



DELTABREW® AA Classic

Product Data Sheet

Date of issue: 8 December 2022

Thermostable alpha-amylase for brewing

Description: DELTABREW® AA Classic is a heat stable alpha-amylase obtained from a selected strain of *Bacillus licheniformis*. This enzyme is an endo- α -amylase hydrolysing starch α -1,4-glucosidic linkages. The enzyme reduces the viscosity of starch slurry and releases soluble dextrans as well as small amounts of maltose and glucose at very high temperatures.

Properties:

Enzyme: amylase	IUBMB: 3.2.1.1
Activity: >12.000 TAU	Form: liquid
Density: 1.10-1.25 g/ml	Colour: brown

Colour and appearance may vary from batch to batch. Colour intensity or turbidity is not an indication of enzyme activity.

Application: DELTABREW® AA Classic can be added during both the cereal cooking step and in the mashing process. The α -amylase leads to a faster and more consistent liquefaction, yield increase and significantly reduces the viscosity, resulting in easier wort production. The product gives flexibility in using various cereal grain adjuncts such as barley, wheat and maize with no danger of resistant or retrograded starch formation or insufficient consecutive saccharification.

Conditions of use: DELTABREW® AA Classic has shown to best perform when used under the following conditions:

Application	Dosage	Recommendation
Starch liquefaction in a cereal cooking vessel or in the mash tun	250–350 gram per ton of starch	Apply at pH 5.0-7.0 and temperatures up to 100 °C. Optimum conditions of use: pH 5.5-7.0 and 65-95 °C

GM Status: The product and its constituent enzymes are not genetically modified. Enzyme proteins are produced by fermentation of classical microorganisms, which are removed and not present in the final product. Only agricultural raw materials of non-genetically modified (non-GM) origin are used for the fermentation process and in the final formulation.

Composition: DELTABREW® HSA Classic is stabilised with sucrose and glycerol and preserved with sodium benzoate and potassium sorbate.

Packaging and Storage: DELTABREW® AA Classic is available in 25 kg polyethylene drums or IBCs. The product is best stored in the original and unopened packaging under refrigerated conditions (4–8 °C) in order to retain maximum activity during storage. Under optimum conditions shelf life is 24 months.

Safety and caution: Enzyme products need to be handled with care. Please consult the separately available Safety Data Sheet for further information.



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Compliance and legal: Our enzyme products are used as processing aids in the food manufacturing process and are thus free from any labelling provisions in the European Union. The product does not fall within the scope of EU regulations (EC) 1829/2003 and (EC) 1830/2003 on genetically modified food and feed.

The product is manufactured to comply with recommended purity specifications given by the Joint FAO/WHO Expert Committee on Food Additives (JECFA), and conforms with the recommended specifications of the Food Chemical Codex for food enzymes.

Purity criteria:	Total plate count	< 50 000 CFU per g
	Yeasts & Moulds	< 1 000 CFU per g
	Total Coliforms	< 30 CFU per g
	Salmonella	absent in 25 g
	Escherichia coli	absent in 25 g
	Heavy Metals (as Pb)	< 30 mg/kg
	Lead	< 5 ppm
	Arsenic	< 3 ppm
	Cadmium	< 0.5 ppm
	Mercury	< 0.5 ppm
Special diet information:	Kosher:	certified
	Halal:	certified
	Vegan/Vegetarian:	enzyme product or any constituents are not of animal origin

Certification: WeissBioTech GmbH has a certified quality management system according to ISO 9001:2015 and a certified Food Safety Management System according to FSSC 22000 incl. HACCP, which are reviewed in regular audits.

Made by WeissBioTech GmbH, Germany

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