Selective Enzyme Inactivation in Complex Food Systems

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Budget: to be determined
Duration: to be determined

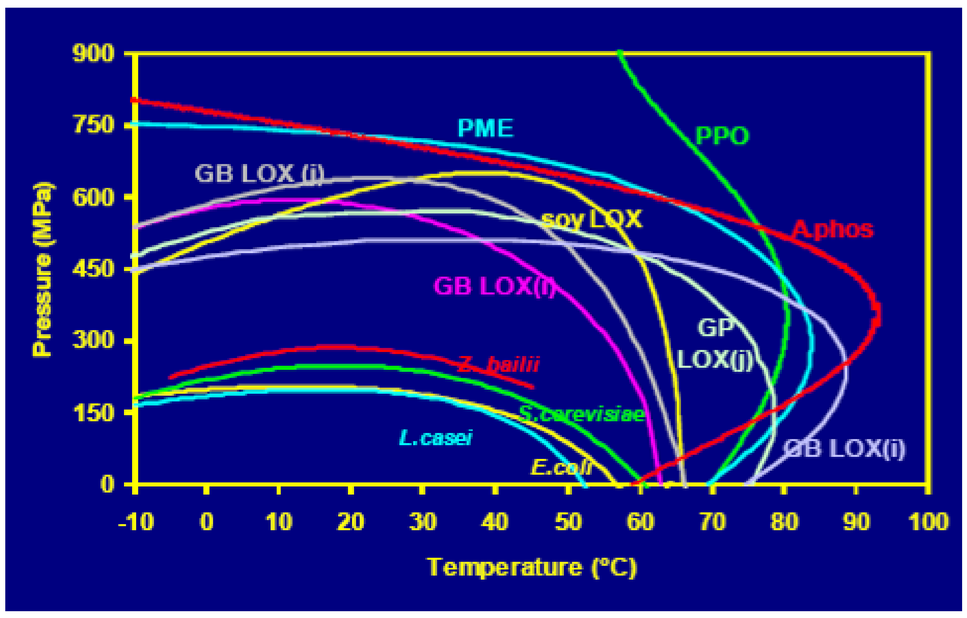
Objectives:

- To improve quality and shelf life of liquid food products by selective inactivation of enzymes that affect flavor, color and texture.
- To increase the knowledge on controlling enzyme activity in complex systems.
- To develop technologies for application in complex liquid food systems.

Pilot unit for high pressure high temperature processing

Motivation:

- New driving forces for selective enzyme inactivation are required.
- Insights derived from single parameter studies on model systems have to be translated to multi-parameter effects in complex food systems.
- The necessary process technology needs to be developed and made applicable for high throughput of liquid products.



Phase diagram of food enzymes (Hendrickx, 2007)

Project scope:

- Explore the (further) potential of new inactivation methods like CO_2, high pressure and advanced heating techniques.
- Design the optimal process for complex liquid food systems, using a multi-parameter approach.
- Develop a versatile pilot unit for real-life tests.

Status:

Project definition stage
Consortium definition stage

Applicability:

Food, Bio-refinery

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