



Product Sheet

# ***Thermoanaerobacter brockii subsp. brockii*** (ATCC® 53556™)

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 brockii subsp. brockii* (ATCC® 53556™)

## Description

**Designation:** [ATCC 33075, DSM 1457, HTD 4]  
**Deposited Name:** *Thermoanaerobium brockii* Zeikus et al.

## Propagation

### Medium

ATCC® Medium 1465: Basal thermophile medium

### Growth Conditions

**Temperature:** 60.0°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>.
3. If the medium is pink (see discussion about resazurin) add 0.1 ml Na<sub>2</sub>S·9H<sub>2</sub>O (1.5% sodium sulfide, stock solution) per 5 - 10 ml of medium. Let the medium sit at room temperature for 10 to 20 minutes until the resazurin becomes colorless before inoculating.
4. When the Balch tube is ready to inoculate, thaw the frozen vial at room temperature under a gentle stream of oxygen-free gas.
5. For inoculation, use an anaerobic (see c below) 1.0 ml syringe tipped with 22-gauge needle, withdraw the cell suspension from the vial and transfer it to the 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 nonselective aerobic broth and an additional tube of #1465 broth. Incubate the non-selective aerobic broth tubes at 37°C. Incubate the #1465 broth culture at 60°C.
6. Growth should be detected in the #1465 broth within 24 to 48 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

Cells are non-motile rods that occur singly, in pairs and chains. Cells within the same chain may be of different lengths. Colonies on #1465 are creamy and rounded, with irregular edges.

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.

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function of this product. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

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**Disclaimers**

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