Microorganisms



732. DEHALOBACTER RESTRICTUS MEDIUM (TCE)

Solution A:		
K ₂ HPO ₄	0.65	g
NaH ₂ PO ₄ x H ₂ O	0.17	g
Peptone (BD Bacto)	0.10	g
Na-acetate	0.46	g
Na-resazurin solution (0.1% w/v)	0.50	ml
Distilled water	900.00	ml
Solution B:		
$(NH_4)_2CO_3$	0.27	g
NaHCO ₃	3.73	g
Distilled water	100.00	ml
Solution C:		
CaCl ₂ x 2 H ₂ O	0.11	g
MgCl ₂ x 6 H ₂ O	0.10	g
Distilled water	10.00	ml
Solution D:		
Trace element solution (see below)	1.00	ml
Solution E:		
Vitamin solution of medium 141	9.00	ml
Vitamin solution of medium 503	1.00	ml
Solution F:		
$Na_2S \times 9 H_2O$	0.30	g
Distilled water	10.00	ml
Solution G:		
Hexadecane	13.50	ml
Tetrachloroethene	1.50	ml

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.

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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. Add solution G only after inoculation of the medium!

Trace element solution:

Na ₂ -EDTA	0.50	g
FeCl ₂ x 4 H ₂ O	2.00	g
ZnCl ₂	70.00	mg
MnCl ₂ x 4 H ₂ O	100.00	mg
H_3BO_3	6.00	mg
CoCl ₂ x 6 H ₂ O	190.00	mg
CuCl ₂ x 2 H ₂ O	2.00	mg
AICI ₃	10.00	mg
NiCl ₂ x 6 H ₂ O	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.