All investigations are realized user-specific in close cooperation with the clients. Short realization times and confidentiality are main aspects of our work.

All investigations follow good laboratory practice guidelines and base on the state of the art. We use wet chemical analysis and photometric techniques.

More analysis and characterization of solids can be shortly be purchased in accordance with our cooperating partners.
Sealing of water leakages in mining, shaft- and tunnel engineering
Sealing of boreholes even under high temperature and pressure
Sealing of salty leakages in kali and rock salt mining
Waterproofing of construction sites
Encapsulation of contaminants
Reduction of permeability over wide ranges

Sodium silicate / silica sol
Cement/ cement-bentonite suspension
Solutions resulting in formation of minerals (gypsum, CaCO₃, Ca(OH)₂, Fe(OH)₃ etc.)
Synthetic materials like epoxide, polyurethane, acrylate
Latex
Bitumen emulsion

Characterization of compatibility of different solutions during grouting in horizons of reservoirs
Stopping of precipitating gypsum, anhydrite and calcium carbonate as layers in pipes, recuperators and pumps as well as during mixing of different pore solutions
Stabilization of solutions against formation of BaSO₄ and other difficultly soluble compounds
Prevention of formation of iron hydroxide
Dissolution of scale using chelating agent, acids, alkalis etc.

Enormous tests in lab and pilot scale (up to 1 m³) for optimization and characterization, determination of penetration capacity, residual permeability and mechanical properties
Determination of properties like sieve analysis, moisture content, density
Performance of water retention test
Determination of permeability in sedimentary and hard rock
Chemical analysis of flowing solutions
Selection of grouting method, -strategy and -material
On site quality control
Preparation of test reports and documentation

Kali + Salz
„Provoked synthesis of minerals“
Sealing of a salty reservoir
Mosaic
Time Released Grout
Formation of gypsum using oversaturated solutions
Gremjatschinskij
Development of possibilities to seal shafts
Test and development of
- silica sol
- acrylates
- cement / bentonite
BAUER Spezialtiefbau
Further development of materials containing silica sol