

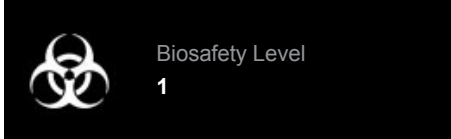


Product Sheet

## *Thermoanaerobacter*

# *pseudethanolicus* (ATCC® 33223™)

Please read this **FIRST**



### 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: *Thermoanaerobacter pseudethanolicus* (ATCC® 33223™)

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:** 39E

**Deposited Name:** *Clostridium thermohydrosulfuricum* Klaushofer and Parkinen

### Propagation

#### Medium

ATCC® Medium 1118: Methanobacteria medium (ATCC medium 1045) with 0.2% yeast extract and 0.5% glucose

#### Growth Conditions

**Temperature:** 65.0°C

**Atmosphere:** Anaerobic

#### Propagation Procedure

1. Sterilize the top of the Balch tube by spraying it with 70% ethanol and then flame the top.
2. If needed exchange the gas in the test tube for 80% N<sub>2</sub>-20% CO<sub>2</sub>.
4. When the Balch tube is ready to inoculate, open the vial. With a sterile anaerobic syringe tipped with a 22-gauge needle withdraw 0.5 ml of reduced #1118 medium and add it to the freeze dried pellet. Immediately place the vial under a gentle stream of oxygen free gas.
5. Using the same anaerobic syringe draw the rehydrated culture up and inoculate the same tube of #1118 broth. Plate 0.1 ml of the inoculated culture onto a non-selective medium and incubate aerobically at 37°C. Use 0.1 ml of the inoculated culture to inoculate a non-selective aerobic broth and an additional tube of #1118 broth. Incubate the non-selective aerobic broth tubes at 37°C. Incubate the #1118 broth culture at 65°C.
6. Growth should be detected in the #1118 broth within 48 to 72 hours. There should be no growth detected on the aerobic plate or in the aerobic broth.

#### ANAEROBIC CONDITIONS:

- a. Resazurin is a commonly used redox indicator that is pink when the redox potential is above 50 mv., and colorless when the redox potential is below 110 mv. i.e. highly reducing. Most strict anaerobes require this low redox potential for optimum growth.
- b. To obtain a fully reduced medium, it is necessary that the medium be anoxic and that a reducing agent be added. Common reducing agents are sodium sulfide, cysteine, dithiothreitol, and titanium citrate.
- c. Syringes can be made anaerobic by one of two methods. 1. Displace the dead space in the syringe with a sterile

1. Sterilize the top of the Balch tube by spraying it with 70% ethanol and then flame the top.
2. If needed exchange the gas in the test tube for 80% N<sub>2</sub>-20% CO<sub>2</sub>.
4. When the Balch tube is ready to inoculate, open the vial. With a sterile anaerobic syringe tipped with a 22-gauge needle withdraw 0.5 ml of reduced #1118 medium and add it to the freeze dried pellet. Immediately place the vial under a gentle stream of oxygen free gas.
5. Using the same anaerobic syringe draw the rehydrated culture up and inoculate the same tube of #1118 broth. Plate 0.1 ml of the inoculated culture onto a non-selective medium and incubate aerobically at 37°C. Use 0.1 ml of the inoculated culture to inoculate a non-selective aerobic broth and an additional tube of #1118 broth. Incubate the non-selective aerobic broth tubes at 37°C. Incubate the #1118 broth culture at 65°C.
6. Growth should be detected in the #1118 broth within 48 to 72 hours. There should be no growth detected on the aerobic plate or in the aerobic broth.

#### ANAEROBIC CONDITIONS:

- a. Resazurin is a commonly used redox indicator that is pink when the redox potential is above 50 mv., and colorless when the redox potential is below 110 mv. i.e. highly reducing. Most strict anaerobes require this low redox potential for optimum growth.
- b. To obtain a fully reduced medium, it is necessary that the medium be anoxic and that a reducing agent be added. Common reducing agents are sodium sulfide, cysteine, dithiothreitol, and titanium citrate.
- c. Syringes can be made anaerobic by one of two methods. 1. Displace the dead space in the syringe with a sterile

### Notes

Gram negative curved rods of varying length which form chains and spores.

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

Gram negative curved rods of varying length which form chains and spores.

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



Product Sheet

# *Thermoanaerobacter pseudethanolicus* (ATCC® 33223™)

## Please read this FIRST



## 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: *Thermoanaerobacter pseudethanolicus* (ATCC® 33223™)

## 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

ATCC® products are warranted for 30 days from the date of shipment, and this warranty is valid only if the product is stored and handled according to the information included on this product information sheet. If the ATCC® product is a living cell or microorganism, ATCC lists the media formulation that has been found to be effective for this product. While other, unspecified media may also produce satisfactory results, a change in media or the absence of an additive from the ATCC recommended media may affect recovery, growth and/or function of this product. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

## 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 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).

© ATCC 2013. All rights reserved. ATCC is a registered trademark of the American Type Culture Collection. [02/26]

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