

**ATCC medium: 528 *Thiobacillus* medium**

NH<sub>4</sub>Cl .....1.0 g  
MgCl<sub>2</sub> .....0.5 g  
MgSO<sub>4</sub> .....0.3 g  
KH<sub>2</sub>PO<sub>4</sub> .....0.4 g  
K<sub>2</sub>HPO<sub>4</sub> .....0.6 g  
FeCl<sub>3</sub> .....0.02 g  
Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>.....10.0 g  
Bromthymol blue.....0.03 g  
Heavy Metal Solution (see below).....30.0 ml  
Yeast extract.....5.0 g  
Distilled water to.....1.0 L

Adjust pH to 6.8.

Autoclave at 121C for 15 minutes.

*Heavy Metal Solution:*

EDTA (should be dissolved first).....1.5 g  
Modified Hoagland Trace Element Solution (see below)... 6.0 ml  
FeSO<sub>4</sub> . 7H<sub>2</sub>O .....0.2 g  
ZnSO<sub>4</sub> . 7H<sub>2</sub>O .....0.1 g  
MnCl<sub>2</sub> . 4H<sub>2</sub>O .....0.02 g  
Distilled water.....1.0 L

*Modified Hoagland Trace Element Solution:*

AlCl<sub>3</sub> .....1.0 g  
KI.....1.0 g  
KBr.....0.5 g  
LiCl.....0.5 g  
MnCl<sub>2</sub> . 4H<sub>2</sub>O .....7.0 g  
H<sub>3</sub>BO<sub>3</sub> .....11.0 g  
ZnCl<sub>2</sub> .....1.0 g  
CuCl<sub>2</sub> .....1.0 g  
NiCl<sub>2</sub> .....1.0 g  
CoCl<sub>2</sub> .....1.0 g  
SnCl<sub>2</sub> . 2H<sub>2</sub>O .....0.5 g  
BaCl<sub>2</sub> .....0.5 g  
Na<sub>2</sub>MoO<sub>4</sub> .....0.5 g  
NaVO<sub>3</sub> . H<sub>2</sub>O .....0.1 g  
Na<sub>2</sub>SeO<sub>3</sub> .....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.