

TM 1302 – THIOBACILLUS AGAR

INTENDED USE

For cultivation and isolation of *Thiobacillus* species.

PRODUCT SUMMARY AND EXPLANATION

The genus *Thiobacillus* is also known under the name of *Acidithiobacillus*. *Thiobacillus* are obligate autotrophic organisms, as they require organic carbon both as an electron and carbon source. Thiobacilli produce high quantity of sulphuric acid as a byproduct during oxidation of thiosulphates, sulphur and related inorganic sulphur-containing compounds to generate metabolic energy. *Thiobacillus*, by its production of sulphuric acid is involved in the destruction of concrete sewers and the acid corrosion of metals. Thiobacillus Agar is a modification of formulation described by Starkey and is used for the isolation and maintenance of *Thiobacillus* species.

COMPOSITION

Ingredients	Gms / Ltr
Ammonium sulphate	0.400
Monopotassium phosphate	4.000
Calcium chloride	0.250
Ferrous sulphate	0.010
Magnesium sulphate	0.500
Sodium thiosulphate	5.000
Agar	12.500

PRINCIPLE

The medium contains three inorganic sulphates and a thiosulphate. Phosphate serves as a buffer while sodium chloride maintains the osmotic balance of the medium.

INSTRUCTION FOR USE

- Dissolve 22.66 grams in 1000 ml distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well and pour into sterile Petri plates.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: White to cream homogeneous free flowing powder.
Appearance of prepared medium	: Light amber coloured clear to slightly opalescent gel forms in Petri plates.
pH (at 25°C)	: 4.2 ± 0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Incubation Temperature	Incubation Period
---------------	------	-------------------	--------	----------	------------------------	-------------------



<i>Thiobacillus thioparus</i>	8158	50-100	Luxuriant	>=70%	25-30°C	7 Days
<i>Thiobacillus thiooxidans</i>	8085	50-100	Luxuriant	>=70%	25-30°C	7 Days

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.










Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Starkey R. L., 1935, Science, 39:197.
2. Eaton A. D., Clesceri L. S. and Greenberg A. E., (Ed.), 1995, Standard Methods for the Examination of water and Wastewater, 19th Ed., American Public Health Association, Washington, D.C.

 GMP Good Manufacturing Practices Certified	 Best Before	 QTY. Quantity	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 LOT/ B. NO. Lot / Batch Number	 Consults Instructions for Use	 QR Code	

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

*For Lab Use Only
Revision: 08 Nov., 2019