

641: DESULFOVIBRIO (MV) MEDIUM

This recipe contains strain-specific modifications for *Desulfovibrio sp.* DSM 24523 *

Final pH: 7.0 - 7.2

Final volume: 1003 ml

| | | |
|--|-----------------|--------------|
| 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 |
| Na-pyruvate | 2.50 | 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.

* Replace lactate with 2.5 g/l Na-pyruvate added to the autoclaved medium from an anoxic stock solution 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 |

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| | | |
|---|--------|----|
| 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 |
| 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 |