

113: THIOBACILLUS DENITRIFICANS MEDIUM

| | | |
|-------------------|--------|----|
| Solution A | 960.00 | ml |
| Solution B | 20.00 | ml |
| Solution C | 20.00 | ml |
| Solution D | 1.00 | ml |

1. Solutions A, B and D are sterilized separately by autoclaving at 121°C for 15 min under 100% N₂ gas atmosphere. Solution C is sterilized by filtration under an atmosphere of 80% N₂ and 20% CO₂ gas mixture. Appropriate amounts of solutions B to D are added to the sterile solution A in the sequence as indicated.

2. Note: A small amount of white precipitate forms after autoclaving, but this has no negative effect on growth.

Solution A

| | | |
|--|--------|----|
| KH ₂ PO ₄ | 2.00 | g |
| KNO ₃ | 2.00 | g |
| NH ₄ Cl | 1.00 | g |
| MgSO ₄ × 7 H ₂ O | 0.80 | g |
| Trace element solution SL-4 | 2.00 | ml |
| Agar, for solid medium | 15.00 | g |
| Distilled water | 960.00 | ml |

Adjust pH to 7.0 with NaOH.

Solution B

| | | |
|--|-------|----|
| Na ₂ S ₂ O ₃ × 5 H ₂ O | 5.00 | g |
| Distilled water | 20.00 | ml |

Solution C

| | | |
|--------------------|-------|----|
| NaHCO ₃ | 1.00 | g |
| Distilled water | 20.00 | ml |

Solution D

| | | |
|--|------|----|
| FeSO ₄ × 7 H ₂ O | 2.00 | mg |
| H ₂ SO ₄ (0.1 N) | 1.00 | ml |

Trace element solution SL-4 (from medium 14)

| | | |
|-----------------------|------|---|
| Na ₂ -EDTA | 0.50 | g |
|-----------------------|------|---|

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| | | |
|--|---------|----|
| $\text{FeSO}_4 \times 7 \text{ H}_2\text{O}$ | 0.20 | g |
| $\text{ZnSO}_4 \times 7 \text{ H}_2\text{O}$ | 0.10 | g |
| $\text{MnCl}_2 \times 4 \text{ H}_2\text{O}$ | 0.03 | g |
| H_3BO_3 | 0.30 | g |
| $\text{CoCl}_2 \times 6 \text{ H}_2\text{O}$ | 0.20 | g |
| $\text{CuCl}_2 \times 2 \text{ H}_2\text{O}$ | 0.01 | g |
| $\text{NiCl}_2 \times 6 \text{ H}_2\text{O}$ | 0.02 | g |
| $\text{Na}_2\text{MoO}_4 \times 2 \text{ H}_2\text{O}$ | 0.03 | g |
| Distilled water | 1000.00 | ml |

First dissolve EDTA in distilled water and adjust pH to 7.0 using 2 N NaOH; then add other compounds.