## **Microorganisms**



### 732: DEHALOBACTER RESTRICTUS MEDIUM (TCE)

| Solution A | 870.00 | ml |
|------------|--------|----|
| Solution B | 100.00 | ml |
| Solution C | 10.00  | ml |
| Solution D | 1.00   | ml |
| Solution E | 2.00   | ml |
| Solution F | 10.00  | ml |
| Solution G | 15.00  | ml |

- 1. Sparge solution A with 80%  $H_2$  and 20%  $CO_2$  gas mixture for 30 45 min to make it anoxic, then dispense under same gas atmosphere into anoxic serum vials (e.g., 9 ml medium in 50 ml bottle). Pressurize closed bottles with 80%  $H_2$  and 20%  $CO_2$  gas mixture to 0.5 bar overpressure and autoclave. Solution B is autoclaved separately under 80%  $N_2$  and 20%  $CO_2$  gas atmosphere. Solutions C, D and F are autoclave under 100%  $N_2$  gas atmosphere. Solution E is prepared under 100%  $N_2$  gas atmosphere and sterilized by filtration. Prepare solution G by filling 13.5 ml hexadecane into a 50 ml serum bottle, then sparge with 100%  $N_2$  gas to make it anoxic and autoclave. Add 1.50 ml anoxic autoclaved tetrachloroethene to the sterile anoxic hexadecane solution by syringe. To complete the medium add appropriate amounts of solutions B to F to the sterile solution A in the sequence as indicated. The pH of the medium before inoculation should be at 7.2.
- 2. Add solution G only after inoculation of the medium!

#### Solution A

| K <sub>2</sub> HPO <sub>4</sub> | 0.65   | g  |
|---------------------------------|--------|----|
| $NaH_2PO_4 \times H_2O$         | 0.17   | g  |
| Peptone (BD Bacto)              | 0.10   | g  |
| Na-acetate                      | 0.46   | g  |
| Sodium resazurin (0.1% w/v)     | 0.50   | ml |
| Distilled water                 | 870.00 | ml |
|                                 |        |    |

#### **Solution B**

| $(NH_4)_2CO_3$     | 0.27   | g  |
|--------------------|--------|----|
| NaHCO <sub>3</sub> | 3.73   | g  |
| Distilled water    | 100.00 | ml |

#### **Solution C**

| CaCl <sub>2</sub> x 2 H <sub>2</sub> O | 0.11  | g  |
|--|-------|----|
| $MgCl_2 \times 6 H_2O$                 | 0.10  | g  |
| Distilled water                        | 10.00 | ml |

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#### **Solution D**

| Solution D                                      |         |    |
|---|---------|----|
| Trace element solution                          | 1.00    | ml |
| Solution E                                      |         |    |
| Wolin's vitamin solution (10x)                  | 1.00    | ml |
| Seven vitamins solution                         | 1.00    | ml |
| Solution F                                      |         |    |
| Na <sub>2</sub> S x 9 H <sub>2</sub> O          | 0.30    | g  |
| Distilled water                                 | 10.00   | ml |
| Solution G                                      |         |    |
| Hexadecane                                      | 13.50   | ml |
| Tetrachloroethene                               | 1.50    | ml |
| <b>Trace element solution</b> (from medium 732) |         |    |
| Na <sub>2</sub> -EDTA                           | 0.50    | g  |
| FeCl <sub>2</sub> x 4 H <sub>2</sub> O          | 2.00    | g  |
| ZnCl <sub>2</sub>                               | 70.00   | mg |
| $MnCl_2 \times 4 H_2O$                          | 100.00  | mg |
| $H_3BO_3$                                       | 6.00    | mg |
| CoCl <sub>2</sub> x 6 H <sub>2</sub> O          | 190.00  | mg |
| CuCl <sub>2</sub> x 2 H <sub>2</sub> O          | 2.00    | mg |
| AICI3   | 10.00   | mg |
| $NiCl_2 \times 6 H_2O$                          | 24.00   | mg |
| $Na_2MoO_4 \times 2 H_2O$                       | 36.00   | mg |
| Distilled water                                 | 1000.00 | ml |

First dissolve EDTA in distilled water, adjust pH to 7 using 2 N NaOH and add ferrous chloride. After ferrous chloride has dissolved add remaining compounds.

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

| Biotin                     | 20.00  | mg |
|----------------------------|--------|----|
| Folic acid                 | 20.00  | mg |
| Pyridoxine hydrochloride   | 100.00 | mg |
| Thiamine HCI               | 50.00  | mg |
| Riboflavin                 | 50.00  | mg |
| Nicotinic acid             | 50.00  | mg |
| Calcium D-(+)-pantothenate | 50.00  | mg |
| Vitamin B <sub>12</sub>    | 1.00   | mg |
| p-Aminobenzoic acid        | 50.00  | mg |
| (DL)-alpha-Lipoic acid     | 50.00  | mg |

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| Distilled water                           | 1000.00 | ml |
|---|---------|----|
| Seven vitamins solution (from medium 503) |         |    |
| Vitamin B <sub>12</sub>                   | 100.00  | mg |
| p-Aminobenzoic acid                       | 80.00   | mg |
| D-(+)-biotin                              | 20.00   | mg |
| Nicotinic acid                            | 200.00  | mg |
| Calcium pantothenate                      | 100.00  | mg |
| Pyridoxine hydrochloride                  | 300.00  | mg |
| Thiamine-HCl x 2 H <sub>2</sub> O         | 200.00  | mg |
| Distilled water                           | 1000.00 | ml |