



Product Sheet

# *Desulfotomaculum nigrificans* (ATCC® 7946™)

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: *Desulfotomaculum nigrificans* (ATCC® 7946™)

## Description

**Designation:** NCA 3750 [L.S. McClung 2133]  
**Deposited Name:** *Clostridium nigrificans* Werkman and Weaver

## Propagation

### Medium

ATCC® Medium 1249: Modified Baar's medium for sulfate reducers  
ATCC® Medium 1249: Modified Baar's medium for sulfate reducers  
ATCC® Medium 42: Desulfovibrio medium

### Growth Conditions

**Temperature:** 45.0°C  
**Atmosphere:** Anaerobic

### Propagation Procedure

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 45°C. Incubate blood plate aerobically at 37°C.
  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<sub>2</sub> or 80% N<sub>2</sub>-10% CO<sub>2</sub>-10% H<sub>2</sub> 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 4°C for up to a week. The cells can be stored at 70 to 80°C 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](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.

## ATCC Warranty

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



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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).

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