



We offer research and development in the fields:

- Crystallization and precipitation, determination of crystallisation paths during evaporation or cooling
- Kinetics of inorganic reactions
- Leaching of ores
- Kinetics of dissolution
- Water and waste water treatment technologies
- Flotation of ores as well as salts
- Ion exchange
- Liquid-liquid extraction
- Solid-liquid-extraction
- Distillation, rectification
- Prevention of scale formation during evaporation, heat exchange etc.
- Colloidal milling
- Synthesis of inorganics
- Tempering and crystallisation processes at high temperatures

All investigations are realised user-specific in close co-operation with the clients. Short realisation times and confidentiality are main aspects of our work. All investigations follow Good Laboratory Practise guidelines and base on the State of the Art.

In addition to contract research we offer the following analytical services:

- Determination of thermal decomposition of inorganic as well as organic compounds at temperatures up to 1500 °C by TG/DTA measurements
- Particle size analysis (laser diffraction analysis, sieve analysis)
- Determination of compressive, tensile and bending tensile strength
- UV-VIS measurements on organic and inorganic compounds
- Viscosity determinations



The following equipment is available:

- Two 10 Liter jacket tank reactors for investigations between -45 °C and 200 °C and pressure up to 2 bar, dead space free bottom outlet valves, self-tightening bellow drives, hand actuated gear drives, 0-600 RPM; 0,3 m² condensers and reflux dividers
- Flotation machines with 5 and 10 Liter cells
- IKA magicLab, device for colloidal milling and dispersing
- Ultrasonic baths with volumes up to 5 Liter
- Triaxial cells for permeability determinations on soil and rock samples
- Beckman Coulter Laser Diffraction particle analyser LS 13320
- Thermoanalytical system DTG-60 (Shimadzu)

- Universal testing device for determination of compressive, tensile and bending tensile strength
- UV-VIS spectrometer Specord 50
- Flame photometer Jenway PFP 7
- Retsch Sieve shaker VE1000
- High temperature furnaces up to 1500 °C
- Rotary evaporators e.g. Heidolph Laborota 4000
- Rotary Viscosimeter Brookfield DV-II+
- Peristaltic and membrane pumps
- Knick Porta-Lab pH/conductivity measurement devices
- Different types of shakers, mixers, water baths, thermostats and all "conventional" laboratory equipment

Own research and development, especially in the fields of chemical engineering, development of construction materials, sealing/immobilization and nano-materials, guarantee a high scientific level of all investigations and consulting services.

Additionally, we offer different training courses in Chemical Engineering. Please visit our web-site www.ibz-freiberg.de for details.

Whatever your requirements, issues or problems, we would be pleased to collaborate with you.



For more information please contact:

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Contract Research and Analytical Services



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