



Product Sheet

# *Geomyces destructans* (ATCC® MYA-4855™)

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  
**2**

## 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: *Geomyces destructans* (ATCC® MYA-4855™)

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:** 20631-21

**Product Description:** An ampoule containing viable cells (yeast cells, spores, or agar cubes with 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 336: Potato dextrose agar (PDA)

ATCC® Medium 28: Emmons' modification of Sabouraud's agar

## Growth Conditions

**Temperature:** 4°C to 10°C

**Atmosphere:** Typical aerobic

## Recommended Procedure

**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 **25°C to 30°C** water bath, until just thawed (**approximately 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 50 µL (or 2 to 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 3 to 4 days of incubation. However, the time necessary for significant growth will vary from strain to strain.

**Colony and Cell Morphology:** On SDA at 10°C after 38 days, colonies white to grayish white, raised, dense velvety texture, slow growing, colony diameter after 38 days 1.8-2.3 cm. Production of light to dark brown exudate. Reverse buff to tan. Hyphae guttulate, 2.25 µm thick. Conidiophores with whorls of 2-6 verticils. Conidia formed singly and in short chains of 2-5, smooth, amygdaliform to allantoids with apical scar, containing oil droplets, 6-10.5 µm x 3-4.5 µm.

## Notes

Type strain of the species; Pathogen causing bat white-nose syndrome; Psychrophilic fungus; Genome sequencing strain (The Broad Institute, USA); Individuals that have contacted with *G. destructans* should observe a personal quarantine and not enter bat congregation sites during active work and for 7 days after last contact with the fungus. Lab processes should be managed to avoid inadvertent contact with culture materials, and clothing and other materials brought into the laboratory should be segregated from those transported to any potential bat congregation sites.

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  
AAGTATGGAGCAATCTCAATGATTCTCCGTGGCGACACTTATGGAAGCCTTTGCAGCCCCGCAAGGG  
GTGGGGAGCAGACTGTAATAAGTCTCCCTTCATGCAAGTCAGCACCCGCTGGCAACACGATCGAAT  
TGACGGGGACGTCCTAAAGCCTACAACACCAACCCGCCGGGAAACCGAGGCGGGGGCCCGTCTACT  
ACTCCACGGGGTGGTAAAGAGTGTATGGATACTCCCTCTGGGGAACCTATGGATAATCCGACGCGAA  
GACCCCTAAGTAGCGCTAGCTATACGGGTAACGTTACAGACTAAGTGGTTGTGGGTGGAGCCTAGCTC  
TGCTTAAGATATAGTCGGGCCCTACGTGAAAGCGCAGGGGTGAGTCGCTACGAACTCGAAACCGTTCC  
GTAGGTGAACCTGCGGAAGGATCATTACAGTAGTCGCCGGGTTGCCGCAAGGCCTCCCGGGTAACT  
ACCACCCCTTTGTTATTACACTTTGTTGCTTTGGCAGGCCTGCCCTCGGGTGTCTGGCTCCGGCCGCGA  
GCGCTTGCCAGAGGACTAAACTCTGTTTGTCTACTGTCTGAGTACTATAATAGTTAAACTTTCAA



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CAACGGATCTCTTGGTCTGGCATCGATGAAGAACGCAGCGAAATGCGATAAGTAATGTGAATTGCAG
AATTCAGTGAATCATCGAATCTTTGAACGCACATTGCGCCCTGGTATTCCGGGGGCATGCCTGTCC
GAGCGTCATTACAACCCTCAAGCTCAGCTTGGTATTGGGCCCGCCGACCCGGCGGGCCCTAAAGTCA
GTGGCGGTGCCGTCCGGCTCCGAGCGTAGTAATCTTCTCGTCCGGAGGTCGGTCTGTGCTTGCCA
GCAACCCCAATTTTTTCAGGTTGACCTCGGATCAGGTAGGATACCCGCTGAACCTAAGCATATCAAT
AA
```

D1D2 region of the 28S ribosomal RNA gene

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ATATCAATAAGCGGAGAAAAGAAACCAACAGGGATTACCTCAGTAACGGCGAGTGAAGCGGTAAC
AGCTCAAATTTGAAATCTGGCCTCACGGTCCGAGTTGTAATTTGTAGAGGATGCTTCGAGCATGGTCTG
GCCTAAGTTCTTGAACAGGACGTCATAGAGGGTGAAGATCCCGTATGCGGCCAGGTGCCTACGCTC
ATGTGAAGCTCCTTCGACGAGTTCGAGTTGTTGGGAATGCAGCTCAAAATGGGTGGTAAATTTTCATCTA
AAGCTAAATATTGGCCAGAGACCGATAGCGCACAAGTAGAGTGATCGAAAGATGAAAAGCACATTTG
GAAAGAGAGTTAAACAGTACGTGAAATTTGTTGAAAGGGAAGCGCTTGAACCCAGACTTGCAGCGCGGC
CGATCATCCGGTGTCTCACCGGTGCACTCGGCCGTGCTCAGGCCAGCATCGGTTTTGGCGGCTGGATA
AAGGCCCTAGGAATGTAGCTCCTCTCGGGGAGTGTATAGTCTAGGGTGAATGCAGCCTGCTGGGAC
CGAGGACCGCGCTTCGGCTAGGATGCTGGCGTAATGGTTGTAAGCGGC
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### Isolation

Wing skin of *Myotis lucifugus*, little brown bat, in Williams Hotel Mine, Ulster County, New York, USA, February 2008.

### References

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

### Biosafety Level: 2

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.

### ATCC Warranty

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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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