



# *Desulfotomaculum* *ruminis* Campbell and Postgate

23193™

## Description

**Strain designation:** NCIB 8452 [DL]

**Deposited As:** *Clostridium nigrificans* Werkman and Weaver

**Type strain:** Yes

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## Storage Conditions

**Product format:** Freeze-dried

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## 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.

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## 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 submerged 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 submerged in liquid nitrogen.

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## Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at [www.atcc.org](http://www.atcc.org).

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## Growth Conditions

### Medium:

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

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ATCC Medium 207: Modified Starkey's medium C

**Temperature:** 37°C

**Atmosphere:** Anaerobic

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## Handling Procedures

1. Open the vial according to enclosed instructions.
2. Perform all steps under anaerobic conditions.
3. Aseptically transfer 0.5 ml of #1249 broth to the vial and rehydrate the pellet.

**Transfer the suspension back into the broth tube. Inoculate a plate of a non-selective medium such as Trypticase Soy, Nutrient, or Blood agar with**

**0.1 ml of the cell suspension.**

**4. Seal the tube with a rubber stopper and incubate anaerobically at 37°C. Incubate the plate(s) aerobically as a purity check.**

**5. After one or two days, growth should be evident as indicated by turbidity throughout the broth. Once growth has been established the culture should be transferred to fresh broth every 48 hours.**

**6. This culture is very sensitive to oxygen when initially rehydrated, therefore steps should be taken to avoid exposure to oxygen. When the culture exhibits good growth it will remain viable for up to 1 week if stored at 4°C under anaerobic condition.**

**ANAEROBIC CONDITIONS:**

- **Tubes of media are placed under a gassing cannula system hooked to a source of oxygen free gas.**
- All transfers are performed while the test tubes are on the cannula system with a gentle stream of oxygen free gas flowing through the system.
- As the test tubes are removed from the cannula system each is sealed with butyl rubber stopper thus maintaining the anaerobic headspace.
- 100% nitrogen or 80% nitrogen-10% carbon dioxide-10% hydrogen gas mixture is typically employed as the oxygen free gas source.

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**Notes**

When examined microscopically, the cells appear as typical single (some pairs) rods that are motile.

Always use freshly prepared anaerobic medium. If there is any question about the anaerobic condition of the medium, the medium can be reduced with the addition of 1.5% cysteine

(2.0 ml per 100 ml of medium).

Other commonly used reducing agents are sodium sulfide, cysteine, dithiothreitol, and titanium citrate. Cysteine is the reducing agent of choice since it does not cause the ferrous ammonium sulfate to precipitate.

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### **Material Citation**

If use of this material results in a scientific publication, please cite the material in the following manner: *Desulfotomaculum ruminis* Campbell and Postgate (ATCC 23193)

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### **References**

References and other information relating to this material are available at [www.atcc.org](http://www.atcc.org).

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**Revision**

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