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Attention: Editor
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PRODUCT RELEASE

Empower Stain Removal and More with β-mannanase!

Bionetix® International is pleased to introduce another important enzyme for manufacturers and formulators: ECP1300™. This high efficiency β-mannanase enzyme is produced by non-pathogenic fungi and is designed to break down complex polysaccharides into simple sugars. Such action makes ECP1300™ useful in a wide range of industries—from laundry detergent formulation to biofuel production and paper making. The following examples offer a snapshot of the many things β-mannanase can do!

Stain Removal

The most important purpose of ECP1300™ is to help with the stain removal process when doing laundry. Mannan is becoming an increasing source of staining due to the use of guar gum as a thickener in many processed foods and personal care products. Mannan sticks to the fabric and makes it difficult to remove stains caused by BBQ sauce, ice cream, chocolate, gum, and other foods or products that contain mannan. To make matters worse, the "mannan glue effect" causes loose particles to stick to mannan residues and soil the fabric. Including ECP1300™ in detergents and stain removers can therefore greatly enhance their stain removal power by breaking down mannans so they are easier to rinse away. Combining ECP1300™ with a variety of other enzymes (e.g., cellulase, lipase, and amylase), can increase the stain removal capacity of detergents even further.

Animal Nutrition

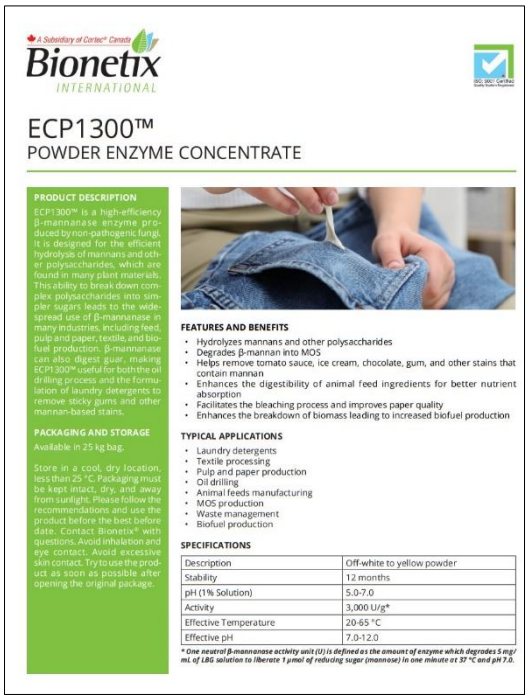
Mannans can also be found in feed products, such as those where copra meal or guar gum has been added for economic advantages. However, these mannan-containing foods can be difficult for animals to digest and can have a negative effect on the growth and health of livestock such as poultry. The addition of β-mannanase can help with digestion to promote better feed conversion. ECP1300™ can also aid hydrolysis of mannan into MOS (mannan-oligosaccharides), a prebiotic with many benefits such as improving gut flora to promote better animal health.

Oil and Biofuel Production

In the oil and gas industry, fracking has become a means of extracting untapped resources in shale oil fields. Guar gum is used to thicken drilling fluids, and β-mannanase can subsequently be used for thinning to help regulate flow. Forms of β-mannanase derived from fungal sources (as is ECP1300™) are typically best suited to low temperature fracturing wells. On the biofuel side of the energy industry, ECP1300™ can also be used as a way to hydrolyze mannans into simple sugars that can be fermented and turned into second generation ethanol.

Paper and Textile Industries

In the pulp and paper industry, β-mannanase can help increase paper brightness, potentially reducing the use of harsh chemicals for bleaching**.** In textile production, ECP1300™ can be used for desizing and aid in the removal of impurities during bio-scouring.



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ECP1300™

POWDER ENZYME CONCENTRATE

PRODUCT DESCRIPTION

ECP1300™ is a high-efficiency β-mannanase enzyme produced by non-pathogenic fungi. It is designed for the efficient hydrolysis of mannans and other polysaccharides, which are found in many plant materials. This ability to break down complex polysaccharides into simpler sugars leads to the widespread use of β-mannanase in many industries, including feed, pulp and paper, textile, and biofuel production. β-mannanase can also digest guar, making ECP1300™ useful for both the oil drilling process and the formulation of laundry detergents to remove sticky gums and other mannan-based stains.

PACKAGING AND STORAGE

Available in 25 kg bag.

Store in a cool, dry location, less than 25 °C. 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. Try to use the product as soon as possible after opening the original package.

FEATURES AND BENEFITS

- Hydrolyzes mannans and other polysaccharides
- Degrades β-mannan into MOS
- Helps remove tomato sauce, ice cream, chocolate, gum, and other stains that contain mannan
- Enhances the digestibility of animal feed ingredients for better nutrient absorption
- Facilitates the bleaching process and improves paper quality
- Enhances the breakdown of biomass leading to increased biofuel production

TYPICAL APPLICATIONS

- Laundry detergents
- Textile processing
- Pulp and paper production
- Oil drilling
- Animal feeds manufacturing
- MOS production
- Waste management
- Biofuel production

SPECIFICATIONS

Description	Off-white to yellow powder
Stability	12 months
pH (1% Solution)	5.0-7.0
Activity	3,000 U/g*
Effective Temperature	20-65 °C
Effective pH	7.0-12.0

** One neutral β-mannanase activity unit (U) is defined as the amount of enzyme which degrades 5 mg/mL of LBG solution to liberate 1 μmol of reducing sugar (mannose) in one minute at 37 °C and pH 7.0.*

Many Mannans = Many Uses for β-mannanase

With the increasing use of mannans, there are more reasons than ever to take advantage of β-mannanase. Start enhancing detergents and feeds, facilitating oil and biofuel production, and improving the paper and textile processing industries today!

Keywords: stain removal, detergent additives, feed additive, improve gut flora, stain removal, animal nutrition, ethanol production, fracking, drilling mud additive, Bionetix

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Bionetix® International is a Canadian-based company that produces biological products used in thousands of field applications worldwide. We promote a healthy environment by providing superior, environmentally friendly alternatives to current treatment methods. Our customers are able to clean and remediate contaminated systems or boost agricultural productivity in a cost-effective, natural, and non-intrusive way through the application of our biological products. Headquartered in Quebec, Canada, Bionetix® International is a subsidiary of Cortec® Corporation. ISO 9001:2015 Certified.

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