



Elioraea thermophila

TSD-174™

Description

Elioraea thermophila strain MS-P2 is a thermophilic bacterial type strain that was isolated in 2015 from an effluent channel of Mushroom Spring at Yellowstone National Park.

Strain designation: MS-P2

Type strain: Yes

Type strain description: This culture provided to the ATCC type strain depository is neither produced nor characterized by ATCC. No technical information is available on this material. Refer to depositor for technical information on this strain.

Technical information: ATCC Technical Services does not have technical information on type strain deposits that are not fully characterized. Additional information can be found in the depositor's publication.

Storage Conditions

Product format: Frozen

Storage conditions: -70°C or colder

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*

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(*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.

Handling Procedures

Depositor-recommended growth conditions:

Growth medium preparation listed below. This material grows at 45-50°C and 50microMol Einstein enhances growth, but also grows in the dark.

For 1 liter of medium prepare 960 ml of distilled water containing: 2.4 g of HEPES buffer, 46 mg of KH_2PO_4 , 24 mg of ferric (NH_4) citrate, 36.5 mg of 2-Oxoglutarate, and 20 ml of basal salt solution^{*1}. Adjust pH to 7.0- 7.5 with 5M KOH. Autoclave the liquid at 121°C, 40min and let it cool down to ~50°C. Add 40 ml of sterile filtered

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distilled water containing: 1.0 g sodium acetate, 1.0 g sodium succinate, 1.0 g yeast extract, 0.625 g NaHCO₃, 50 mg Bacto peptone, 0.25 ml Vitamin Solution A*³, 0.25 ml of Vitamin Solution*⁴, 10 ml amino acid solution*⁵.

*1 The basal salt solution contained (per liter): 3.75 g MgSO₄·7H₂O, 1.8 g CaCl₂·2H₂O, 0.3 g Na-citrate, 0.6 ml of Na₃-EDTA (pH 8.0, 0.25 M), and 50 ml of trace metal solution*².

*2 The Trace metal solution contained (per 1 liter): 2.86 g of H₃BO₃, 1.81 g of MnCl₂·4H₂O, 0.222 g of ZnSO₄·7H₂O, 0.39 g of Na₂MoO₄·2H₂O, 0.079 g of CuSO₄·5H₂O, and 0.0494 g of Co(NO₃)₂·6H₂O.

*3 The Vitamin Solution A contained (per 100 ml): 10 mg biotin, 10 mg riboflavin, 100 mg thiamine HCl, 100 mg thiamine pyrophosphate, 100 mg L-ascorbic acid, 100 mg D-Ca-pantothenate, 100 mg folic acid, 100 mg nicotinamide, 100 mg nicotinic acid, 100 mg 4-aminobenzoic acid, 100 mg pyridoxine HCl, 100 mg lipoic acid, 100 mg NAD.

*4 The Vitamin Solution B contained (per 100 ml): 100 mg of cyanocobalamin (vitamin B₁₂).

*5 The amino acid solution contained 100 mg of each 20 proteinogenic amino acid per 400 ml.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Elioraea thermophila* (ATCC TSD-174)

References

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

Warranty

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