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Brennereitechnologie

SCHLIESSMANN *-VZ-*

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- Enzyme preparation for the saccharification of starch in distilling mashes from all raw materials containing starch (cereals, potatoes, buckwheat, pumpkins, pulses...) -

Technical information and instructions for use

Background:
The main purpose of mashing starchy raw materials in the distillery is to break down the unfermentable plant-based starch into fermentable sugars in the following three steps:
- The starch is gelatinized by mashing with water and heating the mash,
- enzymatic liquefaction of the gelatinized starch and
- enzymatic saccharification of the liquefied starch.

Mashing is followed by fermentation of the released sugar to alcohol.

Product description:
SCHLIESSMANN *-VZ-* is an enzyme preparation that has been tried and tested for more than 20 years for the saccharification of plant-based starch that has previously been gelatinized by heating in water and liquefied with **SCHLIESSMANN-VF- or -VF- "potato".** The glucoamylase of microbial origin, which is the main enzymatic activity of **SCHLIESSMANN -VZ-**, works optimally in the temperature range between 55 and 35°C and at pH values between 5.0 and 4.5.

Standardization:
The preparation is adjusted with water and glycerine to the activity stated in the specification.

Application / Effect:
SCHLIESSMANN *-VZ-*
makes the use of distilled malt as an enzymatic saccharifying agent superfluous. The preparation completely converts previously liquefied starch into fermentable sugars. This effect begins with the addition of the preparation to the liquefied grain mash at 55°C and ends during the 2nd day of fermentation. In contrast to distilled malt, **SCHLIESSMANN -VZ-** does not require a sacchari-fication rest. This results in significant time savings because the mash can be cooled from liquefaction to pitching temperature without interruption. A secondary activity of α-amylase in the **SCHLIESSMANN -VZ-** also ensures additional liquefaction of residual starch paste; proteolytic secondary activities destroy the protein responsible for excessive foam formation.

Dosage:
approx. 50 ml / 100 kg Grain
approx. 18 ml / 100kg Potatoes

The required amount of enzyme is stirred directly into the liquefied mash during the cooling of the mash at 55 to 50° C. No saccharification rest is required! There is no need to observe a saccharification rest! However, to avoid incorrect fermentation, which can be caused by lactic acid bacteria, it is recom-mended to acidify the hot mash to pH 4.5-4.8 by stirring in sulphuric, PM or must lactic acid a few minutes before adding **SCHLIESS-MANN -VZ-.**

Package size:

250 ml bottle	(No. 5046)
500 ml bottle	(No. 5052)
1 l bottle	(No. 5048)

Durability:
Cool storage at 4-6°C maintains the declared enzyme activity for at least 18 months.

Occupational safety:
As enzymes can cause allergic reactions, avoid direct contact with the product and inhalation of dried dust. In the event of accidental spillage or after skin or eye or eye contact, rinse immediately rinse thoroughly with water.

All information in this publication is based on our current experience and knowledge. Schliessmann Kellerei-Chemie does not guarantee that the products can be used as described above without prior careful testing, nor that their use does not infringe the patent rights of third parties.