



# **Anaerocellum acetigenus subsp. lactoaceticus**

**TSD-470™**

## **Description**

*Anaerocellum acetigenus* subsp. *lactoaceticus* strain str. 6A is an anaerobic, extremely thermophilic, cellulolytic bacterial type strain that was isolated from an alkaline hot spring in Hveragerdi, Iceland.

**Strain designation:** str. 6A

**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 Product Experience does not have technical information on type strain deposits that are not fully characterized. Additional information can be found in the depositor's publication.

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## **Storage Conditions**

**Product format:** Frozen

**Storage conditions:** -80°C or colder

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## **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.

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## **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.

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## Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at [www.atcc.org](http://www.atcc.org).

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## Growth Conditions

**Temperature:** 70°C

**Incubation:** To reach log phase growth, depositor indicates that this strain needs less than 1 day (16-20 hours) from a 2% inoculum on cellobiose. 2-3 days on microcrystalline cellulose (i.e. Avicel)

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## Handling Procedures

**Depositor-recommended growth conditions:** For *Anaerocellum acetigenus* subsp. *lactoaceticus* strain str. 6A depositor recommends sample be grown in media typically used for other Caldicellulosiruptorales. It is routinely cultured in DSM 516 or 671 medium, utilizing cellobiose or cellulose as the carbon source. The bacterium requires anaerobic conditions, which are achieved by degassing through three rounds of vacuum and N<sub>2</sub>/CO<sub>2</sub> (80/20 v/v mix) and adding L-cysteine HCl (0.75-1 g/L). The optimal growth temperature is 70°C. Incubation times are less than one day (16-20 hours) from a 2% inoculum on cellobiose, and 2-3 days on microcrystalline cellulose (e.g., Avicel). The bacterium is typically grown in sealed 125 mL serum bottles containing 50 mL of culture medium. Yeast extract is not required if Wolin's vitamin solution (10x) is provided, and instead of autoclaving, 0.22 µm filter sterilization can be used for the final medium, with 5 g/L carbohydrate being used.

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## Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Anaerocellum acetigenus* subsp. *lactoaceticus* (ATCC TSD-470)

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## References

References and other information relating to this material are available at [www.atcc.org](http://www.atcc.org).

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## Revision

This information on this document was last updated on 2025-03-28

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## Contact Information

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