

DNA-Analysis

Granulation-Check

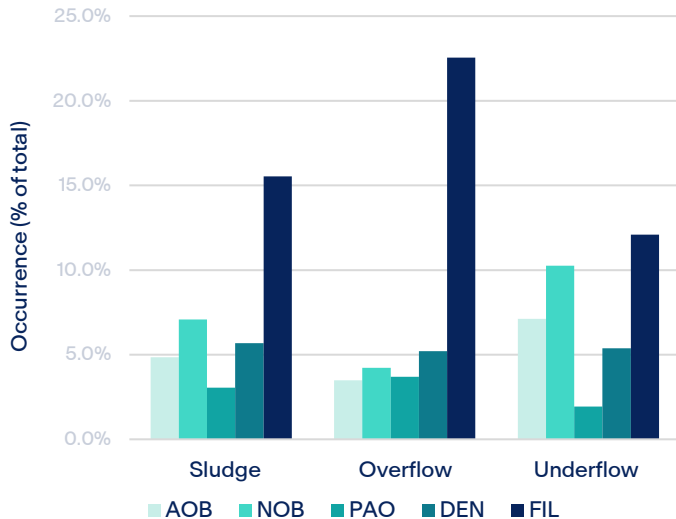


In processes with granular biomass, different niches exist for bacterial growth. The system functions correctly when the niches are properly occupied. The Granulation Check helps to efficiently start up the granulation process and optimize operation..

Included services

- Preliminary phone consultation for sampling instructions
- Sampling and shipping material for 8×3 samples (biweekly)
- DNA extraction, PCR, DNA sequencing, microscopy if required
- Bioinformatics and quality control
- Results as PDF report and raw data (CSV) within 5 working days
- Consulting (approx. 4 hours)

Case study granulation, ARA Altenrhein



Procedure

- Biweekly DNA analyses, for example during startup operation
- Determination of separation efficiency of "good" / "bad" bacteria over time
- Performance evaluation

Results (see figure)

- Nitrite oxidizers (NOB) increasingly found in the underflow (selected sludge)
- Filamentous bacteria (FIL) increasingly found in the overflow (waste sludge)
- Sludge separation is functioning as required

Recommendations

- Adjust nozzle settings, flow rate, and dry solids based on separation performance
- Continuous characterization to identify unfavourable operating modes