

193: DESULFOBACTER MEDIUM

Solution A	942.00	ml
Solution B	30.00	ml
Solution C	20.00	ml
Solution D	1.00	ml
Solution E	10.00	ml

1. Solution A is sparged with 80% N₂ and 20% CO₂ gas mixture to reach a pH below 6 (at least 30 min), then distributed under the same gas atmosphere in anoxic Hungate-type tubes or serum vials and autoclaved. Solution B is autoclaved separately under 80% N₂ and 20% CO₂ gas atmosphere. Solutions C and E are autoclaved under 100% N₂ gas. Solution D is prepared under 100% N₂ gas atmosphere and sterilized by filtration. To complete the medium appropriate amounts of solutions B to E are added to the sterile solution A in the sequence as indicated. Final pH of the medium should be 7.1 - 7.4.

2. Note: Addition of 10 - 20 mg sodium dithionite per liter (e.g. from 5% (w/v) solution, freshly prepared under N₂ and filter-sterilized) may stimulate growth of some strains at the beginning. For transfers use 5 - 10% (v/v) inoculum.

For [DSM 1744](#), [DSM 10631](#), [DSM 16697](#): Omit Na-acetate and add after autoclaving 1.00 g/l yeast extract and 2.50 g/l Na-L-Lactate from sterile anoxic stock solutions.

For [DSM 2059](#), [DSM 27197](#): Omit Na-acetate and add after autoclaving 0.60 g/l Na-benzoate from an anoxic stock solution sterilized by filtration.

For [DSM 4660](#): Omit Na-acetate and add after autoclaving 1.00 ml/l seven vitamins solution (see medium 503) and 0.10 g phenol from anoxic stock solutions sterilized by filtration.

For [DSM 6637](#): Replace Na-acetate with 0.58 g/l acetone. Supplement medium with 3.40 g/l KNO₃ and omit solution E. Add after autoclaving 5.00 g/l Na-pyruvate from an anoxic stock solution sterilized by filtration.

For [DSM 8775](#): Omit Na-acetate and add after autoclaving 2.50 g/l Na-pyruvate from an anoxic stock solution sterilized by filtration.

For [DSM 10711](#): Omit Na-acetate and add after autoclaving 1.00 ml/l seven vitamins solution (see medium 503), 2.50 g/l Na-pyruvate and 0.50 g/l yeast extract from anoxic stock solutions sterilized by filtration.

For [DSM 14956](#): Omit Na-acetate and add after autoclaving 1.60 g/l methanol from an anoxic stock solution sterilized by filtration.

For [DSM 15102](#): Omit Na-acetate and add after autoclaving 1.00 g/l yeast extract and 3.50 g/l D-glucose from sterile anoxic stock solutions.

For [DSM 18843](#): Omit Na-acetate and add after autoclaving 1.00 ml/l seven vitamins solution (see medium 503) and 0.62 g/l Na-stearate from anoxic stock solutions sterilized

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by filtration.

For DSM 25524: Omit Na-acetate and add after autoclaving 1.00 ml/l seven vitamins solution (see medium 503) and 0.33 g/l Na-octanoate from anoxic stock solution sterilized by filtration.

Solution A

Na ₂ SO ₄	3.00	g
KH ₂ PO ₄	0.20	g
NH ₄ Cl	0.30	g
NaCl	7.00	g
MgCl ₂ x 6 H ₂ O	1.30	g
KCl	0.50	g
CaCl ₂ x 2 H ₂ O	0.15	g
Trace element solution SL-10	1.00	ml
Selenite-tungstate solution	1.00	ml
Sodium resazurin (0.1% w/v)	0.50	ml
Distilled water	940.00	ml

Solution B

Na ₂ CO ₃	1.50	g
Distilled water	30.00	ml

Solution C

Na-acetate x 3 H ₂ O	2.50	g
Distilled water	20.00	ml

Solution D

Wolin's vitamin solution (10x)	1.00	ml
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Solution E

Na ₂ S x 9 H ₂ O	0.40	g
Distilled water	10.00	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

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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.

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