



# Process Development Laboratory

## Interested? Contact us!

Engineering & Consulting

PD PA SE&C EC

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## Your benefit

- Experts for process development and process safety
- Long lasting experience in chemicals and fine chemicals
- Situated in an Industrial Park in the heart of Germany

## Our service offer

- Phys chem data
- Equilibrium data
- Thermal separation
- Membrane technology
- Mixing technology
- Reaction kinetics
- Crystallization
- Drying
- Miniplant operation
- GHS measurements
- Safety data

## The right combination matters!

You want to develop a new chemical process? Or you want to improve an existing one? In our combined laboratory for process development and process safety our experts are able to assist you in any case - ranging from single measurements over the investigation of unit operations to the planning and operation of miniplants.

### Thermo-physical properties data

The exact knowledge of the relevant physical properties is the foundation for any reliable process simulation and design of equipment.

### Distillation, vaporization and absorption

We validate process simulations and designs of equipment, investigate the accumulation of by-products in recycle streams and complex systems, connect different process steps or test product qualities.

### Chemical reaction engineering

Chemical reaction engineering is the design of equipment, e. g. chemical reactors. A substantial part of this work is the mixing of the reaction partners and thus the design of mixers and stirrers. The type of reactors, the mode of operation and the operation conditions have to be determined as well as chemical kinetics and heats of reaction.

### Crystallization

Crystallization allows for separation of components with a high degree of purity. We monitor crystallization processes online for optimizing operating parameters and for obtaining reproducibly filterable crystals.

### Membrane technology

The modular set-up of membrane processes permits a simple adaption to the scale of a given separation problem. Due to their flexibility membrane processes find a wide range of application in process industries.

