.1% w/v)	0.50	ml
Na ₂ CO ₃	1.00	g
Na-DL-lactate	2.50	g
Wolin's vitamin solution (10x)	1.00	ml
Na ₂ S x 9 H ₂ O	0.10	g
Distilled water	1000.00	ml

1. Dissolve ingredients (except carbonate, vitamins, lactate and sulfide), sparge medium with 100% N₂ gas for 30 - 45 min to make it anoxic, then dispense under same gas atmosphere into anoxic Hungate-type tubes or serum vials and autoclave. After autoclaving complete the medium by adding vitamins (sterilized by filtration), lactate 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. Adjust pH of the complete medium to 7.0 - 7.2, if necessary.

2. Note: Prior to inoculation 10-20 mg/l sodium dithionite (added from a 5% w/v solution freshly prepared under N₂ and filter-sterilized) can be added to the medium to stimulate growth at the beginning.

For [DSM 7073](#), [DSM 101608](#), [DSM 101609](#): Replace lactate with 0.9 g/l glycerol and adjust pH of complete medium to 7.5.

For [DSM 10017](#): Replace lactate with 2.5 g/l Na-pyruvate added to the autoclaved medium from an anoxic stock solution sterilized by filtration and replace sodium sulfide with 0.15 g/l DL-dithiothreitol (DTT) added from an anoxic stock solution sterilized by filtration.

For [DSM 10349](#): Replace lactate with 2.5 g/l Na-pyruvate added to the autoclaved medium from an anoxic stock solution sterilized by filtration and supplement medium with an additional amount of 1.0 g/l Na₂S₂O₃ x 5 H₂O added from an anoxic stock solution sterilized by filtration.

For [DSM 13257](#), [DSM 16036](#), [DSM 16058](#), [DSM 24088](#), [DSM 24093](#), [DSM 24523](#), [DSM 26885](#): Replace lactate with 2.5 g/l Na-pyruvate added to the autoclaved medium from an anoxic stock solution sterilized by filtration.

For [DSM 18151](#): Replace lactate with 0.2 g/l Na-acetate. After inoculation pressurize

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culture vessels to 1 bar overpressure with sterile 80% H₂ and 20% CO₂ gas mixture.

For DSM 21394: Replace lactate with 5.0 ml/l methanol added to the autoclaved medium from an anoxic stock solution prepared under 100% N₂ gas.

For DSM 24089, DSM 102940: Replace lactate with 3.5 g/l D-fructose added to the autoclaved medium from an anoxic stock solution sterilized by filtration.

For DSM 25471: Replace lactate with 2.0 g/l D-glucose added to the autoclaved medium from a sterile anoxic stock solution.

For DSM 28127: Replace lactate with 0.4 g/l Na-benzoate added to the autoclaved medium from a sterile anoxic stock solution.

For DSM 111569: Supplement medium with 2.20 g/l pyruvate, 1.20 g/l taurine and 0.20 mg/l 1,4-naphthochinone added to the autoclaved medium from anoxic stock solutions sterilized by filtration,

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
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.

Selenite-tungstate solution (from medium 385)

NaOH	0.50	g
Na ₂ SeO ₃ x 5 H ₂ O	3.00	mg
Na ₂ WO ₄ x 2 H ₂ O	4.00	mg
Distilled water	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

641: DESULFOVIBRIO (MV) MEDIUM

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