



Product Sheet

# Penicillium citrinum (ATCC® 9849™)

## Please read this FIRST



Storage Temp.  
**Frozen: -80°C or colder**  
**Freeze-Dried: 2°C to 8°C**  
**Live Culture: See Propagation Section**

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Biosafety Level  
**1**

## Intended Use

This product is intended for research use only. It is not intended for any animal or human therapeutic or diagnostic use.

## Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: *Penicillium citrinum* (ATCC® 9849™)

American Type Culture Collection  
PO Box 1549  
Manassas, VA 20108 USA  
[www.atcc.org](http://www.atcc.org)

800.638.6597 or 703.365.2700  
Fax: 703.365.2750  
Email: [Tech@atcc.org](mailto:Tech@atcc.org)

Or contact your local distributor

## Description

**Strain Designation:** [11, CBS 342.61, IFO 6352, IMI 321326, IMI 61272, JCM 22607, NRRL 756]

**Deposited Name:** *Penicillium citrinum* Thom

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

## Propagation

The information recommended in this section is to assist users in obtaining living culture(s) for their studies. The recommendation does not imply that the conditions or procedures provided below are optimum. Experienced researchers may initiate the growth of a culture in their own way.

ATCC® Medium 200: YM agar or YM broth

ATCC® Medium 325: Malt extract agar (Blakeslee's formula)

ATCC® Medium 336: Potato dextrose agar (PDA)

## Growth Conditions

**Temperature:** 24°C to 26°C

**Atmosphere:** Typical aerobic

## Recommended Procedure

For **freeze-dry (lyophilized)** ampoules:

1. Open an ampoule according to enclosed instructions.
2. From a single test tube of **sterile distilled water** (5 to 6 mL), withdraw approximately 0.5 to 1.0 mL with a sterile pipette and apply directly to the pellet. Stir to form a suspension.
3. Aseptically transfer the suspension back into the test tube of sterile distilled water.
4. Let the test tube sit at room temperature (25°C) undisturbed for **at least 2 hours**; longer (e.g., overnight) rehydration might increase viability of some fungi.
5. Mix the suspension well. Use several drops (or make dilutions if desired) to inoculate recommended solid or liquid medium. Include a control that receives no inoculum.
6. Incubate the inoculum at the propagation conditions recommended.
7. Inspect for growth of the inoculum/strain regularly. The sign of viability is noticeable typically after 2-4 days of incubation. However, the time necessary for significant growth will vary from strain to strain.

**Colony and Cell Morphology:** Colonies on malt agar at 25°C with slow to moderate growth, velutinous to floccose; mycelium white turning greyish-orange. Conidial masses greyish-turquoise. Conidiophores biverticillate. Phialides flask-shaped. Conidia spherical to subspherical, smooth-walled or finely roughened, 2.2-3.0 µm diam.

## Notes

No special notes.

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

## DNA Sequence

18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S ribosomal RNA gene, and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence  
GGTTTCCGTAGGTGAACCTGCGGAAGGATCATTACCGAGTGCGGGCCCTCGGGGCCAACCTCCCAC  
CCGTGTTGCCCGAACCTATGTTGCCTCGGCCGGCCCGCGCCCGCCGACGGCCCCCTGAACGCTGTCT  
GAAGTTGCAGTCTGAGACCTATAACGAAATTAGTTAAAACCTTCAACAACGGATCCTTGTTCCGGCA  
TCGATGAAGAACGCAGCGAAATGCGATAACTAATGTGAATTGCAGAATTCAGTGAATCATCGAGTCTT  
TGAACGCACATTGCGCCCTCTGGTATTCCGGAGGGCATGCCGTGCCGAGCGTCATTGCTGCCCTCAAGC  
CCGGCTTGTGTTGGGCCCGTCCCCCGCGGGGGGACGGGCCGAAAGGCAGCGCGGCACCG  
CGTCCGGTCTCGAGCGTATGGGGCTTCGTACCCGCTCTAGTAGCCCGCCGCGCCAGCCGACCC  
CCAACCTTTAATTATCTCAGGTTGACCTCGGATCAGGTAGGGATACCCGCTGAACCTAAGCATATCAAT  
AA

D1D2 region of the 28S ribosomal RNA gene

ATATCAATAAGCGGAGGAAAAGAAACCAACCGGATTGCCCTAGTAACGGCGAGTGAAGCGGCAAG  
AGCTCAAATTTGAAAGCTGGCCCCCTCGGGTCCGCATTGTAATTTGCAGAGGATGCTTCGGGAACGG  
CCCCATCTAAGTGCCTGGAACGGCCGTCATAGAGGGTGAATCCCGTCTGGGATGGGGTGGCC



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GCGCCCGTGTGAAGCTCCTTCGACGAGTCGAGTTGTTGGGAATGCAGCTCTAATTGGGTGGTAAATTT
CATCTAAAGCTAAATATTGCCCAGGAGACCGATAGCGCACAAAGTAGAGTGATCGAAAGATGAAAAGC
ACTTTGAAAAGAGAGTTAAACAGCACGTGAAATTGTTGAAAGGGAAGCGCTTTCGACAGACTCGCC
CGCGGGGTTTCAGCCGGCACTCGTCCCGGTGACTTCCCCCGGGCGGGCCAGCGTCGGTTTGGGCGGC
CGGTCAAAGGCCTTGGAAGGTAACGCCTCTCGGGGCGTCTTAGCCAGGGGTGCCATGCGGCCTGC
CCGACCGAGGAACGCGCTTCGGCTCGGACGCTGCATTAATGGTGTGTAAGCAG
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beta-tubulin gene

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TGCCCGAATCCGACGCGTCTTTGTTGACCTACCCCTGAACGGACCCCACTTGTTCATCTTGCTAACC
TCACCTTTTCCCAACATATAGGTTACCTGCAGACCGCCAGTGTGTAAGTGCACCTCGAATGATAAT
CGATTTCTTGGACAAGGAAGACACATTTAATACGATGGTTAATAAATGCTAAACGATATGTGGGGATC
TATAGGGTAACCAATTGGTGCCGCTTTCTGGTACGTGCTGCAAATCCTGAACGATCAATTGTTGGATA
CAAAGAGCAATATACTGACCAATCTATAGGCAAACCATTGCTGGCGAGCACGGCCTTGATGGCGATG
GACAGTAAGTTCTTTTCGACAAGAAGTGTACGTTTTTTTCGAGAATGGCGGTCTGATATTTTTGGCA
GCTACAACGGAACTCCGATCTCCAGCTGGAGCGCATGAACGCTCTACTTACCCACGTAAGTGATACT
GACCCCAATGCCATTGGAATCATTATCTAACCAACTATTGTTGTTTTATCAATAGGCTTCCGGTGACAA
GTATGTTCCCGTCCGCTCTGGTTCGACTTGGAGCCCGGTACCATGGACGCTGCTCGGTGCTGGTCCCTTC
GGCAAGCTTTCCGTCGCCGACAACCTCGTTTTCGGTCAATCCGGTGTGTTAACAACCTGGG
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### References

References and other information relating to this product are available online 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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Additional information on this culture is available on the ATCC web site at [www.atcc.org](http://www.atcc.org).  
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