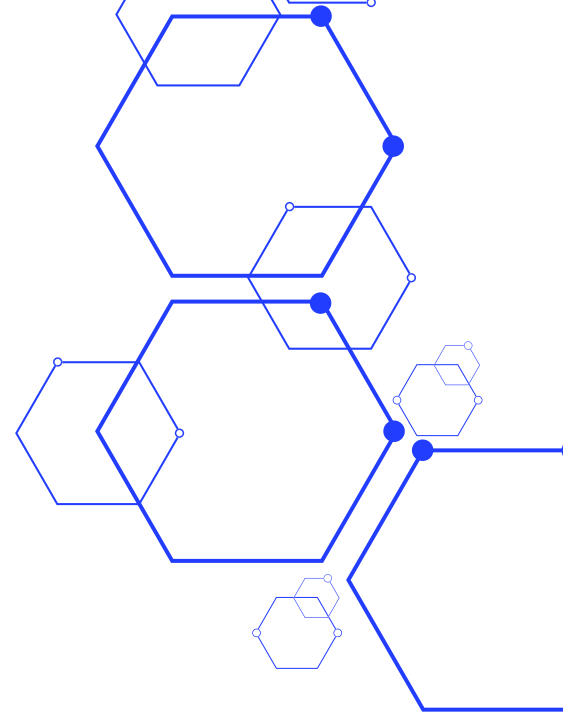


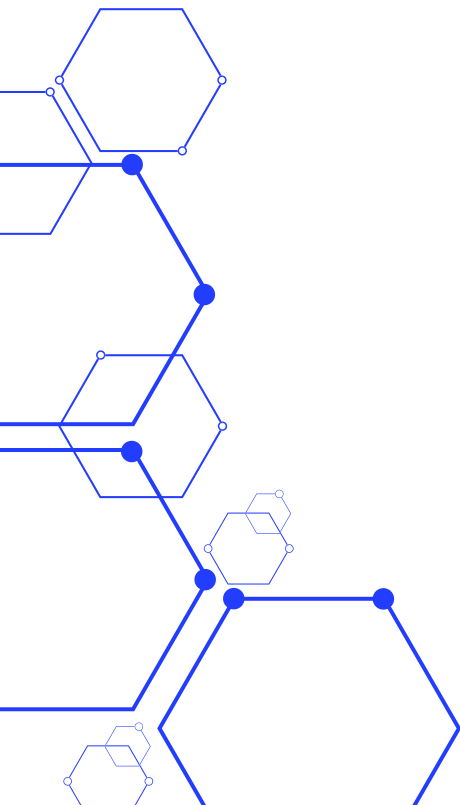


Global solutions for a growing world



FERMENTER TECHMI IMHOFF-FES

HORIZONTAL FERMENTERS FOR SOLID SUBSTRATE



TECHMI IMHOFF-FES FERMENTER

HORIZONTAL FERMENTERS FOR SOLID SUBSTRATE

TECHMI GROUP's horizontal fermenters are built in 316L stainless steel and their importance in the fermentation process of fungi on solid substrate, such as Trichodermas and others

Horizontal fermenters for mushrooms on solid substrate are a crucial tool in the production of mushrooms using the solid state fermentation (SSF) technique. These fermenters are specifically designed to grow mushrooms on a solid substrate, such as grains, cereal husks, agricultural residues or other organic materials.



Our fermenters are equipped with temperature, humidity, ventilation and lighting control systems, which are fundamental for optimal fungal growth. Temperature and humidity are critical factors affecting the development and production of metabolites by fungi, so maintaining these conditions within specific ranges is essential.

Our mixing and stirring devices are optimal for ensuring uniform substrate distribution and facilitating gas exchange. In addition, excellent distribution of adequate aeration is important to provide oxygen to the microorganisms and promote healthy growth.

TECHMI GROUP's horizontal fermenters are available in a variety of sizes and capacities, allowing companies to adapt their production capacity to their specific needs. From laboratory equipment to large-scale production systems.

TECHMI IMHOFF-FES FERMENTER

HORIZONTAL FERMENTERS FOR SOLID SUBSTRATE

Technical details

TECHMI GROUP's FES solid fermenters are designed to provide an environment that optimally replicates the natural conditions in which fungi and Trichoderma grow. Unlike traditional liquid fermentation systems, where microorganisms develop in an aqueous medium, solid fermenters use solid substrates that better simulate the usual environment of Trichoderma in their natural habitat. This similarity with the natural environment results in several benefits Increased Spore Production

- Control of temperature, pH, DO, defoamer, liquid level interface, inoculation port, feed port and multiple spare ports.
- Discharge port, sampling from discharge port, feed port.
- The five electrodes for automatic control parameters.
- Automatic peristaltic pumps for replenishing acid/alkali/foam foam/culture agent.
- Automatic tank lid lifting system
- Siemens S7-200 series PLC control system.
- 10" LCD touch screen.

scada systems and remote monitoring

We design and manufacture custom automation and flow systems.

Applications

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TECHMI GROUP's FES Solid Fermenters in Fungi and Trichodermas Production

Fungi and Trichodermas are microorganisms of great relevance in the agricultural and biotechnological industry due to their ability to control plant diseases, promote plant growth and degrade organic matter. Efficient and high quality production of these microorganisms is essential to maximize their potential in various applications. In this context, TECHMI GROUP's FES solid fermenters stand out as an advanced solution that not only optimizes the production of these fungi and Trichodermas, but also improves the quality of the spores produced.

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Increased Spore Production:

The closer-to-natural environment within the FES solid fermenters allows for more vigorous development of fungi and Trichoderma. As a result, a significant increase in the amount of spores produced is observed, which is crucial for the effectiveness of their agricultural and biotechnological application.

Superior Spore Quality:

Not only are a greater number of spores produced, but the quality of the spores is noticeably superior. The spores generated in FES fermenters are more resistant and viable, which guarantees greater effectiveness in disease control and plant growth promotion when applied in the field.

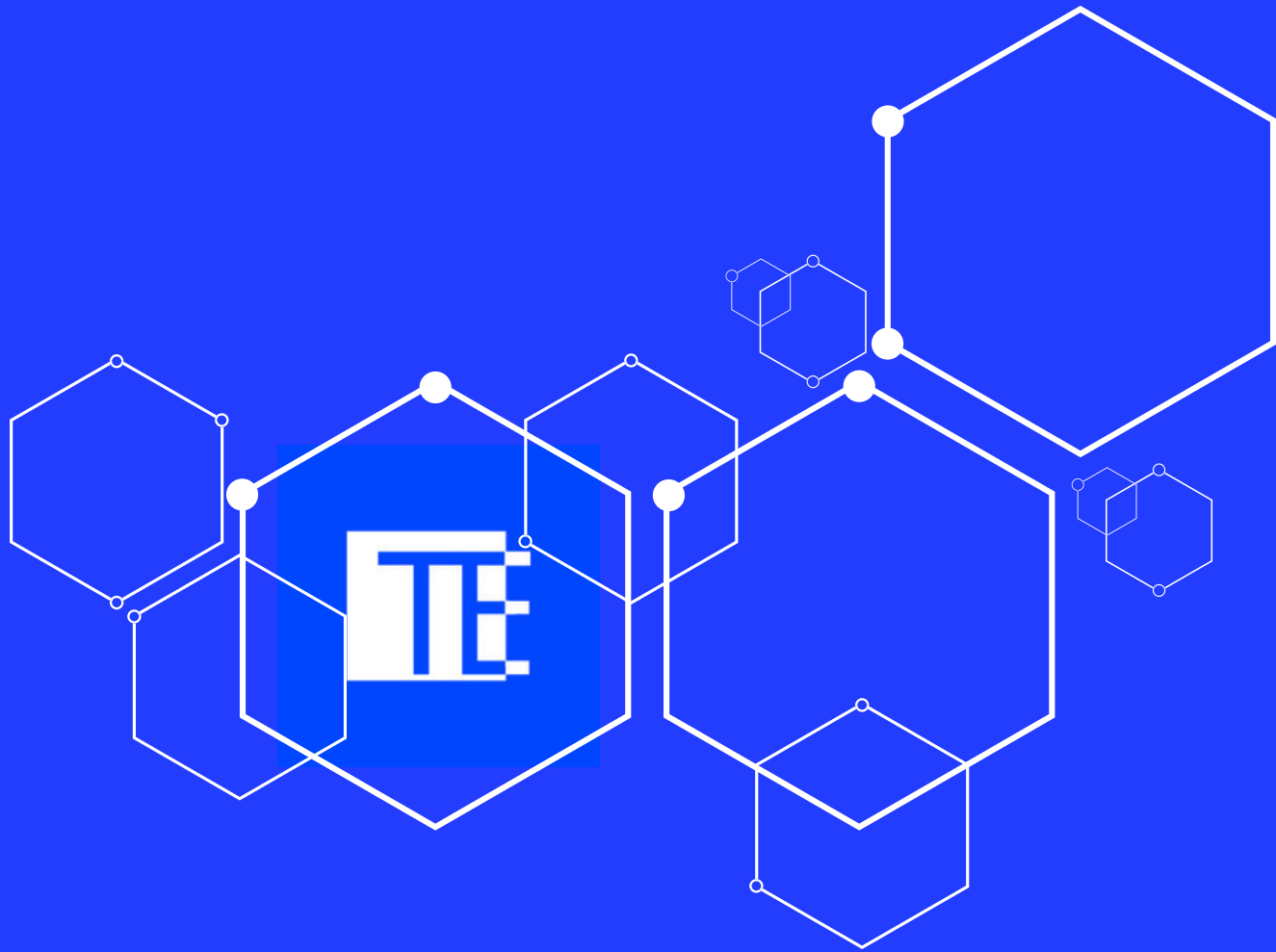
Optimization of the Production Cycle:

Solid fermenters allow precise control of growing conditions, such as temperature, humidity and aeration. This ensures a more efficient and predictable production cycle, which is essential for large-scale production.



Applications:

- Pilot scale production.
- Production of raw materials for drugs and medical devices.
- Biological fermentation of animal feed,
- Fermentation of fungi
- Fermentation of bioproducts on solid substrate.
- Research on natural or waste solids



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