



GLUCOAMYLASE 400 (GAG 511)

Glucoamylase 400 is a GMO free food grade saccharifying glucoamylase or amyloglucosidase enzyme derived from a selected strain of *Apergillus niger*. It is an exoglucosidase capable of hydrolyzing both the α -1,6 and α -1,4 glucosidic linkages of starch, liberating single glucose units.



BENEFITS

Maximizes the conversion of starch containing substrates to fermentable sugars.

Minimizes residual carbohydrates.

Provides a high degree of attenuation.



DOSE RATE & APPLICATION

A typical dosage of:

0.5 – 10 kg/t of grist added in the brew house.

3 – 5 g/hl wort added during fermentation.

Glucoamylase 400 can be used to produce low calorie beers. In this application it can be added directly to the mash vessel at the mashing-in stage. Alternatively, it can be added to cooled worts after yeast pitching.

Glucoamylase 400 can also be used in the starch industry in the production of maltodextrins, glucose, and high fructose syrups.



SPECIFICATIONS

PHYSICAL & CHEMICAL

PHYSICAL FORM

Liquid with a SG of 1.0-1.2

COLOR

Brown (color may vary from batch to batch)

ACTIVITY

minimum 475 AMGP/g

One AMG unit is defined as the amount of enzyme which hydrolyses one μ mol of p-nitrophenyl α -glucopyranoside per minute at 37C and pH 4.4

MICROBIOLOGICAL

TOTAL VIABLE COUNT < 10,000/g

SALMONELLA SP absent in 25g

COLIFORMS < 30/g

ANTIBACTERIAL ACTIVITY negative by test

MYCOTOXINS negative by test

HEAVY METALS

ARSENIC < 3 mg/kg

LEAD < 5 mg/kg



PACKAGING & STORAGE

Glucoamylase 400 is available in 28kg containers and should be stored in a dry cool area and protected from exposure to direct sunlight. abv Glucoamylase 400 is stable for 6 months when the storage temperature does not exceed 20C. If stored at 5C the product will maintain the declared activity for 12 months.



SAFETY & HANDLING

Avoid unnecessary contact with enzyme preparation during handling. In case of spillage rinse with water. Additional information can be found in the Safety Data Sheet.



CONFORMITY TO STANDARDS

Glucoamylase 400 complies with the current recommended specifications for food grade enzymes given by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and the Food Chemicals Codex (FCC).



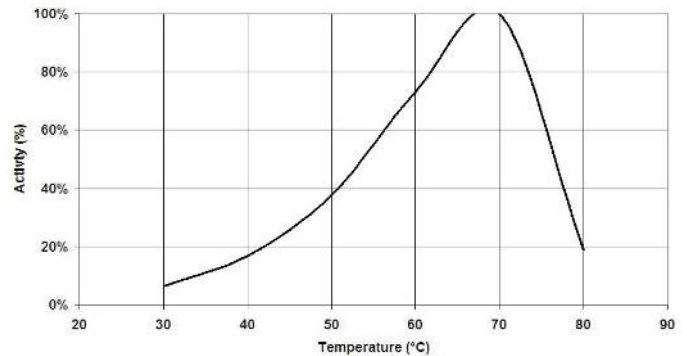
ADDITIONAL INFORMATION

Glucoamylase 400 can be used between pH 3.5-5.0 and a temperature between 20-70C.

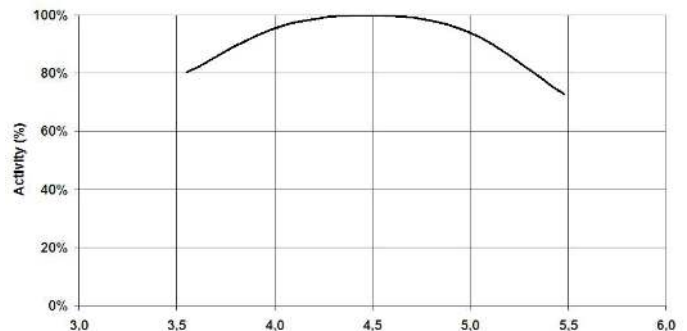
Total inactivation is obtained by heating at 95C for 10 minutes or at 100C for 3 minutes.

Typical beer pasteurization temperatures will not totally inactivate Glucoamylase 400.

Influence of temperature on activity



Influence of pH on activity



CONTACT US

For more information, please visit us online at www.lallemandbrewing.com

For any questions, you can also reach us via email at abvickers@lallemand.com