Desulfotomaculum nigrificans (Werkman and Weaver) Campbell and Postgate

7946™

Description

Strain designation: NCA 3750 [L.S. McClung 2133]
Deposited As: *Clostridium nigrificans* Werkman and Weaver
Type strain: No

Storage Conditions

Product format: Freeze-dried

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.

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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 1249: Modified Baar's medium for sulfate reducers
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ATCC Medium 42: Desulfovibrio medium
Temperature: 45°C
Atmosphere: Anaerobic

Handling Procedures

1. Open vial according to enclosed instructions.

2. Under anaerobic conditions, withdraw 0.5 ml of the #1249 broth from a single test

tube (5 to 6 ml) and rehydrate the entire vial contents.

3. Aseptically transfer this aliquot back into the broth tube and inoculate a #260 (blood agar) plate to be incubated anaerobically. An aerobic blood plate may also be streaked to check for purity.

4. Incubate tubes and plate under an anaerobic atmosphere at 45ºC. Incubate blood plate aerobically at 37ºC.

5. Within 24 to 48 hours, growth is evident by moderate to good turbidity in the broth with sediment in the bottom of the tube. No growth occurs on the blood agar plate incubated aerobically. Once growth is achieved, transfer the culture to fresh tubes of #1249 broth. This culture does not grow well on agar.

ANAEROBIC CONDITIONS:

Anaerobic conditions for transfer may be obtained by the following:

·Placement of test tubes under a gassing cannula system hooked to anaerobic gas.

Anaerobic conditions for incubation may be obtained by any of the following:

· Loose screw caps on test tubes in an activated anaerobic gas pack jar, or

· Use of sterile butyl rubber stoppers on test tubes so that an anaerobic gas headspace is retained.

Notes

Always use freshly prepared anaerobic media.

The best results have been obtained using the gassing cannula system. For reviving the cultures initially, an anaerobic jar is not recommended. Once the culture has been established, an anaerobic jar can be used if the inoculum is 20% or greater.

Either 100% N_2 or 80% N_2-10% CO_2-10% H_2 can be used as the anaerobic gas for culturing this organism.

Once growth has been obtained, this culture is fairly easy to maintain if

transferred every other day. A culture that has good growth and is fresh can be maintained at 4ºC for up to a week. The cells can be stored at 70 to 80ºC by growing a large volume in ATCC medium #1249, harvesting the cells and then mixing the cell pellet in an equal volume of fresh #1249 and 20% glycerol (10% final concentration). Dispense the cells into vials (approximately 0.5 to 1.0 ml per vial) and freeze rapidly. Both the #1249 broth and glycerol need to be pre-reduced. This may be accomplished by adding 0.1 ml (for each 5 to 6 ml medium) of a 1.5% sodium sulfide solution.

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: *Desulfotomaculum nigrificans* (Werkman and Weaver) Campbell and Postgate (ATCC 7946)

References

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

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