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## Technical Data Sheet

### WHC Glucoamylase Enzyme

Product	
Product Name: <b>WHC Glucoamylase Enzyme</b>	
Product Description	
WHC Glucoamylase Enzyme is derived through <i>Aspergillus niger</i> extraction and refinement, with significant glucose conversion and enzyme activity. In order to saccharify liquefied starch from different sources, such as corn, wheat, barley, rice, tapioca, potatoes, etc., the product is widely used to produce glucose.	
Specification	
Appearance	<i>Brown liquid</i>
Activity	<i>Over 1.500 AMG units per gram</i>
Specific gravity:	<i>1.10 to 1.20 g/ml</i>
EC Code	<i>3.2.1.3</i>
Optimal pH	<i>4.2-4.6</i>
Optimal Temperature	<i>25°C to 66°C 77°F to 150°F</i>
The operational pH range is from pH 3.0 to 5.5.	
The ideal temperature range for enzyme stability is between 25°C to 66°C [77°F to 150°F]. If the temperature is higher than 70°C, enzyme loss will significantly increase.	
Guidlines	
We recommend that small trials be used to determine the precise usage. Temperature of 25°C to 66°C [77°F to 150°F] and a pH of 4.2–4.6 are ideal for industry operation; typically, pH is adjusted first, followed by the addition of gluco-amylase. For Brewing and Distilling we suggest a dose of 150-300ml per tonne of grain the mash and/or 2-10ml per hl directly into the fermenter.	
Packaging	
WHC Glucoamylase Enzyme is available in 25kg buckets and 1000kg IBC tanks. These materials comply with relevant food-contact legislation, including, EU Regulation 1935/2004 (materials intended for contact with food), EU Regulation 1245/2020 (plastic materials intended for contact with food)), EU Regulation 2023/2006 (GMP for materials intended for contact with food), and FDA CFR 21 (174-179) (USA).	
Storage and Handling	
Storage Conditions:	Avoid direct exposure to sunlight or moisture while transporting and storing in cool, dry areas. Keeping original sealed container at or below 25°C. Product lasts longer if kept in 4°C to 10°C cold storage. <b><i>This product contains bio-active ingredients. Sunlight, extreme temperatures, and humidity can render enzymes inactive.</i></b> As a result, you should move and store things in a cool, dry place. Avoid being directly exposed to moisture or the sun. Warehouses need to be kept clean, cool, and dry.
Shelf life:	The product has a shelf life of 12 months if stored below 25°C and 18 months if under 4°C to 10°C cold storage. Enzymes may become less effective over shelf-life, but they can still be used; usage should be increased accordingly.
Handling:	While the product contains bioactive, non-toxic ingredients, sensitive people may experience allergic reactions. Avoid making unnecessary direct contact with the product. In the event of contact with the skin or eyes, immediately rinse the area well with water for at least 15 minutes. Seek medical attention whenever necessary. Starch sources should have complete, extensive, prolonged, and beneficial contact with the enzyme. Continuous saccharification that is fully intermittent must flow smoothly.

If you have any questions or concerns about our product please contact us at [lab@whclab.com](mailto:lab@whclab.com)

