



Brewline®

THE CRAFT BREWER'S PORTFOLIO

TECHNICAL DATA SHEET

CraftZYM® OPAL

FORMULATION

CraftZYM® OPAL is an enzymatic preparation of purified bacterial Alpha-amylase from *Bacillus subtilis*.

APPLICATION AREA

Enzyme used to liquefy must starch during brewing.

RECOMENDED DOSAGES

30 to 50 ml/100 kg of cereals.

The dosage of the enzyme depends on the quality of the raw materials, the temperature and the period of action.

INSTRUCTIONS FOR USE

Dilute and mix the necessary dosage in the mashing water.

Optimal pH: 4.5 to 7.5

Optimum temperature: up to 80°C

Use an iodine test to check the transformation of starch to fermentable sugars after saccharification.

Take a sample of must at 72°C and place it on a porcelain cup.

Add a drop of iodine:

- If a blue colour appears, the saccharification has not finished. Starch remains present in the must, add CraftZYM OPAL enzyme to the must.
- If a yellow colour appears, the starch has been transformed to sugar.

SPECIFICATIONS

Colour & Appearance	Dark brown liquid
Stabilising agents	Not added
Preservatives	Not added
pH	6,3
Arsenic	< 3 mg/kg
Lead	< 5 mg/kg
Heavy metals	< 30 mg/kg

Density	1,64 g/mL
Total colony count	<100 UFC/mL
Enterobacteriaceae	< 10 UFC/g
Coliforms	< 30 UFC/g
<i>Escherichia coli</i>	Absent in 25 g
Salmonella	Absent in 25 g
Mycotoxins	Negative test

STORAGE

Store in its original packaging hermetically sealed, in a cool (<10°C), dry and odorless place. Storage at temperatures above 20°C could damage the enzyme. Respect the optimal use-by-date appearing on the conditioning. Use quickly after opening.

CONDITIONING

1 kg bottle (5 kg box).

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For use in beer brewing. For the production of products destined for direct human consumption. This document is provided for information purposes only, without commitment or guarantee, according to our current knowledge. Product in compliance with the purity specifications recommended by the Joint FAO/WHO Expert Committee on Food Additives (JECFA) and by the FCC for enzymes used in foodstuff processing. The product's conditions of use are subject to adherence to current legislation and local standards.

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