Thermodesulfobacterium commune Zeikus et al.

33708™

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.
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 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*).
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.

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.

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