

ATCC medium: 1953 Seawater *Nitrosomonas* medium

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|-------------------------------------------------------|---------|
| (NH ₄) ₂ SO ₄ | 1.5 g |
| MgSO ₄ . 7H ₂ O | 0.2 g |
| CaCl ₂ . 2H ₂ O | 20.0 mg |
| K ₂ HPO ₄ | 15.0 mg |
| HEPES..... | 4.76 g |
| 5% K ₂ CO ₃ | 2.0 ml |
| 0.04% Phenol red..... | 0.3 ml |
| Trace elements (see below)..... | 1.0 ml |
| Artificial Seawater (see below).... | 1.0 L |

Adjust medium for final pH 7.8. Autoclave at 121C for 15 minutes.

Trace Elements:

| | |
|-----------------------------------------------------------|----------|
| EDTA..... | 2.06 g |
| HCl, concentrated..... | 83.0 ml |
| FeSO ₄ . 7H ₂ O | 1.54 g |
| MnCl ₂ . 4H ₂ O | 0.2 g |
| Na ₂ MOO ₄ . 2H ₂ O..... | 0.1 g |
| ZnSO ₄ . 7H ₂ O | 0.1 g |
| CuSO ₄ . 5H ₂ O | 20.0 mg |
| CoCl ₂ . 6H ₂ O | 2.0 mg |
| Distilled water..... | 917.0 ml |

Add hydrochloric acid and EDTA to water and thoroughly dissolve before adding remaining ingredients.

Artificial Seawater:

| | |
|---------------------------------------------|--------|
| NaCl..... | 27.5 g |
| MgCl ₂ . 6H ₂ O | 5.38 g |
| MgSO ₄ . 7H ₂ O | 6.78 g |
| KCl..... | 0.72 g |
| NaHCO ₃ | 0.2 g |
| CaCl ₂ . 2H ₂ O | 1.4 g |
| Distilled water..... | 1.0 L |