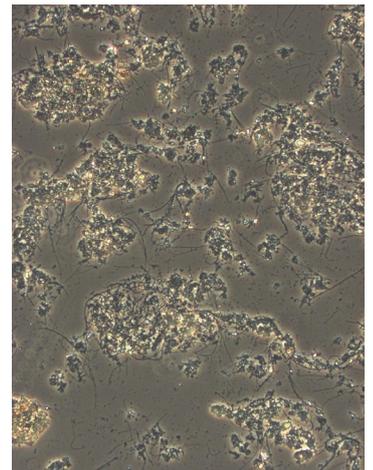


Novozymes BioQuick™ 5140

Reduces production delays and enables discharge compliance for new plant start-ups

The successful start-up of a wastewater treatment plant requires a specific series of events involving the microbial community. First, the microbial community needs to build to a concentration sufficient for removing organics within the designed hydraulic retention time. Second, it needs to flocculate and settle. If one of these events does not happen, the start-up period can drag on for weeks, causing delays and possible production hold-ups for industrial plants. A well-developed microbial community can take weeks or months to become established with only native microorganisms. Importing sludge can shorten the start-up period, but it involves the hassle of finding a source and trucking it to the plant. Also, imported sludge does not always lead to a shortened start-up period, particularly if the sludge requires an adaptation period or contains nuisance organisms such as filaments.



BioQuick 5140 : Preinoculated porous media for rapidly developing an established microbial community

BioQuick 5140 contains beneficial microorganisms on a microporous mineral carrier and trace elements. When added to an aeration basin, the carrier acts as a support medium and provides attachment sites for bacterial growth, while the micronutrients and microorganisms help accelerate biomass development. As the microbial community develops, BioQuick 5140 helps floc particles increase in size, mass, and settleability. BioQuick 5140 should be used in conjunction with other Novozymes' microbial products for start-ups and for upset recovery. This allows the start-up process to happen faster and with greater predictability.

The benefits of using BioQuick 5140

Lower operating costs

- Reduces surcharges
- Reduces permit violations
- Reduces production delays

Improved plant efficiency

- Quickly builds biomass
- Improves flocculation
- Improves settleability

Simplified operations

- Shortens start-up period
- Makes start-ups more predictable

Novozymes is the world leader in bioinnovation. Together with customers across a broad array of industries we create tomorrow's industrial biosolutions, improving our customers' business and the use of our planet's resources.

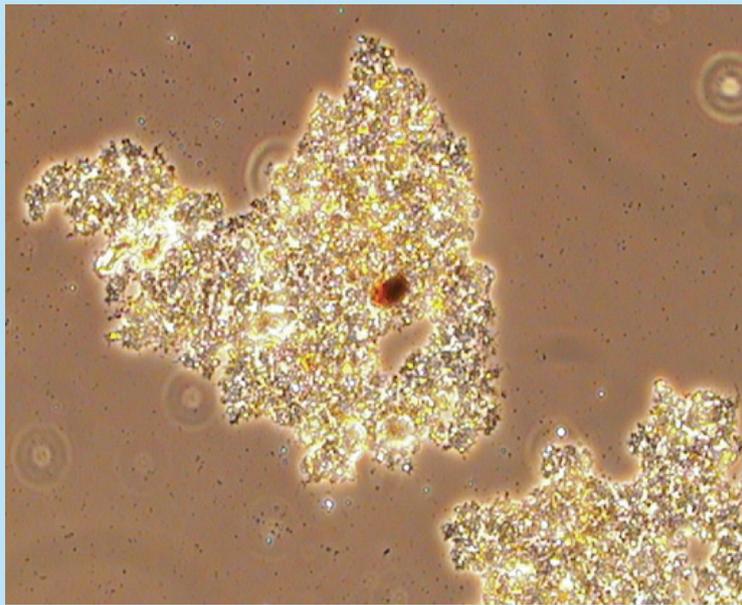


Fig. 1. Large and dense floc particles after a successful start-up.

Enhancing your business is our business

Team up with Novozymes for innovative biosolutions to reduce costs, improve water quality, and capitalize on renewable energy opportunities. Unique products, experience with beneficial microorganisms and enzymes, and our commitment to improve our business are just three reasons to choose Novozymes as your bioinnovation partner.

For more information please visit www.novozymes.com

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