Microorganisms



480a: DESULFURELLA MEDIUM (BRACKISH WATER)

NaCl	10.00	g
NH ₄ Cl	0.33	g
CaCl ₂ x 2 H ₂ O	0.33	g
$MgCl_2 \times 6 H_2O$	0.33	g
KCI	0.33	g
KH ₂ PO ₄	0.33	g
Trace element solution SL-10	1.00	ml
Yeast extract	0.10	g
Na-acetate	5.00	g
Sodium resazurin (0.1% w/v)	0.50	ml
Sulfur (powder)	10.00	g
Na_2CO_3	1.00	g
Wolin's vitamin solution (10x)	1.00	ml
$Na_2S \times 9 H_2O$	0.50	g
Distilled water	1000.00	ml

Dissolve ingredients (except sulfur, carbonate, vitamins and sulfide) and sparge medium with $80\%~N_2$ and $20\%~CO_2$ gas mixture for 30 - 45 min to make it anoxic. Adjust pH to 5.9, dispense medium under $80\%~N_2$ and $20\%~CO_2$ gas atmosphere into anoxic Hungate-type tubes or serum vials containing already the appropriate amount of sulfur and sterilize medium by heating in a boiling water bath for 2- 3 hours on each of 3 successive days. Add vitamins (sterilized by filtration) and sulfide from sterile anoxic stock solutions prepared under $100\%~N_2$ gas and carbonate from a sterile anoxic stock solution prepared under $80\%~N_2$ and $20\%~CO_2$ gas mixture. Prior to use adjust pH of complete medium to 6.8 - 7.0, if necessary.

Trace element solution SL-10 (from medium 320)

HCI (25%)	10.00	ml
FeCl ₂ x 4 H ₂ O	1.50	g
ZnCl ₂	70.00	mg
$MnCl_2 \times 4 H_2O$	100.00	mg
H ₃ BO ₃	6.00	mg
CoCl ₂ x 6 H ₂ O	190.00	mg
CuCl ₂ x 2 H ₂ O	2.00	mg
NiCl ₂ x 6 H ₂ O	24.00	mg
$Na_2MoO_4 \times 2 H_2O$	36.00	mg
Distilled water	990.00	ml

First dissolve $FeCl_2$ in the HCl, then dilute in water, add and dissolve the other salts. Finally make up to 1000.00 ml.

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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 ₁₂	1.00	mg
p-Aminobenzoic acid	50.00	mg
(DL)-alpha-Lipoic acid	50.00	mg
Distilled water	1000.00	ml