



***Thermodesulfobacterium commune* Zeikus et al.**

33708TM

Description

Thermodesulfobacterium commune strain YSRA-1 is a thermophilic bacterium isolated from a hot spring in Yellowstone National Park. This bacterial type strain is propagated anaerobically at 70°C and is part of the National Park Service (NPS) Special Collection

Strain designation: YSRA-1 [DSM 2178, VKM B-1767]

Deposited As: *Thermodesulfobacterium commune* Zeikus et al.

Type strain: Yes

Storage Conditions

Product format: Freeze-dried

Storage conditions: 2°C to 8°C

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



ATCC® Credible leads to Incredile®

www.atcc.org

***Thermodesulfobacterium commune* Zeikus et al.**

33708

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 1249: Modified Baar's medium for sulfate reducers

Temperature: 70°C

Atmosphere: Anaerobic

Handling Procedures

1. Open vial according to enclosed instructions.
2. Perform all steps under anaerobic conditions (*see below*).

***Thermodesulfobacterium commune* Zeikus et al.**

33708

3. Aseptically transfer 0.5 mL of #1249 broth to the vial and rehydrate the entire freeze-dried pellet. Immediately place the rehydrated pellet under a stream of oxygen-free sterile gas. Then transfer the suspension back into the tube of broth. Inoculate a plate of non-selective medium with 0.1 mL of the culture. Inoculate a non-selective tube of broth.
4. Seal the test tube with a rubber stopper and incubate anaerobically at 70°C. Incubate the plate(s) and aerobic broth at 30°C as a purity check.
5. After one or two days, growth should be evident by turbidity throughout the broth. Once growth has been established, the culture should be transferred to fresh broth every 24 to 48 hours.
6. This culture is very sensitive to oxygen; 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 conditions.

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 a butyl rubber stopper, thus maintaining the anaerobic headspace.
- Alternatively, the culture can be grown using the Hungate Method, which uses Balch Tubes for cultivation (*see below*).

Hungate method:

A. Balch tubes available from Bellco Glass, Vineland, NJ; 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, and the tubes can be pressurized to 2 atm. Alternatively, serum vials may be used, 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. 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.

***Thermodesulfobacterium commune* Zeikus et al. 33708**

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Thermodesulfobacterium commune* Zeikus et al. (ATCC 33708)

References

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

Warranty

The product is provided 'AS IS' and the viability of ATCC® products is warranted for 30 days from the date of shipment, provided that the customer has stored and handled the product according to the information included on the product information sheet, website, and Certificate of Analysis. For living cultures, ATCC lists the media formulation and reagents that have been found to be effective for the product.

While other unspecified media and reagents may also produce satisfactory results, a change in the ATCC and/or depositor-recommended protocols may affect the recovery, growth, and/or function of the product. If an alternative medium formulation or reagent is used, the ATCC warranty for viability is no longer valid.

Except as expressly set forth herein, no other warranties of any kind are provided, express or implied, including, but not limited to, any implied warranties of merchantability, fitness for a particular purpose, manufacture according to cGMP standards, typicality, safety, accuracy, and/or noninfringement.

Disclaimers

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. Any proposed commercial use is prohibited without a [license from](#)



ATCC® Credible leads to Incredible®

www.atcc.org

ATCC.

While ATCC uses reasonable efforts to include accurate and up-to-date information on this product sheet, ATCC makes no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. ATCC does not warrant that such information has been confirmed to be accurate or complete and the customer bears the sole responsibility of confirming the accuracy and completeness of any such information.

This product is sent on the condition that the customer is responsible for and assumes all risk and responsibility in connection with the receipt, handling, storage, disposal, and use of the ATCC product including without limitation taking all appropriate safety and handling precautions to minimize health or environmental risk. As a condition of receiving the material, the customer agrees that any activity undertaken with the ATCC product and any progeny or modifications will be conducted in compliance with all applicable laws, regulations, and guidelines. This product is provided 'AS IS' with no representations or warranties whatsoever except as expressly set forth herein and in no event shall ATCC, its parents, subsidiaries, directors, officers, agents, employees, assigns, successors, and affiliates be liable for indirect, special, incidental, or consequential damages of any kind in connection with or arising out of the customer's use of the product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, ATCC is not liable for damages arising from the misidentification or misrepresentation of such materials.

Please see the material transfer agreement (MTA) for further details regarding the use of this product. The MTA is available at www.atcc.org.

Copyright and Trademark Information

© ATCC 2023. All rights reserved.

ATCC is a registered trademark of the American Type Culture Collection.

Revision

This information on this document was last updated on 2025-12-06

***Thermodesulfobacterium commune* Zeikus et al.**
33708

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
