1040: MARIDESULFOVIBRIO MEDIUM

- **Sea Salt (SIGMA)**: 35.00 g
- **Wolfe's mineral elixir**: 1.00 ml
- **Yeast extract**: 1.00 g
- **Sodium resazurin (0.1% w/v)**: 0.50 ml
- **Na₂CO₃**: 1.00 g
- **Na-DL-lactate**: 2.50 g
- **Wolin's vitamin solution (10x)**: 1.00 ml
- **Na₂S x 9 H₂O**: 0.30 g
- **Distilled water**: 1000.00 ml

Dissolve ingredients (except carbonate, lactate, vitamins and sulfide), then sparge medium with 80% N₂ and 20% CO₂ gas mixture for 30 - 45 min to make it anoxic. Dispense medium under same gas atmosphere into anoxic Hungate-type tubes or serum vials and autoclave. After autoclaving add lactate, vitamins and sulfide from sterile anoxic stock solutions prepared under 100% N₂ gas and carbonate from a sterile stock solution prepared under 80% N₂ and 20% CO₂ gas mixture. The vitamin solution should be sterilized by filtration. Adjust pH of the complete medium to 7.0-7.2, if necessary.

For **DSM 15518**: Replace lactate with 3.0 g/l D-glucose added to the autoclaved medium from a sterile anoxic stock solution and adjust pH of complete medium to 6.0.

For **DSM 17682, DSM 111985**: Reduce amount of Na-lactate to 0.6 g/l and replace Wolin's vitamin solution of medium 141 with the vitamin solution of medium 521.

For **DSM 24848, DSM 29592**: Replace lactate with 3.0 g/l D-glucose added to the autoclaved medium from a sterile anoxic stock solution.

For **DSM 105309**: Replace lactate with 3.0 g/l D-glucose added to the autoclaved medium from a sterile anoxic stock solution and adjust pH of complete medium to 7.5 -8.0.

**Wolfe's mineral elixir** (from medium 792)

- MgSO₄ x 7 H₂O: 30.00 g
- MnSO₄ x H₂O: 5.00 g
- NaCl: 10.00 g
- FeSO₄ x 7 H₂O: 1.00 g
- CoCl₂ x 6 H₂O: 1.80 g
- CaCl₂ x 2 H₂O: 1.00 g
- ZnSO₄ x 7 H₂O: 1.80 g
- CuSO₄ x 5 H₂O: 0.10 g
- AlK(SO₄)₂ x 12 H₂O: 0.18 g
- H₃BO₃: 0.10 g
- Na₂MoO₄ x 2 H₂O: 0.10 g
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\begin{align*}
\text{(NH}_4\text{)}_2\text{Ni(SO}_4\text{)}_2 \times 6 \text{H}_2\text{O} & \quad 2.80 \quad \text{g} \\
\text{Na}_2\text{WO}_4 \times 2 \text{H}_2\text{O} & \quad 0.10 \quad \text{g} \\
\text{Na}_2\text{SeO}_4 & \quad 0.10 \quad \text{g} \\
\text{Distilled water} & \quad 1000.00 \quad \text{ml}
\end{align*}
\]

First adjust pH to 1.0 with diluted H\textsubscript{2}SO\textsubscript{4}, then add and dissolve the salts.

**Wolin's vitamin solution (10x) (from medium 120)**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Biotin</td>
<td>20.00 mg</td>
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<tr>
<td>Folic acid</td>
<td>20.00 mg</td>
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<tr>
<td>Pyridoxine hydrochloride</td>
<td>100.00 mg</td>
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<tr>
<td>Thiamine HCl</td>
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<tr>
<td>Riboflavin</td>
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<tr>
<td>Nicotinic acid</td>
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<tr>
<td>Calcium D-(+)-pantothenate</td>
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<tr>
<td>Vitamin B\textsubscript{12}</td>
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<tr>
<td>p-Aminobenzoic acid</td>
<td>50.00 mg</td>
</tr>
<tr>
<td>(DL)-alpha-Lipoic acid</td>
<td>50.00 mg</td>
</tr>
<tr>
<td>Distilled water</td>
<td>1000.00 ml</td>
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