

We investigate, develop and optimize biotechnological processes

The research of the HKI Bio Pilot Plant is mainly focused on the development and optimization of biotechnological processes of natural product producers, including strain development and optimization. In the German academic sector, the Bio Pilot Plant offers unique opportunities for the cultivation of a wide spectrum of microorganisms (bacteria, lower and higher fungi, genetically modified organisms, safety group 1 and 2) from picoliter droplets, via microtiter plates and shake flask cultures to laboratory and pilot scale bioreactors of up to 4.2 m³. All necessary analytical and purification processes including the appropriate technical equipment are available for high quality purifications of natural products, proteins and biopolymers. We are well experienced in the cultivation of microorganisms in the chemostat, anaerobic fermentation conditions, and fermentation at high cell densities. The establishment of a microfluidic platform for ultra-high-throughput-screening of natural products and enzymes and the integration with bioelectrochemistry are examples for the development of innovative technologies. The Bio Pilot Plant closely co-operates with the research departments of the HKI and groups of the Friedrich Schiller University and the Ernst Abbe University of Applied Sciences, Jena.

[BioPilotPlant flyer \(4.2 MiB\)](#)