

194: DESULFOBULBUS SP. MEDIUM (FRESHWATER)

Solution A	952.00	ml
Solution B	30.00	ml
Solution C	10.00	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 into 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. Solutions B to E are added to the sterile, cooled solution A in appropriate amounts 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 2055](#): Na-propionate is replaced with 0.70 g/l Na-butyrate, 0.30 g/l Na-caproate and 0.15 g/l Na-octanoate added after autoclaving from sterile anoxic stock solutions prepared under N₂. Adjust final pH of medium to 7.7.

For [DSM 3852](#): Na-propionate is replaced with 0.70 g/l ethanol absolute added after autoclaving from a sterile anoxic stock solution prepared under N₂. In addition, the medium is supplemented with 0.10 g/l each of yeast extract and casamino acids.

For [DSM 5092](#): Na-propionate is replaced with 0.90 g/l putrescine added after autoclaving from a sterile anoxic stock solution prepared under N₂.

For [DSM 5193](#): Supplement medium with 0.50 g/l yeast extract and replace Na-propionate with 0.90 g/l Na-methoxyacetate added after autoclaving from a sterile anoxic stock solution prepared under N₂.

For [DSM 5433](#): Na-propionate is replaced with 1.50 g/l 1,2-propanediol added after autoclaving from a sterile anoxic stock solution prepared under N₂.

For [DSM 5651](#): Na-propionate is replaced with 1.50 g/l of Na-(D/L)-3-hydroxybutyrate as substrate.

For [DSM 6283](#), [DSM 12907](#): Na-propionate is replaced with 2.50 g/l Na-(DL)-lactate and 1.00 g/l yeast extract added after autoclaving from sterile anoxic stock solutions prepared under N₂. Final pH of the medium should be 6.8 - 7.0.

For [DSM 7474](#), [DSM 7475](#), [DSM 7476](#): Na-propionate is replaced by 0.40 g/l 3,4,5-trimethoxybenzoic acid added after autoclaving from a sterile anoxic stock solution (2% w/v) prepared under N₂ and neutralized with NaOH. Stock solutions of 3,4,5-trimethoxybenzoate should be prepared freshly and sterilized by filtration.

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Supplement medium with 1.00 ml/l seven vitamins solution (see medium 503) added from an anoxic stock solution sterilized by filtration.

For DSM 10291, DSM 24454: Na-propionate is replaced with 2.50 g/l Na-L-lactate added after autoclaving from a sterile anoxic stock solution prepared under N₂. Supplement medium with 1.00 ml/l seven vitamins solution (see medium 503) added from an anoxic stock solution sterilized by filtration.

For DSM 12016: Na-propionate is replaced with 0.10 ml/l propanol added after autoclaving from a sterile anoxic stock solution prepared under N₂. Supplement medium with 1.00 g/l yeast extract. When growth has started, feed again same amount of propanol.

For DSM 13527, DSM 21556, DSM 24590: Na-propionate is replaced with 1.00 g/l Na-butyrates added after autoclaving from a sterile anoxic stock solution prepared under N₂.

For DSM 14880: Na-propionate is replaced with 0.50 g/l yeast extract and 2.20 g/l sodium pyruvate added after autoclaving from anoxic stock solutions sterilized by filtration.

For DSM 28570: Na-propionate is replaced with 0.15 g/l Na-benzoate added after autoclaving from a sterile, anoxic stock solution prepared under N₂.

For DSM 102358, DSM 102359, DSM 102360: Na-propionate is replaced with 1.50 g/l Na-benzoate and 1.00 g/l Na-acetate as substrates. Reduce amount of sulfide to 0.10 g/l. Dithionite is used to reduce medium completely.

For DSM 105758: Na-propionate is replaced with 0.70 g/l Na-butyrates, 0.30 g/l Na-caproate and 0.15 g/l Na-octanoate added after autoclaving from sterile anoxic stock solutions prepared under N₂. Adjust final pH of medium to 9.0.

For DSM 107641: Na-propionate is replaced with 1.50 g/l 1,2-propanediol added after autoclaving from a sterile, anoxic stock solution prepared under N₂.

Solution A

Na ₂ SO ₄	3.00	g
KH ₂ PO ₄	0.20	g
NH ₄ Cl	0.30	g
NaCl	1.00	g
MgCl ₂ x 6 H ₂ O	0.40	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	950.00	ml

Solution B

Na ₂ CO ₃	1.50	g
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Distilled water	30.00	ml
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Solution C

Na-propionate	1.50	g
Distilled water	10.00	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

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



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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