

DNA-Analysis

Anammox - Check

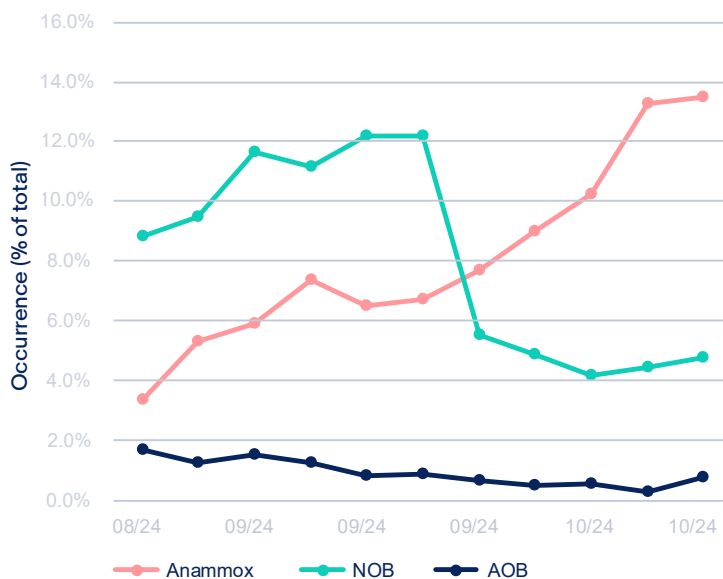


During the operation of Anammox reactors, the growth of certain bacteria can lead to operational problems. Determining the existing bacteria helps with root-cause analysis and enables a better understanding of the process..

Included services

- Preliminary phone consultation for sampling instructions
- Sampling and shipping material for 3×2 samples (biweekly)
- DNA extraction, PCR, DNA sequencing, microscopy if required
- Bioinformatics and quality control
- Results as PDF report and raw data (CSV)
- Consulting (approx. 3 hours)

Case Study: Commissioning of Anammox Reactor (ARA Langmatt)



Procedure

- Weekly DNA analyses over 4 weeks
- Derivation of measures
- Performance evaluation

Results (see figure)

- Initially, few Anammox bacteria (AMX) were present, with problematic nitrite oxidizers (NOBs) dominating
- After measures: decrease in NOBs, increase in AMX
- Early detection of undesirable bacteria
- Indicator for early countermeasures

Recommendations

- Reduce oxygen input
- Copper dosing