



# ***Acidithiobacillus ferrooxidans* (Temple and Colmer) Kelly and Wood**

**53993™**

## **Description**

**Strain designation:** BNL-5-31

**Deposited As:** *Leptospirillum ferrooxidans* Markosian

**Type strain:** No

**Patent depository:** This material was deposited with the ATCC Patent Depository to fulfill U.S. or international patent requirements. This material may not have been produced or characterized by ATCC. As an International Depository Authority (IDA) for patent deposits, ATCC is required to complete viability testing only at time of initial deposit of patent material. Patent deposits are made available on behalf of the Depositor when the pertinent U.S. or international patent is issued, but material may not be used to infringe the patent claims.

**Patent number:**

5,297,625

**Technical information:** ATCC Technical Services does not have technical information on patent deposits that are not produced or characterized by ATCC. Additional information can be found in the corresponding patent available from the patent holder or with the U.S. and/or international patent office.

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## **Storage Conditions**

**Product format:** Test tube

**Storage conditions:** See handling procedure

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## **Intended Use**

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

# ***Acidithiobacillus ferrooxidans* (Temple and Colmer) Kelly and Wood**

53993

diagnostic use.

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## **BSL 1**

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

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## **Certificate of Analysis**

For batch-specific test results, refer to the applicable certificate of analysis that can be found at [www.atcc.org](http://www.atcc.org).

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## **Growth Conditions**

**Medium:**

# *Acidithiobacillus ferrooxidans* (Temple and Colmer) Kelly and Wood

53993

ATCC Medium 2039: *Acidithiobacillus ferrooxidans* Medium

**Temperature:** 30°C

**Atmosphere:** Aerobic

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## Handling Procedures

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 either on a shaker or 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 backup 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.
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## Notes

No growth on solid media. The cells are motile and rod-shaped.

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

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## Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Acidithiobacillus ferrooxidans* (Temple and Colmer) Kelly and Wood (ATCC 53993)

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# *Acidithiobacillus ferrooxidans* (Temple and Colmer) Kelly and Wood

53993

## References

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

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## ***Acidithiobacillus ferrooxidans* (Temple and Colmer) Kelly and Wood**

53993

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### **Revision**

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### **Contact Information**

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and Wood**

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