

Bionetix® Newsletter

July 2021

York University Study Demonstrates Exciting Potential for Bionetix® Biogas Treatments

Even though biogas holds exciting opportunities as a renewable energy source, there are many factors that can go wrong in the course of biogas production. Bionetix® aims to counter challenges by boosting biogas efficiency through bioaugmentation and biostimulation technologies. York University in Toronto, Ontario, was asked to study a few of these products for their impact on biogas production and released their results at the end of 2020.[†]

One product tested by York University was a new Bionetix® formulation not yet named at the time. Now called BIOGAS BOOSTER 3™, this package of three micronutrients was designed by Bionetix® to boost methane production by meeting nutritional needs of microorganisms that do the work of anaerobic digestion. York University testing showed that the addition of BIOGAS BOOSTER 3™ did indeed increase biogas production in just one week, with expectations for continued growth in biogas production as time went on.

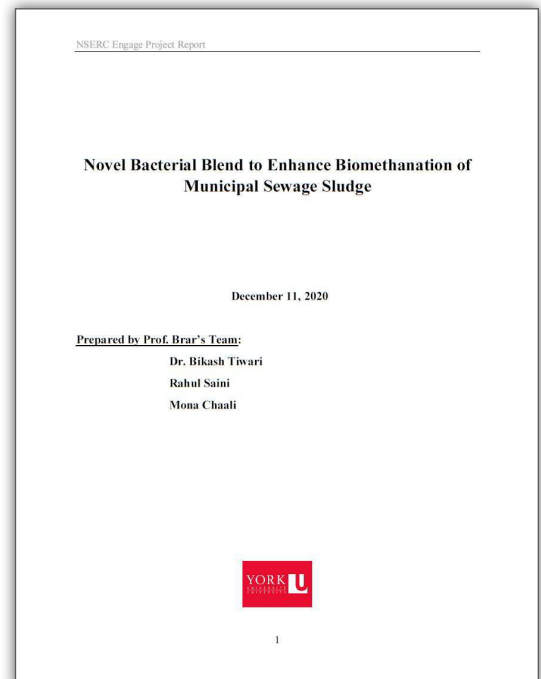
The study also addressed another problem for biogas production. While the most abundant biogas feedstock is lignocellulosic waste (e.g., plant matter, wood, agricultural waste), it is difficult to digest and releases inhibitors that keep microorganisms from growing to reach their full anaerobic digestion capacity. This in turn limits the amount of biogas produced. In regard to this challenge, York University testing suggested that BCP12™, an existing Bionetix® bioaugmentation product, could potentially help by increasing the concentration of beneficial microorganisms even in the presence of lignocellulosic inhibitors. The report concluded, "Hence, BCP[12™] can be also employed as [a] supplement in media containing inhibitors to increase the microbial tolerance towards several toxic compounds."

Equip yourself with these and other exciting tools for the biogas industry by contacting us today: <https://www.bionetix-international.com/contact-us/>

Read more about BCP12™ here: https://www.cortecvci.com/whats_new/announcements/BCP12-York-University-Study-PR.pdf

Read more about BIOGAS BOOSTER 3™ here: https://www.cortecvci.com/whats_new/announcements/BIOGAS-BOOSTER-3-PR.pdf

[†]York University NSERC Engage Project Report, "Novel Bacterial Blend to Enhance Biomethanation of Municipal Sewage Sludge," 11 December 2020. Prepared by Prof. Brar's Team: Dr. Bikash Tiwari, Rahul Saini, and Mona Chaali.





BIONETIX® NEWS

Bionetix® Joins Canadian Virtual Export Mission to Argentina

Bionetix® International was proud to be one of 10 “Ontario mission companies” participating in the April 12th-15th “Water and Wastewater Export Business Mission to Argentina” to connect Canadian cleantech companies with key players in Argentina. Oscar Caceres, Latin America Sales Representative, represented Bionetix® at the virtual trade mission, and found that the embassy did an excellent job screening contacts and facilitating discussion between Bionetix® and Argentinian parties interested in biological solutions for wastewater treatment. Oscar had already learned much about the regulations and potential obstacles in the Argentinian market through a March 1st webinar hosted by the Ontario Trade Commissioner Service. However, he came away from the events seeing great potential for Bionetix® technology in Argentina and strategizing new ways to overcome barriers through the use of Bionetix® concentrates. If you work in Argentina or other surrounding Latin America regions, be sure to contact Oscar with your questions: ocaceres@bionetix.ca.



Bionetix® Passes ISO 9001 Audit with No Non-Conformities

Certificat(e) CA08/4215
Le système de gestion de
The management system of

Bionetix International Corporation Inc.
21040, rue Dupont
Ste-Anne-de-Bellevue, QC H9X 4C7, Canada
a été évalué et enregistré selon les exigences de la norme
has been assessed and certified as meeting the requirements of:

ISO 9001:2015
La portée d'enregistrement est présentée ci-dessous:
The scope of registration is as follows:

**Design, development and manufacturing of microbial products, natural hygiene solutions and environmental treatments.
Conception, développement et fabrication de produits microbiologiques, de solutions d'hygiène naturelle et de traitements environnementaux.**

Des éclaircissements supplémentaires concernant la portée de ce certificat ainsi que l'applicabilité des exigences de la norme selon ISO 9001:2015 peuvent être obtenus en consultant l'organisme.
Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2015 requirements may be obtained by consulting the organization.

Ce certificat est valide du 1 mars 2020 au 1 mars 2023
et demeurera valide sous réserve du bon maintien des audits de surveillance.
L'audit de renouvellement est dû au minimum 60 jours avant la date d'échéance.
Edition 8. Enregistrée depuis février 2008.
This certificate is valid from 1 March 2020 until 1 March 2023
and remains valid subject to satisfactory surveillance audits.
Recertification audit due a minimum of 60 days before the expiration date.
Issue 8. Certified since February 2008.

L'audit ayant abouti à ce certificat a débuté 22/01/2020. L'audit leading to this certificate commenced on 22/01/2020.
Le certificat précédent était valide jusqu'au 01/03/2020. Previous issue certificate validity date was until 01/03/2020.

Autorisé par/Authorized by:
Dan Seal
Dan Seal
Technical Accreditation Manager, Certification & Business Enhancement North America
Accredited Office/Bureau accrédité
SGS North America, Inc.
201 Route 17 North, Rutherford, NJ 07070, USA
(201) 508-3000 f (201) 935-4555 www.us.sgs.com

Ce certificat demeure la propriété de SGS et sera retourné sur demande
This certificate remains the property of SGS and shall be returned upon request

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Quality Management System audit time was a little different for Bionetix® International this year due to COVID. Instead of Michel Morin of the SGS accrediting agency traveling onsite to our biotechnology offices near Montreal, Canada, he performed the ISO 9001:2015 quality audit remotely via Zoom video conferencing on January 22nd, 2021. The most important thing that did not change was that Bionetix® again passed the quality management system audit with no non-conformities! Three audit report highlights included Bionetix® meeting its goal of no product returns in 2020, slightly surpassing its goal on average ratings for its 2020 customer satisfaction survey, and chronicling 10 new and revised products in progress.





RESOURCE NEWS

Refreshed Product Data Sheets!



AQUA-FEED™
FEED ADDITIVE

FEATURES AND BENEFITS

- Improves hydrolysis and digestion
- Supplies beneficial bacteria to the intestine of fish, shrimp
- Supports intestine health
- Reduces waste discharge

PRODUCT DESCRIPTION

AQUA-FEED™ is an all natural feed additive specially formulated for the aquaculture industry to promote increased weight gain of shrimp, fish, and other aquatic species. It is rich in β-glucans, mannan-oligosaccharides (MOS), beneficial probiotics, and other key vitamins, nutrients, and minerals to support overall species' health.

AQUA-FEED™ also works to keep aquaculture ponds clean and improve quality of aquatic life by promoting healthy aerobic conditions that lead to the release of methane, ammonia, and hydrogen sulfide, which are harmful to aquaculture and promote disease.

TYPICAL APPLICATIONS

- Ornamental Ponds
- Fish/Ranch Farms


SPECIFICATIONS

Description	Light Yellow
Stability	Max.
pH	4.0-7.0
Nutrient Content	Microelement
Enzymes Present	Amylase, xylanase
Microorganisms	Bacilli, Bacillus Blend
Bacteria Count	5 billion

PACKAGING & STORAGE

Available in bulk, water-soluble custom packaging.

Store in a cool, dry location. No sunlight. Please follow the recommendations and use the product before the best before date. Contact Bionetix® with questions. Avoid excessive skin contact.



ABC 1000™
MULTIPURPOSE CONCENTRATE POWDER

FEATURES AND BENEFITS

- Offers economical approach to cleaning
- Degradable a wide range of complex organics
- Reduces BOD, suspended solids, organic sludge, and FOG
- Fights bad odors

PRODUCT DESCRIPTION

ABC 1000™ is a high concentrate, multipurpose bacterial powder ready to blend with a wide range of organic diluents in order to formulate a broad spectrum of end-use products. This non-pathogenic, bacillus spore blend is effective in numerous applications where it is necessary to degrade a variety of complex organics and reduce BOD, suspended solids, organic sludge, odor, and FOG (fats, oils, greases).

ABC 1000™ offers many advantages to compounders because of its multipurpose use as a biological concentrate in addition to its versatility and natural effectiveness. ABC 1000™ reduces inventory and shipping costs, providing an economical approach to formulating microbial products.

TYPICAL APPLICATIONS

- Holding Tanks
- Lagoons
- Drain Lines

SPECIFICATIONS

Description	Brown
Stability	Max.
pH (1% Solution)	5.0-7.0
Bacteria Count	50 bil

PACKAGING & STORAGE

Available in bulk, water-soluble pouches or custom packaging.

Store in a cool, dry location. Packaging in sunlight. Please follow the recommendations before date. Contact Bionetix® with questions. Avoid inhalation and eye contact. Avoid excessive skin contact.



ABC 1200™
SPORE BLEND POWDER FOR FOG

FEATURES AND BENEFITS

- Increases microbial populations to promote waste degradation
- Prevents malodorous odors
- Reduces BOD, COD, suspended solids, and organic sludge
- Effective on waste from an industrial and municipal
- Economic approach to formulating microbial cleaning products

PRODUCT DESCRIPTION

ABC 1200™ is a multipurpose blend of vegetative and spore microorganisms effective in degrading many types of industrial and municipal waste. This concentrate is applicable for numerous end use formulations to degrade organic waste in food, chemical, petroleum, petrochemical, and other industries. By increasing microbial populations, ABC 1200™ prevents malodorous conditions and reduces BOD, COD, suspended solids, and organic sludge. ABC 1200™ offers compounders the advantage of reduced inventory and shipping costs, providing an economical approach to formulating microbial cleaning powder products.

TYPICAL APPLICATIONS

ABC 1200™ is ideal for formulation of products:

- Sewer Mains
- Landfills
- ABCs
- Lagoons
- Tanks (Imhoff, Oxidation, and Sludge)
- Aeration SBRs

SPECIFICATIONS

Description	Brown
Stability	Max.
pH (1% Solution)	5.0-7.0
Bacteria Count	50 bil

PACKAGING & STORAGE

Available in bulk, water-soluble pouches or custom packaging.

Store in a cool, dry location. Packaging in sunlight. Please follow the recommendations before date. Contact Bionetix® with questions. Avoid excessive skin contact.



ABC 4000™
MULTIPURPOSE CONCENTRATE LIQUID

FEATURES AND BENEFITS

- Cleans and digests organic waste materials in a variety of applications
- Improves cleaning capabilities
- Controls odor
- Economical approach to formulating microbial products

PRODUCT DESCRIPTION

ABC 4000™ is a multiple spore blend concentrate liquid ready for use as the base culture in formulating a wide range of biological cleaners. Non-pathogenic bacteria in ABC 4000™ work to solubilize grease, fats, oils, starches, proteins, and cellulose. ABC 4000™ digests these organic waste materials and allows them to be rinsed away. The concentrate can also be used for odor control.

ABC 4000™ is advantageous for compounders because of its multipurpose functionality in numerous end-use formulations. It reduces inventory and shipping costs, providing an economical approach to formulating microbial cleaning, maintenance, and odor control liquid products.

TYPICAL APPLICATIONS

ABC 4000™ can be formulated for:

- Carpet and fabric care
- Grease trap and drain maintenance
- Septic tank and wastewater treatment
- Bathroom and hard surface cleaning
- Odor control

SPECIFICATIONS

Description	Light Yellow
Stability	Max.
pH (1% Solution)	5.0-7.0
Bacteria Count	50 bil

PACKAGING & STORAGE

Available in 4 x 4 L, 20.37 kg, 20.

Store in a cool, dry location. No sunlight. Please follow the recommendations and use the product before the best before date. Contact Bionetix® with questions. Avoid inhalation and eye contact. Avoid excessive skin contact.



ABC 6000™
MULTIPURPOSE BIOENZYME BLEND LIQUID

FEATURES AND BENEFITS

- Contains microorganisms and bio-enzymes for targeted cleaning
- Digests grease, fats, oils, starches, proteins, and cellulose in a non-odorous manner
- Offers an economical approach to formulating microbial products

PRODUCT DESCRIPTION

ABC 6000™ is a blend of bacteria and free enzymes for use as the base culture in formulating a wide range of biological cleaning products. ABC 6000™ combines non-pathogenic bacteria with protease, amylase, cellulase, and lipase enzymes to improve the release and removal of soil and odor-containing compounds found in organic waste.

ABC 6000™ comes ready to formulate in a liquid, pre-dilutable form. Use of the blend reduces inventory and shipping costs, providing an economical approach to the formulation of bio-enzymatic cleaning liquids.

TYPICAL APPLICATIONS

- Serves as the base culture for the formulation of a wide range of cleaning products
- Can be used as a cleaning aid and an organic digester for release and liquefaction of a wide variety of organic wastes

SPECIFICATIONS

Description	Beige or brown free flowing liquid
Stability	Max. less of 1 kg/yr
pH	6.0-8.0
Enzymes Present	Protease, amylase, cellulase, lipase
Bacteria Count	2 billion CFU/g

PACKAGING & STORAGE

Available in 4 x 4 L, 20.37 kg, 208.82 kg, and custom packaging.

Store in a cool, dry location. Packaging must be kept intact, dry, and away from sunlight. Please follow the recommendations and use the product before the best before date. Contact Bionetix® with questions. Avoid inhalation and eye contact. Avoid excessive skin contact.

We have recently revised five of our product data sheets with updated information and a fresh, clean look! Download and print these product data sheets at any time from our website or simply send an email link to your customer. As evidence of the wide array of end uses for Bionetix® biologicals, these products cover everything from the aquaculture industry to cleaning, odor control, and wastewater maintenance. Take a closer look below.

AQUA-FEED™ is an all-natural feed additive specially formulated for the aquaculture industry to promote increased weight gain of shrimp, fish, and other aquatic species. It is rich in β-glucans, mannan-oligosaccharides (MOS), beneficial probiotics, and other key vitamins, nutrients, and minerals to support overall species' health. Get the PDS here: https://www.bionetix-international.com/wp-content/uploads/2021/05/AQUAFEED_PDS_EN_05-05-21.pdf

ABC 1000™ is a high concentrate, multipurpose bacterial powder ready to blend with a wide range of organic diluents in order to formulate a broad spectrum of end-use products. This non-pathogenic bacillus spore blend is effective in numerous applications where it is necessary to degrade a variety of complex organics and reduce BOD, suspended solids, organic sludge, odor, and FOG (fats, oils, greases). Get the PDS here: https://www.bionetix-international.com/wp-content/uploads/2019/11/ABC1000_PDS_EN_7-6-21.pdf

ABC 1200™ is a multipurpose blend of vegetative and spore microorganisms effective in degrading many types of industrial and municipal waste. This concentrate is applicable for numerous end use formulations to degrade organic waste in food, chemical, petroleum, petrochemical, and other industries. Get the PDS here: https://www.bionetix-international.com/wp-content/uploads/2019/11/ABC1200_PDS_EN_07-06-21.pdf

ABC 4000™ is a multiple spore blend concentrate liquid ready for use as the base culture in formulating a wide range of biological cleaners. Non-pathogenic bacteria in ABC 4000™ work to solubilize grease, fats, oils, starches, proteins, and cellulose. ABC 4000™ digests these organic waste materials and allows them to be rinsed away. The concentrate can also be used for odor control. Get the PDS here: https://www.bionetix-international.com/wp-content/uploads/2019/11/ABC4000_PDS_EN_07-06-21.pdf

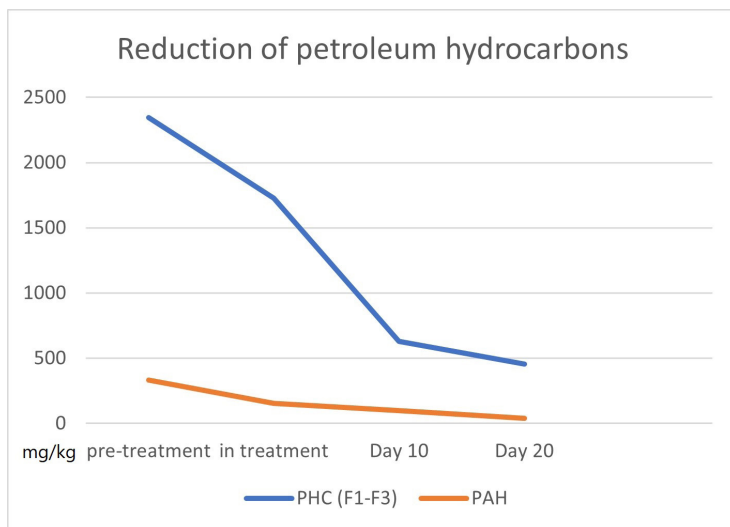
ABC 6000™ is a blend of bacteria and free enzymes for use as the base culture in formulating a wide range of biological cleaning products. ABC 6000™ combines non-pathogenic bacteria with protease, amylase, cellulase, and lipase enzymes to improve the release and removal of soil and odor-containing compounds found in organic waste. Get the PDS here: https://www.bionetix-international.com/wp-content/uploads/2021/07/ABC6000_PDS_EN_07-07-21.pdf

New Case Histories

Case histories are a great way to be inspired and share positive results with potential customers. Our latest two releases feature microorganisms at work to clean up contaminated soil and oil-stained concrete.

Soil Bioremediation Test

An engineering company decided to test Bionetix® bioremediation on soil, but only applied one of the three recommended doses of BCP35™ and BIOSURF™. Even so, the amount of measured petroleum hydrocarbons (PHC) and polycyclic aromatic hydrocarbons (PAH) dropped by more than 70% in only 20 days. Total concentration of petroleum hydrocarbons was slightly elevated on day 43 (still more than 70% below initial measurements), but this could be due to bioremediation breaking longer, unmeasured hydrocarbons (i.e., chains longer than C34) into detectable smaller chains. In any case, the usually persistent and difficult to decompose PAH continued to drop during this time as a success indicator. Log in to read the full case history here: https://www.bionetix-international.com/wp-content/uploads/Restricted_Case_Histories/ch036.pdf



Restaurant Walkway Cleanup



Building management asked a restaurant in New Brunswick to clean up oil stains on the concrete slab outside the back door leading to the dumpster. The restaurant wanted a cleaner that was not abrasive and would not change the concrete appearance. Since the stains were mainly from organic and food waste, they applied undiluted HYGIEA2600™, a biological cleaning product specifically designed for these kinds of stains. They activated the microorganisms with a mist of water, then rinsed the concrete off a day later. The cleaning was very effective and the customer was very happy with the results. Log in to read the full case history here: https://www.bionetix-international.com/wp-content/uploads/Restricted_Case_Histories/ch035.pdf

UPCOMING EVENTS



ISSA North American Show 2021
Exhibits: November 16th-18th
Las Vegas Convention Center
Las Vegas, NV
Booth #W-6609
<https://www.issashow.com>



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