**Thermoplasma volcanium (ATCC® 51530™)**

**Designation:** DSM 4299 [GSS1*]
**Deposited Name:** Thermoplasma volcanium Segerer et al.

**Medium**
ATCC® Medium 569: Thermoplasma medium

**Growth Conditions**
**Max Temperature:** 60.0°C
**Min Temperature:** 55.0°C

**Propagation Procedure**
1. Keep cryovial frozen until ready for use, then thaw slowly at room temperature when you are ready to inoculate.
2. Using two sterile 25.0 cm T-flasks, add 10.0 ml of fresh media to each. Place the flasks at 55°C for 30 minutes. Once the vial reaches room temperature remove the flask from the 55°C incubator. Remove 0.5 ml of #569 broth and add it to the vial. Transfer the entire contents back to the flask. Take 1.0 ml from the first flask and transfer it to the second flask.
3. Incubate the flasks at 55°C. *Thermoplasma volcanium* requires oxygen, so slanting the flasks will provide greater surface area. Shaking is not recommended.
4. Growth appears in the first flask in 4 to 7 days. Subsequent transfers grow more rapidly, and due to drastic loss in viability, transfers should be done 24 to 48 hours after growth. The inoculum size should be 10 to 20%. Glassware should be free of any trace of detergent or soap. Cells do not tolerate refrigeration.
5. For long term storage, freeze in liquid nitrogen. It is recommended that actively growing cells are harvested by centrifugation at 9000 rpm for 30 minutes, the supernatant removed, and the pellet resuspended in a smaller amount of fresh growth medium with an equal volume of 20% glycerol (10% final concentration) added. Small amounts of this suspension are aliquoted into small cryovials and immediately placed in liquid nitrogen storage.

**Notes**
Under 1000x magnification the cells appear as spheres and pleomorphic filaments.

**References**
Additional information on this culture is available on the ATCC web site at [www.atcc.org](http://www.atcc.org).

**Biosafety Level: 1**
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes for Health.

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