Sideroxydans lithotrophicus

700298™

Description

Strain designation: ES-1
Deposited As: Unidentified bacterium
Type strain: Yes

Storage Conditions

Product format: Frozen

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 7266: Modified Wolfe's Mineral Medium Gradient Plate Medium
Temperature: 25°C
Atmosphere: Microaerophilic: 3-5% O_2, 10% CO_2

Handling Procedures

1. One frozen vial should be used to start no more than three gradient plates.

2. Autoclave the top and bottom layers for 20 minutes at 121°C. Cool the top layer in an ice bath while allowing the bottom layer to cool slightly.

3. Pipette 8.5 ml of the bottom layer into a standard Petri dish. Allow to set a minimum of 15 minutes, but no longer than 30 minutes.

4. While the bottom layer is setting, adjust the pH of the top layer to between 6.0 and 6.4 by sparging with filter-sterilized CO_2.

5. Inoculate the top layer with the vial of *S. lithotrophicus* and pipette 16 ml over the solidified bottom layer.

6. Place the plates in either GasPak jars with BD BBL CampyPak Plus Microaerophilic system envelopes with palladium catalysts or Mitsubishi AnaeroPack system jars with Pack-MicroAero gas generating envelopes adjusted for the volume of the container.

Notes

Growth should be checked by epifluorescent microscopy five days after inoculation. Syto 13 (Molecular Probes, Eugene, OR) provides good penetration of the Fe-oxides and bright fluorescence. A 0.25 mM stock solution is prepared in sterile d-H_2O that is then diluted 1:5 with the bacterial culture. Cells are long, helical and vibroid shaped, less than 0.5 um in diameter, and motile during exponential growth.

Additional volume may be obtained by concentrating cells by centrifugation and using the entire pellet as inoculum for further growth. For example, three plates may be used as inoculum for 12 plates, and the pellet from 12 plates may be used to inoculate 36 plates.

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: *Sideroxydans lithotrophicus* (ATCC 700298)

References

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

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