



Product Sheet

# *Acidithiobacillus ferrooxidans* (ATCC®) 19859™

Please read this FIRST



Storage Temp.  
**Frozen: -80°C or colder**  
**Freeze-Dried: 2°C to 8°C**  
**Live Culture: See Propagation Section**

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Biosafety Level  
**1**

## Intended Use

This product is intended for research use only. It is not intended for any animal or human therapeutic or diagnostic use.

## Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: *Acidithiobacillus ferrooxidans* (ATCC® 19859™)

American Type Culture Collection  
PO Box 1549  
Manassas, VA 20108 USA  
[www.atcc.org](http://www.atcc.org)

800.638.6597 or 703.365.2700  
Fax: 703.365.2750  
Email: [Tech@atcc.org](mailto:Tech@atcc.org)

Or contact your local distributor

## Description

**Designation:** NCIB 9490

**Deposited Name:** *Thiobacillus ferrooxidans* Temple and Colmer

**Product Description:** This strain is recommended by ATCC® for use in the tests described in ASTM Standard Test Method E1357-90 where only the taxon is specified.

## Propagation

### Medium

ATCC® Medium 2039: *Acidithiobacillus ferrooxidans* Medium

### Growth Conditions

**Temperature:** 26°C

**Atmosphere:** Aerobic

### Propagation Procedure

1. Incubate test tube cultures under above conditions upon receipt. It is helpful to incubate test tubes in a slanted position to increase gas exchange in broth. Transfer culture to fresh media within one week of arrival.
2. Gently vortex the test-tube to dislodge the iron that has oxidized onto the glass. Aseptically withdraw approximately 1.0 mL of the broth culture and transfer into 5 mL of fresh broth.
3. Incubate the broth in a static and slanted position.
4. Growth is evident within one to two weeks, when yellow-orange iron oxide deposits are observed.
5. Transfer the culture approximately every two to four weeks.
6. Transfer more tubes than needed as a backup source in the event of low viability due to repeated passage. The culture will remain viable for a minimum of one month and for up to three months when stored at room temperature without shaking.

## Notes

The cells are motile and rod-shaped.

This strain is cited to produce hydrogen sulfide:ferric ion oxidoreductase (Appl. Environ. Microbiol. 58: 431-433, 1992) and is used in the testing of the bioleaching rate of iron from pyrite.

Additional information on this culture is available on the ATCC® web site at [www.atcc.org](http://www.atcc.org).

## References

References and other information relating to this product are available online at [www.atcc.org](http://www.atcc.org).

## Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes for Health.

## ATCC Warranty

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## Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans. While ATCC uses reasonable efforts to include accurate and up-to-date information on this product sheet, ATCC makes no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. ATCC does not warrant that such information has been



Product Sheet

***Acidithiobacillus*  
*ferrooxidans* (ATCC®  
19859™)**

confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, and use. ATCC is not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to insure authenticity and reliability of materials on deposit, ATCC is not liable for damages arising from the misidentification or misrepresentation of such materials.

Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at [www.atcc.org](http://www.atcc.org)

Additional information on this culture is available on the ATCC web site at [www.atcc.org](http://www.atcc.org).

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