BAA-1776

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Description

Thermoanaerobacterium thermostercoris strain BUF is a thermophilic bacterial type strain that was isolated in Italy.
Strain designation: BUF
Deposited As: *Thermoanaerobacterium* sp.
Type strain: Yes

Storage Conditions

Product format: Frozen
Storage conditions: -80°C or colder

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 diagnostic use.

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.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Medium:
ATCC Medium 2107: Modified Reinforced Clostridial
ATCC Medium 260: Trypticase soy agar/broth with defibrinated sheep blood
Temperature: 60°C
Atmosphere: 80% N_2, 20% CO_2; 100% N_2

Handling Procedures

1. Sterilize the top of the Balch tube (see A) by spraying it with 70% ethanol and then flaming the top.
2. Exchange the gas in the test tube for 100% N_2; do not over pressurize.
3. Prepare tubes for inoculation: If there is any question about the medium being anaerobic (see B), add 0.1 ml of reducing agent (5% Co-enzyme M stock

solution; see C) to each tube. Let the medium sit at room temperature for at least 2 hours before inoculating.

4. Allow the vial to thaw under a gentle stream of anaerobic gas. Using an anaerobic 1.0 ml syringe (see D) tipped with a 22-gauge needle, withdraw the thawed cells and inoculate a single tube ATCC® medium #2107 broth. Transfer 0.5 ml of the inoculated culture to a second tube of #2107 broth. Plate 0.1 ml of the inoculated culture onto a non-selective medium and incubate the plate aerobically at 37°C. Incubate culture tubes at 60°C.
5. Growth should be detected in the broth within 24 to 48 hours. No growth should be detected on the aerobic plate.

ANAEROBIC CONDITIONS:

A. Balch tubes are specially designed for anaerobic work and use an aluminum crimp cap to hold a rubber stopper in place. Needles can easily be inserted through the stopper; do not over pressurize. Alternatively, serum vials may be use, or screw cap tubes with butyl rubber stoppers. In the latter case, the stopper may be removed and the tube placed under a cannula system that dispenses sterile, oxygen-free gas for addition of reducing agents or inoculation.
B. 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 (ie, highly reducing). Most strict anaerobes require this low redox potential for optimal growth.
C. To obtain a fully reducing agent must be added. Common reducing agents are sodium sulfide, cysteine, dithiothreitol, titanium citrate and Co-enzyme M. For this culture, Co-enzyme M or cysteine is the agent of choice.
D. Syringes can be made anaerobic by one of two methods:
    1. Displace the dead space in the syringe with a sterile oxygen-free gas.
    2. Displace the dead space in the syringe with a reducing agent.

Notes

Colonies on anaerobic #260 agar are moist, rounded, with a clear center and spreading edges. Colonies on anaerobic #18 agar are tan, slightly raised, with scalloped edges. Cells are gram positive rods. The medium must be reduced prior to

inoculation. Do not store more than one week at 4°C.

Additional information on this culture is available on the ATCC® web site at www.atcc.org.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: BAA-1776 (ATCC BAA-1776)

References

References and other information relating to this material are available at www.atcc.org.

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Revision

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Contact Information

ATCC
10801 University Boulevard
Manassas, VA 20110-2209
USA
US telephone: 800-638-6597
Worldwide telephone: +1-703-365-2700
Email: tech@atcc.org or contact your local distributor