we clean water

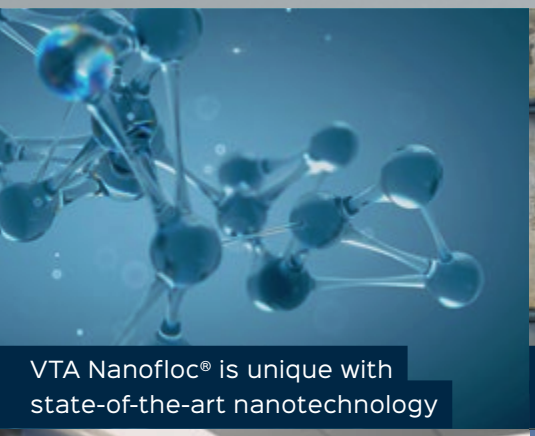
VTA Nanofloc®

We utilize advanced nanotechnology to enhance water purification processes



VTA Nanofloc® Video

Liquid engineering process with VTA Nanofloc® for optimal wastewater treatment



VTA Nanofloc® is unique with state-of-the-art nanotechnology



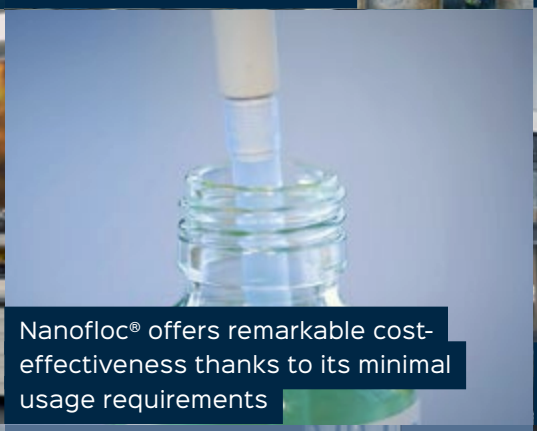
The hurdles within wastewater treatment are substantial



Our continuous dedication to research and refinement ensures our success



VTA Nanofloc® operates with exceptional efficiency and remarkable speed



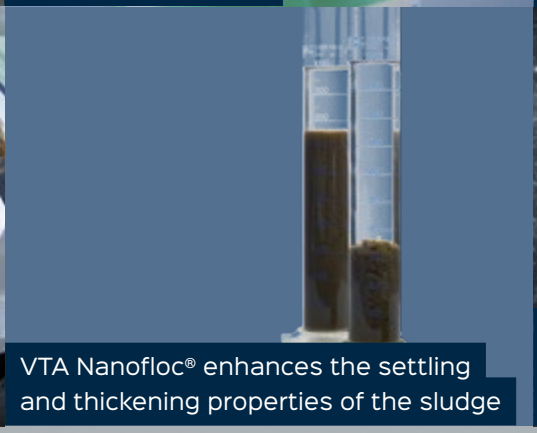
Nanofloc® offers remarkable cost-effectiveness thanks to its minimal usage requirements



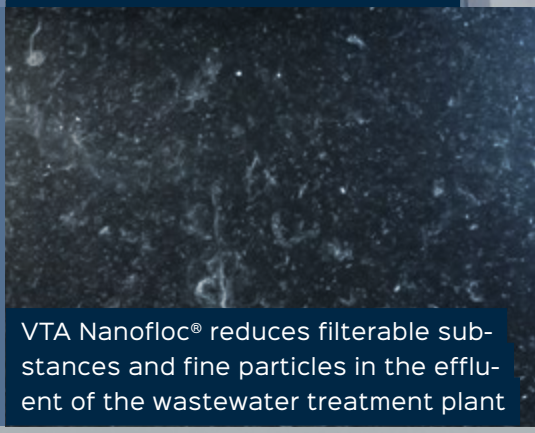
VTA Nanofloc® enhances the efficacy of wastewater treatment facilities



The VTA liquid engineering process significantly enhances cost efficiency for wastewater treatment plants while promoting sustainability



VTA Nanofloc® enhances the settling and thickening properties of the sludge



VTA Nanofloc® reduces filterable substances and fine particles in the effluent of the wastewater treatment plant

Instantaneous impact and unparalleled penetrating capability – VTA Nanofloc®, an advanced solution crafted with cutting-edge nanotechnology

One innovation, numerous advantages:

ENHANCED SETTLING PERFORMANCE

- Reliable impurity control even with extreme inlet fluctuations (external discharges)
- Significant acceleration of settling rates (up to fivefold increase achievable)
- Rapid formation of highly dense, shear-resistant sludge flocs
- Efficient binding of ultra-fine flocs and suspensions

COST EFFICIENCY

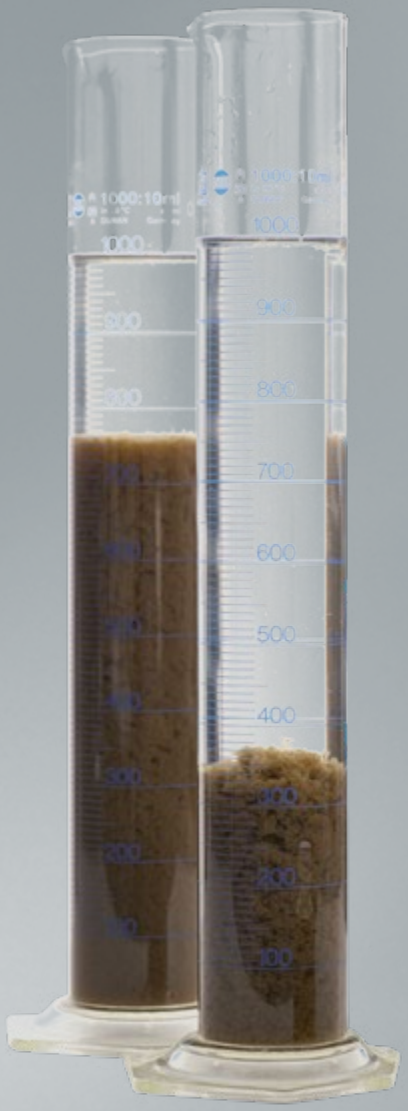
- Enhanced oxygen transfer efficiency
- Reduced energy consumption for aeration
- Accelerated degradation of contaminants

IMPROVED SLUDGE MANAGEMENT

- Prompt and lasting enhancement of sludge properties in terms of sedimentation and thickening
- Streamlined dewatering process and reduced polymer usage
- Decreased reloading via filtrate or centrate discharge

Enhances the efficiency and environmental footprint of the wastewater treatment facility

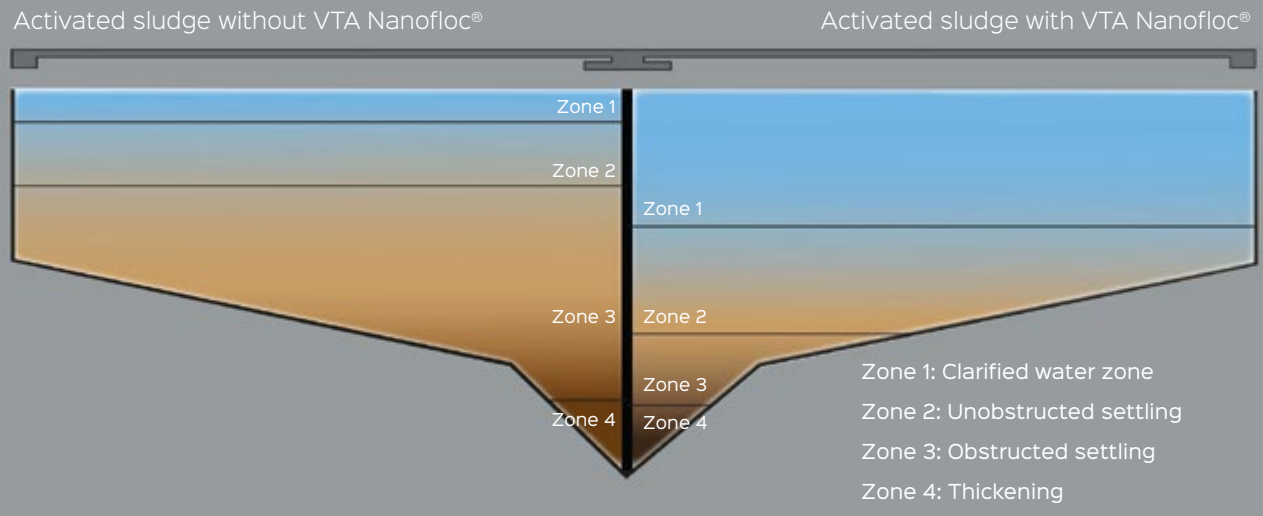
Sedimentation behavior



Effective and economical! VTA Nanofloc® maximizes the settling rate of solid particles and the control of contaminants in biological systems in record time – while requiring minimal dosage.

By strategically implementing VTA Nanofloc® in precise doses within the distribution structure, return sludge, or secondary clarifier inlet, we can potentially enhance the settling rate of suspended solids by up to five times. This is achieved by fostering the formation of compact and shear-stable activated sludge flocs. Such optimization not only boosts the hydraulic load-bearing capacity but also mitigates sludge carryover, particularly under impact loads and heavy rainfall occurrences. Moreover, it reduces the need for polymers in sludge dewatering while markedly improving the dewatering efficiency.

Sedimentation – Secondary clarifier



By strategically employing VTA Nanofloc®, tangible outcomes affirm heightened settling velocities of solid particles. This amplification extends the effectiveness of zones 1 and 2 within the secondary clarifier, specifically facilitating unimpeded settling of sludge flocs. Consequently, it enhances the hydraulic dynamics of the wastewater treatment facility.

Flocculation & filamentous bacteria

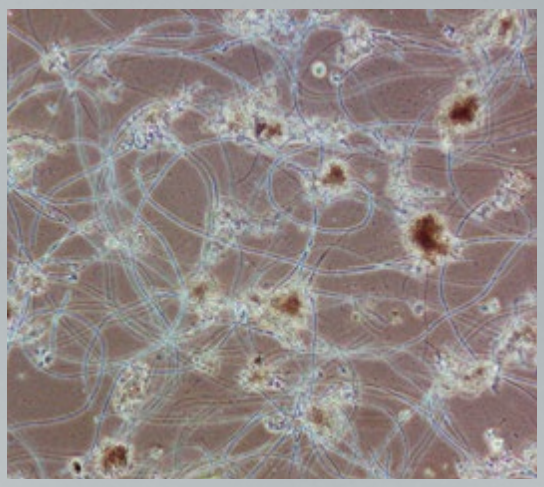


Image 1

An initial microscopic inspection unveiled significant floc breakdown with robust filaments. The bulk of the activated sludge comprised dense, lengthy filaments primarily of the filamentous bacterium type 021N alongside diverse industrial filaments. Floc settling became impracticable due to heightened filament presence and substantial floc size.

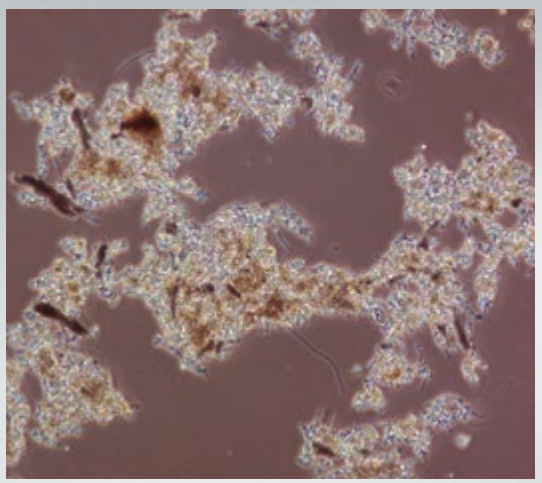


Image 2

Shortly after commencing VTA Nanofloc® treatment, a notable decrease in filamentous bacteria and a stabilization of the floc formation became evident. The restoration of the floc biocenosis led to an optimal cleansing outcome.

we clean water

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„Clean water,
clean environment –
for our future
generations.“

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