

DISTILAMAX[®] XP

Yeast selected for use in the production of malted grain Whisky

Technical Data Sheet

APPLICATIONS:

- DistilaMax[®] XP is a *Saccharomyces cerevisiae* var. *diastaticus* selected especially for its ability to ferment maltose, maltotriose and other sugars in malted barley feedstock.
- DistilaMax XP displays a good temperature tolerance and performs well at temperatures from 20°C up to 35°C.
- DistilaMax XP is recommended for use in the production of whisky, by fermentation of wort made from malted grain.
- DistilaMax XP produces a congener profile that is well-suited to malted barley whisky such as increasing complexity and fruity characters.

RESULTS WITH DISTILAMAX XP:

DistilaMax XP in comparison with other yeasts used in Scotch Whisky industry, performs well on malted barley in regards to ethanol content, as demonstrated in Figure 1. During fermentation temperatures can be quite high; therefore it is important to select a yeast which can operate well at temperatures higher than 32°C. Figure 2 demonstrates the results of 3 yeasts used in the whisky industry in regards to ethanol concentration at various temperatures. DistilaMax XP performs well within the temperature range of 20°C - 35 °C but it is recommended to control the temperature if possible, to around 30°C.

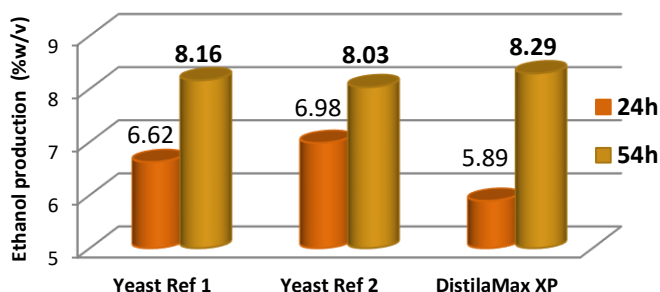


Figure 1: Results of ethanol content (%w/v) at 24h and 50h on malted barley, initial gravity 1077.

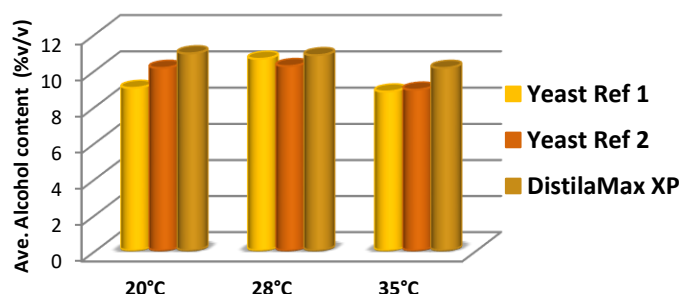


Figure 2: Impact of temperature on ethanol content with various yeasts used in the production of whisky.

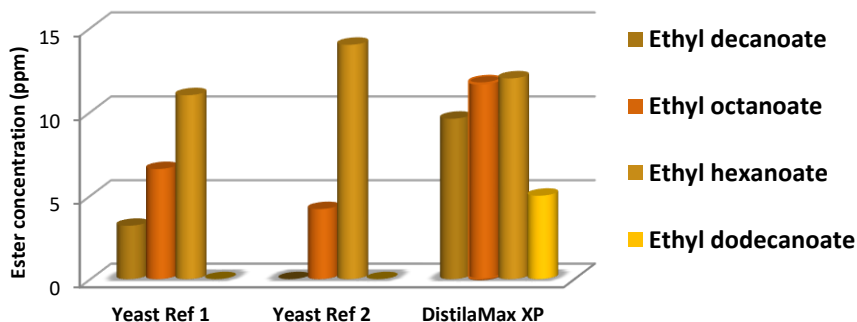


Figure 3: Ester concentration at 28°C with 3 yeasts on malted barley whisky.

Ethyl decanoate: Floral-like aromas
Ethyl hexanoate: Fruity aromas

Ethyl octanoate: Floral-like aromas
Ethyl dodecanoate: Soap-like notes



LALLEMAND BIOFUELS
& DISTILLED SPIRITS

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CHARACTERISTICS:

- Solids (Dry Weight): 95.5 +/-2.5%
- Viable Cells (CFU/g): >2x10e10
- Total Wild Yeast (CFU/g): <1000

DistilaMax XP is not genetically modified and is Kosher.

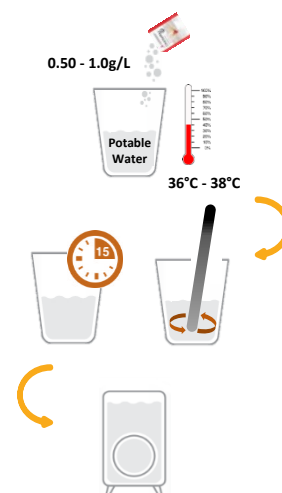
DOSAGE:

- The optimal yeast dosage is variable according to individual distillery production processes.
- Normal dose rate 0.50 - 1.0 grams of yeast per litre of wort (dosage: 500 - 1000 ppm).

INSTRUCTIONS OF USE:

Lallemand Biofuels & Distilled Spirits recommends the rehydration of DistilaMax XP.

1. For rehydration, use a clean container. Do not use demineralized water.
2. Rehydrate the yeast in clean water. The water should be 10 times the weight of the yeast and at a temperature of 36°C - 38°C.
3. Suspend contents carefully by gently stirring and then wait for 15 - 20 minutes maximum (minimum 10 minutes) before moving onto the next step.
4. Add this preparation to the wash. If there is a temperature difference of more than 8°C between the wash to be inoculated and the rehydration solution, add some wash slowly into the rehydration solution to reduce the temperature difference.
5. Once the vacuum-sealed bag is open or broken, use yeast promptly.



STORAGE, HANDLING & PACKAGING:

- DistilaMax XP should be stored in a cool and dry area away from heat and direct sunlight for maximum stability.
- Shelf Life: 3 years from date of manufacture if vacuum-seal is not broken.
- Packaging: DistilaMax XP is available in vacuum-sealed foil bags in 10 kilograms or boxes of 20 x 500 grams.

To the best of our knowledge, the information contained here is true and accurate.

However, any recommendations or suggestions are made without any warranty or guarantee since conditions and methods of use are beyond our control. This information should not be considered as a recommendation that our products be used in violation of any patents.



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