ATCC medium: 1438 *Rhodobacter veldkampii* medium (ATCC medium 37) with 1 g/L sodium acetate

ATCC Medium 37 (see below) with 1 g/L sodium acetate

ATCC Medium 37:
Solution 1:
$CaCl_2$ .....2.0 g
Distilled water.....2.5 L

Distribute 2000 ml in 75-80 ml amounts into 127 ml (4 oz) screw-capped Boston round bottles and autoclave.

Solution 2:
Heavy Metal Solution (see below)..... 50.0 ml
Vitamin B12 Solution (see below)..... 3.0 ml
Vitamin Solution (see below)..... 15.0 ml
KH_2PO_4 ..... 1.0 g
KCl..... 1.0 g
NH_4Cl ..... 0.8 g
$MgCl_2$. $6H_2O$ ..... 0.8 g
Sodium ascorbate (may be omitted if large inocula are used)... 2.4 g
Distilled water..... 32.0 ml

Solution 3:
$NaHCO_3$ .....4.5 g
Distilled water.....900.0 ml

Bubble CO_2 gas through for at least 30 minutes. After CO_2 saturation of Solution 3, add Solution 2 and immediately filter-sterilize using CO_2 pressure to push the liquid through (no suction). Add this sterile filtered solution to the 127 ml bottles containing 75-80 ml of Solution 1 so that it completely fills the bottle.

Solution 4:
Na_2S . $9H_2O$ .....3.0 g
Distilled water.....200.0 ml

Autoclave with a magnetic-stirrer rod in the flask. Partially neutralize the sterilized Solution 4 by adding, on a magnetic stirrer, drop by drop, 2.0 ml sterile 2 M H_2SO_4.

Directions for completion of Medium:
Remove 6 ml of medium in the Boston round bottles that were filled to full capacity as directed under Solutions 2 and 3. Replace this volume with an equal volume of neutralized Solution 4. Allow the bottles to stand at least overnight to develop a hazy, white precipitate before inoculating. At this time, the final pH will be 6.7 +/- 0.1. To inoculate, remove 6 ml of completed medium and replace it with an equal volume of inoculum. Grow cultures under tungsten light.

Heavy Metal Solution:

EDTA (should be dissolved first).....1.5 g
Modified Hoagland Trace Element Solution (see below).....6.0 ml
$FeSO_4 \cdot 7H_2O$ .....0.2 g
$ZnSO_4 \cdot 7H_2O$ .....0.1 g
$MnCl_2 \cdot 4H_2O$ .....0.02 g
Distilled water.....1.0 L

Vitamin B12 Solution:

Vitamin B12 (Cyanocobalamine).....2.0 mg
Distilled water.....100.0 ml

Vitamin Solution:

Biotin.....0.2 mg
Nicotinic acid.....2.0 mg
Thiamine.....1.0 mg
p-Aminobenzoic acid.....0.1 mg
Pantothenic acid.....0.5 mg
Pyridoxamine 2HCl.....5.0 mg
Distilled water.....100.0 ml

Modified Hoagland Trace Element Solution:

$AlCl_3$ .....1.0 g
KI.....1.0 g
KBr.....0.5 g
LiCl.....0.5 g
MnCl2 . $4H_2O$ .....7.0 g
H_3BO_3 .....11.0 g
$ZnCl_2$ .....1.0 g
$CuCl_2$ .....1.0 g
$NiCl_2$ .....1.0 g
$CoCl_2$ .....1.0 g
$SnCl_2 \cdot 2H_2O$ .....0.5 g
$BaCl_2$ .....0.5 g
Na_2MoO_4 .....0.5 g
$NaVO_3 \cdot H_2O$ .....0.1 g
Na_2SeO_3 .....0.5 g

Dissolve each salt in distilled water before mixing. Adjust the pH of each solution to below 7.0. Adjust the final pH to 3-4. The total final volume is 3.6 L. The flaky yellow precipitate which is formed after mixing transforms after a few days into a very fine white precipitate. Mix the solution thoroughly before use.