CTE GLOBAL, INC.
Leading to a brighter tomorrow

SZM XC-150

Specialty Acid Cellulase enzyme for use in propagation and fermentation

Description

SZM XC-150 is a purified native acid cellulase enzyme. It hydrolyzes cellulose to cellobiose through the cooperation of endo- and exoglucanases; and β-glucosidase hydrolyzes cellobiose to glucose. Its application is to yield glucose molecules from cellulosic biomass that can be fermented by yeast into biofuels of interest such as ethanol. Anti-nutritional factors such as cellulose, arabinoxylan, beta-glucan and pectins can be hydrolyzed to reducing sugars for second generation biofuel production.

Typical Characteristics

Activity: 150,000 u/mL (minimum)
Appearance: Brown liquid
pH: 4.0 – 7.0
Bulk Density: 1.10 - 1.20 g/mL
Unit Definition
One unit (u) is the amount of enzyme which liberates 1 umol of reducing sugar from carboxymethyl cellulose per hour under the conditions of the assay.

Performance Benefits

SZM XC-150 provides the following benefits to ethanol producers.

- More fermentable sugars (conversion of cellulose to glucose)
- Potential to utilize additional feedstocks

Application Recommendations

SZM XC-150 is used in propagation and/or fermentation in order to provide more fermentable sugars derived from cellulose. SZM XC-150 has a broad operating range for enhanced process flexibility and performs well within the temperature and pH ranges typical in whole ground corn batch fermentations.
In high gravity fermentations, performance can be further enhanced by the addition of SZM XT-20 fungal alpha amylase or SZM AP-1 acid protease.

Dosage Recommendation

SZM XC-150 should be dosed at 0.0041 - 0.0083% weight enzyme / weight as is corn. The actual dose required will depend upon the conditions of your fermentation: time, initial pH and the level of solids.

Regulatory Status

- ISO 9001 registered company
- Kosher certified
- GRAS (Generally Recognized as Safe)

GM Status

This product is not a GMO.
The enzyme product is manufactured by fermentation of microorganisms that are not present in the final product. The production organisms and the enzyme effectiveness are improved by means of modern technology.

Packaging

SZM XC-150 is available in totes.

Storage

SZM XC-150 will meet the declared activity upon arrival at your plant. SZM XC-150 can be safely stored in sealed containers. Enzymes should be stored below 77^0F (25^0C) and sheltered from direct sunlight for maximum stability.

Shelf Life

The enzymatic activity of SZM XC-150 remains at ≥ 95% for six months when stored at 25^oC. The recommended dosage may need to be increased if stored for longer than six months.

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Safety and Enzyme Handling

SZM XC-150 contains proteins obtained from large-scale cultures of a mold. Proteins may cause an allergic-type reaction in sensitized individuals that could require immediate medical attention. Prolonged direct contact may cause minor irritation to skin, eyes, or mucus membranes. For detailed handling information, please refer to the appropriate Safety Data Sheet.

Technical Service

CTE Global, Inc. is committed to formulating a productive and mutually beneficial relationship with ethanol producers in order to make their fermentation process as consistent, efficient, and cost-effective as possible. More detailed information about the application of this product is available upon request. If you have any questions, please contact us and let us know how we can be of assistance.

For more information contact:

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