



Moorella thermoautotrophica (Wiegel et al.) Collins et al.

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Description

Moorella thermoautotrophica strain DSM 1974 was isolated from mud and water at a hot spring in Yellowstone National Park. This thermophilic type strain is propagated anaerobically at 55-60°C.

Strain designation: DSM 1974 [JW701/3]

Deposited As: *Clostridium thermoautotrophicum* Wiegel 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

Temperature: 55-60°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 Anaerobe Systems PYG Broth (AS-822) to the vial

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and rehydrate the 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 of the culture. Inoculate a non-selective tube of broth.

4. After one or three days, growth should be evident by turbidity through out the broth. Once growth has been established, the culture should be transferred to fresh broth every 24 to 48 hours.
5. 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 butyl rubber stopper thus maintaining the anaerobic headspace.

Notes

Anaerobe Systems Brucella PYG broth (AS-822) is recommended for growth.

Anaerobe Systems Brucella Blood Agar plates (AS-111 or AS-141) are recommended for analyzing colony morphology and purity.

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: *Moorella thermoautotrophica* (Wiegel et al.) Collins et al. (ATCC 33924)

References

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

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