

71: ACIDITHIOBACILLUS THIOOXIDANS MEDIUM

Final pH: 4.5

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|--|---------|------|
| KH_2PO_4 | 3.00 | g |
| $\text{MgSO}_4 \times 7 \text{H}_2\text{O}$ | 0.50 | g |
| $(\text{NH}_4)_2\text{SO}_4$ | 3.00 | g |
| $\text{CaCl}_2 \times 2 \text{H}_2\text{O}$ | 0.25 | g |
| $\text{Na}_2\text{S}_2\text{O}_3 \times 5 \text{H}_2\text{O}$ | 5.00 | g |
| Distilled water | 1000.00 | ml |
| $\text{K}_2\text{S}_4\text{O}_6$ (optional) | 5.00 | g/l |
| $\text{FeSO}_4 \times 7 \text{H}_2\text{O}$, might need strain adjustment | 10.00 | mg/l |
| Elemental sulfur, might need strain adjustment | 10.00 | g/l |

Prepare the medium without thiosulfate, adjust pH to 4.4 - 4.7 and autoclave at 121°C for 15 min. Sterilize thiosulfate separately by filtration and add after autoclaving.

Note: Incubate statically without shaking.

For [DSM 585](#) replace thiosulfate with 5.00 g/l tetrathionate ($\text{K}_2\text{S}_4\text{O}_6$) added from a stock solution sterilized by filtration.

For [DSM 14366](#) supplement medium with 10.00 mg/l $\text{FeSO}_4 \times 7 \text{H}_2\text{O}$. The final pH of the medium should be 4.4.

For [DSM 103717](#) omit thiosulfate from the medium and add 10.00 g/l elemental sulfur as substrate. For sterilization place the sulfur in screw-capped tubes, add 1-2 drops of distilled water and incubate on 3 successive days for 3 h at 90-100°C in a water bath. Before use, aseptically layer the sulfur onto the surface of autoclaved liquid basal medium.