



## ENZYME - TECHNICAL DATA SHEET

# ABV AROMAZYME

ABV AROMAZYME is a food-grade enzyme preparation with a strong glycosidase activity derived from a selected strain of *Aspergillus niger*. It is composed of  $\beta$ -glucosidase enzymes that are capable of hydrolysing the glycosidic bonds, liberating monoterpene alcohol compounds and glucose. It has been developed to increase the complexity of the hop aroma and flavour profile in beer. The application of ABV AROMAZYME during fermentation provides brewers with the opportunity to improve their hop utilization by releasing additional volatile aroma compounds, thereby decreasing overall hop quantities or using less sophisticated hop varieties.

## BENEFITS

Increases the diversity of hop flavours and aroma by changing the ratio of specific terpene compounds

Enhances the beer mouthfeel and drinkability by reducing unpleasant, harsh bitterness

Slightly increases wort fermentability

Expresses more character from less sophisticated hop varieties

## DOSE RATE & APPLICATION

The recommended dosage is 5g/hL.

ABV AROMAZYME has optimal activity between pH 3.5-6.5, although lower activity is still observed at pH 3.0 for use in sour beers. The optimal temperature range is 15-65°C.

Dilute the enzyme in an adequate amount of water (~ 1g in 10ml) to ensure even distribution within the fermenter.



## SPECIFICATIONS

### PHYSICAL & CHEMICAL

#### PHYSICAL FORM

White to light brown coloured powder

#### ACTIVITY

1500 BGDU/g

One BGDU unit is defined as the amount of enzyme which hydrolyses one  $\mu$ mol of p-nitrophenyl-glucopyranoside per minute at 37°C and pH 4.4

### MICROBIOLOGICAL

SOLIDS	> 90%
YEAST	< 100 CFU/g
TOTAL PLATE COUNT	< 1000 CFU/g
COLIFORMS	< 30 CFU/g
SALMONELLA	absent in 25g
STAPHYLOCOCCUS AUREUS	absent in 1g
ESCHERICHIA COLI	absent in 25g

### HEAVY METALS

ARSENIC	< 3 mg/kg
LEAD	< 5 mg/kg
MERCURY	< 0.5 mg/kg
CADMIUM	< 0.5 mg/kg



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## FOR OPTIMAL RESULTS

$\beta$ -glucosidase activity is one type of hop biotransformation reaction within the complex metabolism of brewing yeast. There are many factors that will affect the flavour and aroma of the final product. Therefore, it is recommended to perform trials with ABV AROMAZYME in order to optimise recipe and process details. The selection of the yeast strain, hop variety, timing of hop additions and timing of enzyme addition will have a direct influence on the final results.

When using ABV AROMAZYME, the following factors should be considered:

Dry-hopping early in fermentation will result in greater extraction of terpene glycosides.

Add the enzyme mid-fermentation to allow time for the enzyme to break down glycosides and the actively fermenting yeast to consume the glucose released from the reaction, while minimizing volatile loss from CO<sub>2</sub> stripping.

Avoid adding enzyme after filtration.



## PACKAGING & STORAGE

ABV AROMAZYME is available in 100 g sealed plastic jars, that should be stored in a cool and dry area. Refer to the label of containers for expiry date. If stored properly, the product will maintain the declared activity for 4 years. It is recommended to use all the product once opened.



## SAFETY & HANDLING

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



## CONFORMITY TO STANDARDS

ABV AROMAZYME 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).

### CONTACT US

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