



Trichoderma longibrachiatum-JZ-1

Catlog Number: M-2383

• Product Background

Trichoderma longibrachiatum is a beneficial fungus classified under the phylum Ascomycota (formerly known as "imperfect fungi") and is recognized as a key biocontrol agent in plant protection science. Its preferred substance name is *Trichoderma longibrachiatum*, with synonyms including *Hypocrea sagamiensis* and the CAS number 67892-33-5.

Morphologically, this fungus exhibits distinct characteristics across different culture media:

On PDA medium, colonies reach a radius of 65–70 mm at 20–30°C in dark conditions, forming dark green conidial piles with occasional white spots and faint yellow hyphal stripes.

Conidia are green, elliptical or slender elliptical, while chlamydospores are abundant on CMD medium.

It thrives at 30–35°C, with maximum conidia production at these temperatures, and produces diffusible yellow pigments that peak at 30°C. Naturally occurring in soil environments, *Trichoderma longibrachiatum* has gained widespread attention for its dual role in plant health and soil improvement. It acts through multiple biological mechanisms to support agricultural sustainability, making it a core product in bio-based crop protection and soil management solutions.



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• Basic Info

Application: Cellulolytic bacteria. Using rice straw meal as the sole carbon source, fermented and cultured at 30°C, the measured filter paper enzyme activity FPase2.70 U/mL, endocellulase enzyme activity CMCase2.84 U/mL .

• Properties

CD BioSustainable is a reputable and professional company in the industry. We provide high-level technical services and total solutions to deliver only the most satisfactory results for our clients.

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Directions: 1. Prepare 1 test tube containing pre-oxygenated liquid medium; 2. In a safety cabinet, cauterize the top of the ampoule with an alcohol lamp, rupture it by rapid dripping, and crack it with tweezers; 3. Aspirate the liquid medium and add it into the ampoule to fully dissolve the bacterial powder and then aspirate it back into the test tube; 4. Place the test tube in the corresponding culture conditions and wait for the strain to grow.

Storage: 1. Select the appropriate culture medium according to the characteristics of bacteria; 2. Take out as soon as possible after culture and put it into the refrigerator for storage, pay attention to the storage temperature of different bacteria, such as fungi, *Vibrio cholerae*, etc. need to be stored at room temperature; 3. Record the results of the identification of the strains, including growth, colony characteristics, staining reaction, etc. when preserving the strains; 4. The strain is divided into two sets of storage, one set is used for the preservation of the transmission, and one set is used for the experiments. Regular seed transfer, every 3 generations of identification.

Synonyms: JZ-1

Note: 1. Place the freezing tube in a low-temperature, dry place before activation to avoid bacteria decline; 2. Open, re-solubilize and other operations should be carried out aseptically; 3. If you find any abnormalities such as loosening of the cap of the freezing tube or muddy re-solubilization solution, please stop using it.

• Product Features

Exhibits a granular colony surface with smooth, highly branched green hyphae.

Available in wettable powder formulation with 100% solubility, ensuring easy application.

Offers flexible specifications with viable count options ranging from 20 billion CFU/g to 400 billion CFU/g to meet diverse usage needs.

Features a stable shelf life of 12–18 months when stored in ventilated, cool, and dry conditions.

Produces bioactive metabolites such as auxins, gibberellins, cytokinins, and antifungal compounds like 6-n-pentyl-2-pyrone.

Demonstrates broad-spectrum antagonistic activity against various plant pathogens through multiple mechanisms (mycoparasitism, lysis, competition).

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