

## 194. DESULFOBULBUS SP. MEDIUM (FRESHWATER)

### Solution A:

Na <sub>2</sub> SO <sub>4</sub>	3.00	g
KH <sub>2</sub> PO <sub>4</sub>	0.20	g
NH <sub>4</sub> Cl	0.30	g
NaCl	1.00	g
MgCl <sub>2</sub> x 6 H <sub>2</sub> O	0.40	g
KCl	0.50	g
CaCl <sub>2</sub> x 2 H <sub>2</sub> O	0.15	g
Selenite-tungstate solution (see medium 385)	1.00	ml
Na-resazurin solution (0.1% w/v)	0.50	ml
Distilled water	940.00	ml

### Solution B:

Trace element solution SL-10 (see medium 320)	1.00	ml
-----------------------------------------------	------	----

### Solution C:

Na <sub>2</sub> CO <sub>3</sub>	1.50	g
Distilled water	30.00	ml

### Solution D:

Na-propionate	1.50	g
Distilled water	10.00	ml

### Solution E:

Vitamin solution (see medium 141)	10.00	ml
-----------------------------------	-------	----

### Solution F:

Na <sub>2</sub> S x 9 H <sub>2</sub> O	0.40	g
Distilled water	10.00	ml

*Solution A* is sparged with 80% N<sub>2</sub> and 20% CO<sub>2</sub> 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. *Solutions B, D* and *F* are autoclaved separately under 100% N<sub>2</sub> gas. *Solution C* is autoclaved under 80% N<sub>2</sub> and 20% CO<sub>2</sub> gas atmosphere. *Solution E* is prepared under 100% N<sub>2</sub> gas atmosphere and sterilized by filtration. *Solutions B* to *F* 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.

*Continued next page*

*Note: Addition of 10 - 20 mg sodium dithionite per liter (e.g. from 5% (w/v) solution, freshly prepared under N<sub>2</sub> 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 N<sub>2</sub>. Adjust final pH of medium to 7.7.

For DSM 3852 Na-propionate is replaced with 0.70 g/l ethanol added after autoclaving from a sterile anoxic stock solution prepared under N<sub>2</sub>. In addition, solution A 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 N<sub>2</sub>.

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 N<sub>2</sub>.

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 N<sub>2</sub>.

For DSM 5502 and DSM 5503 Na-propionate is replaced with 3.00 g/l ammonium oxalate monohydrate. In addition, solution A is supplemented with 1.00 g/l yeast extract. Adjust pH of final medium to 6.8 – 7.0.

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

For DSM 6283 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 N<sub>2</sub>. Final pH of the medium should be 6.8 - 7.0.

For DSM 7474, DSM 7475 and DSM 7476 Na-propionate is replaced with 0.40 g/l 3,4,5-trimethoxybenzoic acid added after autoclaving from a sterile anoxic stock solution prepared under N<sub>2</sub>. Supplement medium with 1.00 ml/l seven vitamins solution (see medium 503) added from an anoxic stock solution sterilized by filtration.

*Continued next page*

For [DSM 10291](#) and [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 N<sub>2</sub>. 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 N<sub>2</sub>. Supplement medium with 1.00 g/l yeast extract. When growth has started, feed again same amount of propanol.

For [DSM 13527](#) and [DSM 21556](#) Na-propionate is replaced with 1.00 g/l Na-butyrate added after autoclaving from a sterile anoxic stock solution prepared under N<sub>2</sub>.

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 15970](#) Na-propionate is replaced with 0.60 g/l syringic acid (neutralized with NaOH) added after autoclaving from a sterile, anoxic stock solution prepared under N<sub>2</sub>. Prior to inoculation the completed medium should equilibrate over night.

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 N<sub>2</sub>.

For [DSM 102358](#), [DSM 102359](#) and [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.