The number of damages caused by biogenic sulfuric acid corrosion (BSA) is increasing. The development of materials resistant to BSA requires testing methods that allow for a testing of the materials that is both oriented towards practice and accelerated. To achieve this, test rigs were setup at Fraunhofer UMSICHT.

In cooperation with Dr. Brill + Partner GmbH – Institut für Hygiene und Mikrobiologie weathering tests are carried out to assess the BSA resistance of materials. The results provide indications for a targeted optimization and further development of the materials.

Keywords
- BSA
- Damage to material
- Material testing
- Microorganisms
- Analytics

Industries
- Wastewater treatment
- Biogas plants
- Canal construction
- Drinking water supply
- Sewage engineering
1 Test cubes in original condition.
2 Testing plant.

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Our services

• Conducting weathering tests
• Use of different materials and substrates
• Use of different micro organisms
• Accompanying microbial analytics
• Material optimization

Development of biogenic sulfuric acid corrosion in the sewer system*

Absorption of H₂S, oxidation sulfur, formation of H₅SO₄ acid attack

H₂S emissions into the gas space
dissolved sulfide/dissolved H₂S gas
tenire sulfide in wastewater
sulfide formation through bacteria
inorganic sulfur compounds
organic sulfur compounds