

## ***Thiothrix-6***

*Resembles: Thiothrix-021N* (less robust filaments)

*Probes:* Class specific: Gam42a [10], group specific: G123T [7] and TNI [16]

*Frequency occurrence* (200 samples; 175 WTPs):

- observed with a FI  $\geq 1$  in 1 sample
- observed with a FI  $\geq 3$  in 0 samples



### ***Characteristics***

- robust, long, bent filaments;
- present in the liquid between the flocs;
- filament length > 200  $\mu\text{m}$ ;
- filaments not branched;
- not motile;
- cell diameter 2.0 - 2.5  $\mu\text{m}$ ;
- sheath absent;
- without attached growth;
- septa distinct;
- discoid or square cells, occasionally cell packages inside the filaments;
- sulphur granules might be present *in situ*; response to S-test unknown;
- Gram: small blue granules inside Gram negative cells;
- Neisser negative.

### ***Occurrence in activated sludge***

*Thiothrix-6* was only observed in a WTP treating wastewater from a pulp & paper industry. Due to the limited number of observations, it is not possible, however, to draw final conclusions concerning a possible correlation of this morphotype with a specific industrial branch.

See *Thiothrix-1* lemma for remarks, physiology, control strategies and references.

### ***Slide show images***

- 1-3: morphological features.
  - 3: very uncommon 'cell packages'
- 4: occasionally *in situ* sulphur storage

- 5: Gram stained
- 6: FISH image with probe TNI