

PRODUCT SPOTLIGHT

BIONETIX INTERNATIONAL BCP655: BIOCONVERTER FOR INDUSTRIAL AND MUNICIPAL LAGOONS; A COST EFFECTIVE SOLUTION TO A COMMON PROBLEM



Bionetix BCP655 consumes inorganic nitrogen such as ammonia, nitrate, and nitrite in municipal and industrial treatment plants. It removes nitrogen from wastewater rather than converting it to another form; and significantly reduces ammonia levels, usually 40-50% within 24-48 hours. BCP655 enhances removal of organic nitrogen i.e. amino acids, proteins, purines, pyrimidines, and nucleic acids while increasing wastewater treatment efficiency by at least 50%. There is reduced plant upsets from shocks and eliminates expensive surcharges due to high TKN discharge levels.



The *Pseudomonas* bacteria used in BCP655 are heterotrophs and utilize organic carbon as the source for food and energy. During this process, overall nitrogen removal occurs through three separate mechanisms:

- The selected *Pseudomonas* strains have a much higher carbon uptake than what is normally encountered in a wastewater treatment system. As their carbon uptake is usually higher (because they can attack a wide range of organic chemicals), the corresponding nitrogen uptake is higher. Since ammonia is available as a nitrogen source, the ammonia consumption is increased also and the discharge ammonia levels are reduced in the treated water.
- *Pseudomonas* bacteria, considered to be the most active denitrifiers, utilize nitrite/nitrate for respiration if the dissolved oxygen drops below the critical level in the aeration tank. This also results in lower nitrogen levels.
- *Pseudomonas* are capable of utilizing nitrite as well as nitrate for growth purposes if ammonia is no longer available in the system. Bioaugmentation with BCP655 results in removal of nitrogen from the wastewater, rather than a conversion from ammonia to nitrate or nitrite.



Please contact Bionetix for more information on BCP655 or any of our other water treatment technologies.