# MET 44

**Stocks**

| | | **per 100 ml** |
|---|---|---|
| (1) | $NaNO_3$ | 3.4 g |
| (2) | $NaH_2PO_4.12H_2O$ | 0.925 g |
| (3) | $Na_2EDTA.2H_2O$ | 0.803 g |
| (4) | $MnCl_2.4H_2O$ | 0.0144 g |
| (5) | $FeSO_4.7H_2O$ | 0.06 g |
| | $H_2SO_4$ | 0.3 ml |

(6) Vitamin mix:

| | **per litre** |
|---|---|
| Cyanocobalamin (Vitamin $B_{12}$) | 0.0005 g |
| Biotin | 0.0005 g |
| Thiamine HCl (Vitamin $B_1$) | 0.1g |

For ease of measuring, first prepare primary stock solutions and divide into 1ml aliquots to be frozen for later use.

| Component | Primary Stock solution | Quantity | Molar Concentration in final medium |
|---|---|---|---|
| Thiamine HCl ($B_1$) | - | 100mg | $2.96 \times 10^{-7}$ |
| Biotin | 0.1g $L^{-1}$ $dH_2O$ | 5ml | $2.05 \times 10^{-9}$ |
| Cyanocobalamin ($B_{12}$) | 0.1g $L^{-1}$ $dH_2O$ | 5ml | $3.69 \times 10^{-10}$ |

(7) Sodium metasilicate **per 200 ml**
$Na_2SiO_3.9H_2O$ 6 g
(Silicate can react with glass, ensure this stock solution is stored in plastic bottles).

**Medium**

| | **per litre** |
|---|---|
| Stock solution 1 | 0.1 ml |
| Stock solution 2 | 0.1 ml |
| Stock solution 3 | 0.1 ml |
| Stock solution 4 | 0.1 ml |
| Stock solution 5 | 0.1 ml |
| Stock solution 6 (Vitamin mix) | 1.0 ml |
| Stock solution 7 | 0.35 ml |

Make up to 1 litre with filtered natural seawater. For agar, add 15 g per litre Bacteriological Agar. Autoclave at 15 psi for 15 minutes.

**Reference**

Schöne, H. K. and Schöne, Anne. "MET 44: A Weakly Enriched Sea-Water Medium for Ecological Studies on Marine Plankton Algae, and Some Examples of Its Application", vol. 25, no. 3, 1982, pp. 117-122. – adapted for CCAP

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