

Pressure Reactor Cascade – High pressure to find new active compounds

Many natural products are produced by filamentous microorganisms (fungi or actinobacteria) that drastically increase viscosity in bioreactors due to their morphology. Therefore, in classical systems it is much harder to provide sufficient oxygen supply for these organisms and this usually has negative effects on the production of active compounds.

Increasing the pressure within the reactor system allows a gentle oxygen supply and thus favours the desired microbial activity. By implementing the reactors as cascade, continuous fermentation processes can be realized. This allows to study the production processes of active compounds that are subject to end product inhibition (catabolite repression, e.g. all antibiotics).

The pressure reactor cascade is a research reactor system for process development. As such, it is situated at the boundary of basic research and possible economic exploitation by companies. Suitable partners can be found nationally and internationally.

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