



Product Sheet

Trichoderma spirale (ATCC® MYA-4918™)

Please read this **FIRST**



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



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: *Trichoderma spirale* (ATCC® MYA-4918™)

American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

Or contact your local distributor

Description

Strain Designation: TUB F-901

Genotype: Not available

Product Description: An ampoule containing viable cells (yeast cells, spores, or agar cubes with mycelia) suspended in cryoprotectant.

Propagation

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

ATCC® Medium 336: Potato dextrose agar (PDA)

Growth Conditions

Temperature: 20°C to 25°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 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 2 - 3 days of incubation. However, the time necessary for significant growth will vary from strain to strain.

Colony and Cell Morphology: On PDA medium at 25°C after 8 days, mycelium white with dark green tint, dense, cottony. Reverse tan to brown. Hyphae hyaline, guttulate. Conidiophores hyaline, branched. Phialides obclavate, single or in groups of 3-4, 12 x 3 µm. Conidia green, broadly ellipsoidal, smooth, 3.75-4.5 x 3 µm.

Notes

No special notes.

Additional, updated information on this product may be available on the ATCC web site at 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; GenBank number KC581162:

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AGGGATCATTACCGAGTTTACAAC TCCCAACCCAATGTGAACGTTACCAA CTGTTGCCTCGGCGGG  
ATCTCTGCCCGGGTGC GTCGCAGCCCGGACCAAGGCGCCCGGAGGACCAACCAAACTCTTTT  
GTATACCCCTCGCGGGTTTTATATCTGAGCCATCTCGGCGCCTCTCGTAGGCGTTTCGAAAATGAATC  
AAAAC TTTCAACAACGGATCTCTTGGTTCTGGCATCGATGAAGAACGCAGCGAAAATGCGATAAGTAAT  
GTGAATTGCAGAATTCAGTGAATCATCGAATCTTTGAACGCACATTGCGCCCGCCAGTATTCTGGCGGG  
CATGCCTGTCCGAGCGTCATTTCAACCCCTCGAACCCCTCCGGGGGTCGGCGTTGGGGATCGGCCCTT  
ACGGGGCCGGCCCCGAAAATACAGTGGCGGTCTCGCCGAGCCTCTCCTCGCGCAGTAGTTTGACACTC  
GCATCGGGAGCGCGCGCTCCATTGCCGTA AAAACACCCAAC TTTCTGAAATGTTGACCTCGGATCAG  
GTAGGAATACCCGCTGAACTTAA
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D1D2 region of the 28S ribosomal RNA gene; GenBank number KC581160:

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ATATCAATAAGCGGAGGAAAAGAAACCAACAGGGATTGCCCCAGTAACGGCGAGTGAAGCGGCAAC  
AGCTCAAATTTGAAATCTGGCCCTCGGGGTCGGAGTTGTAATTTGTAGAGGATGCTTTTGGTGAGGTG  
CCGCCGAGTTCCCTGGAACGGGACGCCACAGAGGGTGAGAGCCCGTCTGGCTGGCCACCGACCTC  
CTGTAAAGCTCCTTCGACGAGTCGAGTAGTTTGGGAATGCTGCTCAAATGGGAGGTATATGTCTTCTA  
AAGCTAAATATTGGCCAGAGACCGATAGCGCACAAAGTAGAGTGATCGAAAGATGAAAAGCACCTTG  
AAAAGAGGGTTAAATAGTACGTGAAATTTGTTGAAAGGGAAGCGCTTGTGACCAGACTTGGGCGCGGC  
GGATCATCCGGGGTCTCTCCGGTGCAC TCGCCGCTTAGGCCAGCATCAGTTCTGTCGGGGGAA
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AAAGGTTTCGGGAACGTGGCTCCTCCGGGAGTGTTATAGCCCGTTGCATAATACCCTGCGGTGGACTG
AGGACC GCGCATCTGCAAGGATGCTGGCGTAATGGTACCAGCGA

Isolation

Park soil; Singapore.

References

References and other information relating to this product are available online at 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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Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at www.atcc.org

Additional information on this culture is available on the ATCC web site at www.atcc.org.

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