

DNA-Analysis

Fit for winter

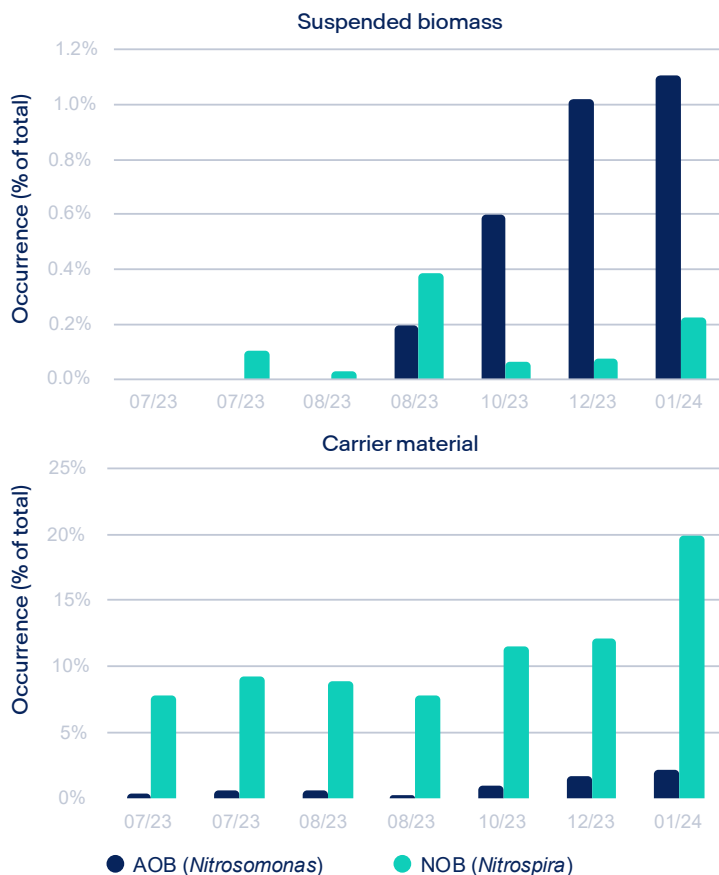


Low wastewater temperatures in winter often present a particular challenge for biological processes and bacteria. The "Fit for winter" package prepares the biology optimally for this phase and ensures stable processes.

Included services

- Preliminary phone consultation for sampling instructions
- Sampling and shipping material for 8×2 samples (biweekly)
- DNA extraction, PCR, DNA sequencing, microscopy if required
- Bioinformatics and quality control
- Results as PDF report and raw data (CSV)
- Consulting (approx. 6 hours)

Case study nitrification, ARA Bazenheid



Procedure

- Weekly DNA analyses over 4 weeks
- Derivation of measures
- Success monitoring

Results (see figure)

- Initially few nitrifiers (AOB + NOB) were present in the sludge
- Significant increase in nitrifiers due to increased sludge age

Good conditions for winter

- Ammonia oxidizers (AOB) found primarily in sludge
- Nitrite oxidizers (NOB) found primarily on carriers

Recommendations

- Increase sludge age seasonally based on DNA analyses
- Gradually increase oxygen availability starting in autumn