



# *Phytophthora fragariae* Hickman

18638™

## Description

An ampoule containing viable cells (may include spores and mycelia) suspended in cryoprotectant.

**Strain designation:** Calif-6-2

**Deposited As:** *Phytophthora fragariae* Hickman

**Type strain:** No

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## Storage Conditions

**Product format:** Frozen

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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

### Medium:

ATCC Medium 477: Kidney bean medium

**Temperature:** 24°C

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## Handling Procedures

**Frozen ampoules** packed in dry ice should either be thawed immediately or stored in liquid nitrogen. If liquid nitrogen storage facilities are not available, frozen ampoules may be stored at or below -70°C for approximately one week. **Do not under any circumstance store frozen ampoules at refrigerator freezer temperatures (generally -20°C).** Storage of frozen material at this temperature will result in the death of the culture.

1. To thaw a frozen ampoule, place in a **2530 °C** water bath, until just thawed ( **approximately 4-5 minutes**). Immerse the ampoule just sufficient to cover the frozen material. Do not agitate the ampoule.
2. Immediately after thawing, wipe down ampoule with 70% ethanol and aseptically transfer at least 50 µl (or 2-3 agar cubes) of the content onto a plate or broth with medium recommended.
3. Incubate the inoculum/strain at the temperature and conditions recommended.
4. Inspect for growth of the inoculum/strain regularly. The sign of viability is noticeable typically after 5-6 days of incubation. However, the time necessary for significant growth will vary from strain to strain.

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## Notes

The post-preservation viability of frozen culture of *Phytophthora fragariae* may be poor. We found that incubation of the frozen culture in Nutrient Broth (ATCC MD-5103) before growing it on solid medium such as V-8 Juice agar (ATCC MD-0343) improves the viability. Thus we suggest that upon opening the vial, the frozen culture is first transferred into Nutrient Broth and incubated at the recommended temperature until the sign of growth is visible. Then the culture can be transferred to a solid medium such as V-8 Juice agar.

Additional, updated information on this product may be available on the ATCC web site at [www.atcc.org](http://www.atcc.org).

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## Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Phytophthora fragariae* Hickman (ATCC 18638)

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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 2024-12-17

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## ***Phytophthora fragariae* Hickman**

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