

# Solids Processing

## Crystallization – a broad spectrum of processes for better products

### Our service ...

The crystallization experts of Bayer Technology Services support you in all phases of process selection and development – from the laboratory to commercial scale production.

We perform the initial screening tests with your product and determine relevant material data.

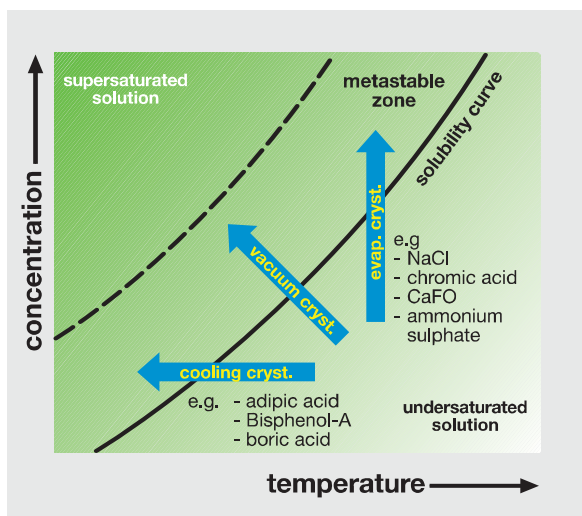
Our production-oriented services comprise

- process development,
- scale-up,
- optimization and
- layout

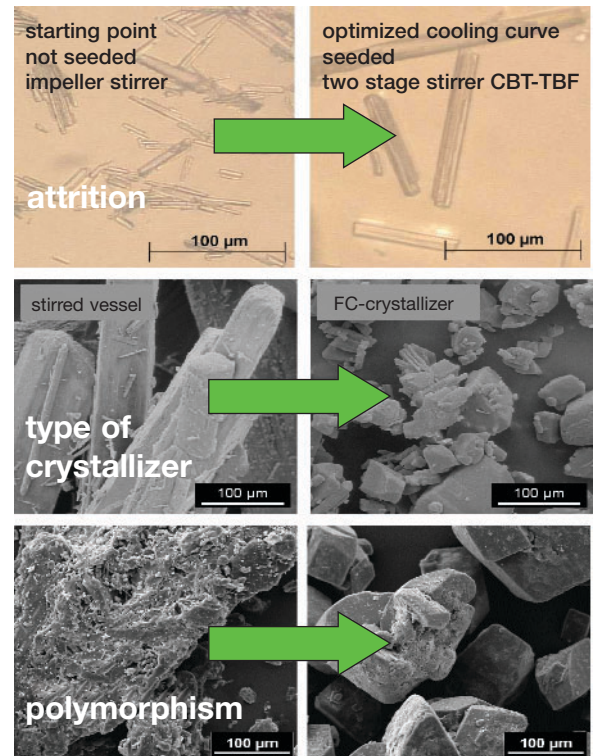
for all batch and continuous crystallization processes as well as

- solution crystallization (cooling, evaporation, vacuum crystallization),
- melt crystallization (layer and suspension crystallization) and
- product design from the melt.

We can develop the optimal process for your product or assist you in improving existing processes.



Which process is best for your product? We test different crystallization processes with your product.



Improved processes, better products! A customized crystallization process results in tailormade product properties.

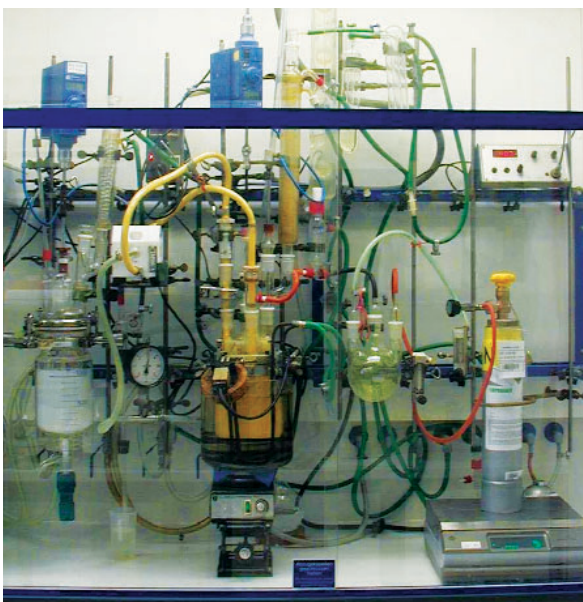
### ... is your gain.

You benefit from our years of expertise and interdisciplinary integration into technical development within the Bayer Group. This ensures:

- flexibility, allowing you to quickly adapt to changes in your market sector;
- innovation, helping you to keep your processes up to date through new and continuing development;
- objective consultancy, providing a reliable basis for your process and investment decisions.



## Our equipment and our approach



Experimental unit for the crystallization of an active substance

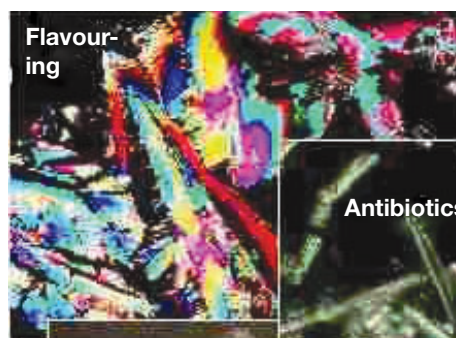
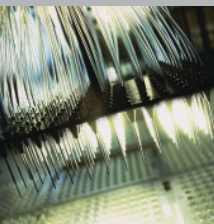
We use our flexible lab equipment to support you over the entire life cycle of the product by:

- determining material data (solubility, solid density, melting point, melt enthalpy);
- characterizing the modification (XRD, DSC, Raman, FT-IR);
- determining the particle size distribution online and offline;
- providing microscopy (light, scanning and transmission electron microscopy);
- working with processes on the laboratory scale (0.1 – 30 L) and on the pilot plant scale;
- designing process-automated units;
- providing optimal solutions for continuous and batch operations;
- investigating explosive and toxic material systems;
- Modeling on the basis of the population balance with PARSIVAL®.

## References

As a development department of an integrated pharmaceutical/chemical group, we can demonstrate comprehensive project experience in a wide range of areas.

- Batch processes:
  - pharmaceutical products
  - agrochemical products: fungicides – 350 tons/year
  - agrochemical products: herbicides – 400 tons/year
  - fine chemicals
- Continuous processes
  - commodities for chemicals and polymers
- Melt crystallization



The crystallization experts at Bayer Technology Services have a wealth of experience with a variety of substances.

## Contact

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