

EXALASE

(see Enzymes CBS, Why and when to use enzymes)

EXALASE is produced by fermentation of a selected strain of *Bacillus subtilis* and contains alpha-acetolactate decarboxylase activity. In classical lager fermentations without the use of EXALASE, alpha-acetolactate is slowly converted to diacetyl by rising the temperature at the end of main fermentation and diacetyl is reduced by yeast to acetoin during the maturation period. EXALASE can be used to catalyze the decarboxylation of alpha-acetolactate directly to acetoin since the beginning of excretion of alpha-acetolactate by yeast. The maturation period could be eliminated as far as diacetyl is concerned.

TEMPERATURE

The optimal temperature for this enzyme is around 30-40°C and at the normal lager fermentation temperature the enzyme works at 25% of its maximal activity, but as the fermentation is a long process (several days) the enzyme can eliminate all the alpha-acetolactate.

pH EFFECT

Optimum pH between 5.5 and 6. At pH 5 the enzyme works at 50% of its maximal activity, and at pH 4 at 25%. The same remark as for optimal temperature can be made.

DOSAGE

1-2 ml per Hl of beer.

ACTIVITY

2000 ADU/ml. One ADU is the amount of enzyme which under standard conditions produces 1µmol of acetoin by decarboxylation of alpha-acetolactate.

FOOD GRADE

This product complies with FAO/WHO JECFA and FCC recommended specifications for food grade enzymes, supplemented with maximum limits of 5×10^4 /g for total viable count and 10^2 /g for moulds; the product is GRAS.

AVAILABILITY

EXALASE is available in liquid form in polyethylene drums of 1-5-25 liters.

STORAGE

EXALASE will maintain the declared activity for at least 6 months when stored at 5°C.

Our technical advice on the uses of our materials is given without obligation. The buyer is responsible for the application and processing of our products, and he is also liable for observing any third party rights.
