DistilaBact LP

Selected *Lactiplantibacillus plantarum* for managing sour mash development in the production process of distilled spirits

APPLICATIONS

- DistilaBact LP is a *Lactiplantibacillus plantarum* specifically selected for use in managing sour mash development during the production of distilled spirits.
- DistilaBact LP can be added directly into the mash either as a co-inoculation with yeast or a few hours after the yeast dose.
- DistilaBact LP contributes to the development of a distinctive aromatic profile during the fermentation, which is characteristic of the sour mash fermentation (increased lactic and citrus notes).
- DistilaBact LP has no impact on either fermentation kinetics or residual sugar levels.

RESULTS WITH DISTILABACT LP

- Use of DistilaBact LP in sour mash production does not significantly impact fermentation: ethanol and glycerol levels are comparable with or without DistilaBact LP. Use of this lactic acid bacteria only influences lactic acid levels **(figure 1)**.
- DistilaBact LP contributes to a higher ethyl lactate content in new make spirit (NMS) **(figure 2)**. This elevated ethyl lactate level significantly impacts the sensory profile meaning NMS made using DistilaBact LP will be different from NMS produced without this lactic acid bacteria, one of the desirable results of well managed sour mash production.

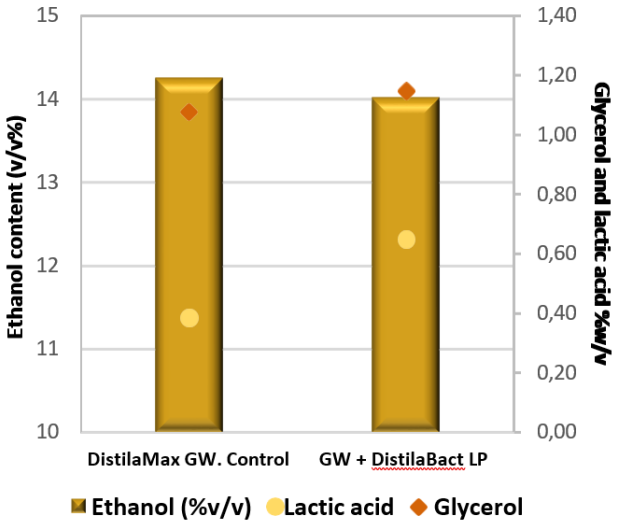

Figure 1: Ethanol, lactic acid and glycerol content at the end of fermentation. LBDS Lab trials on corn mash, 2018.

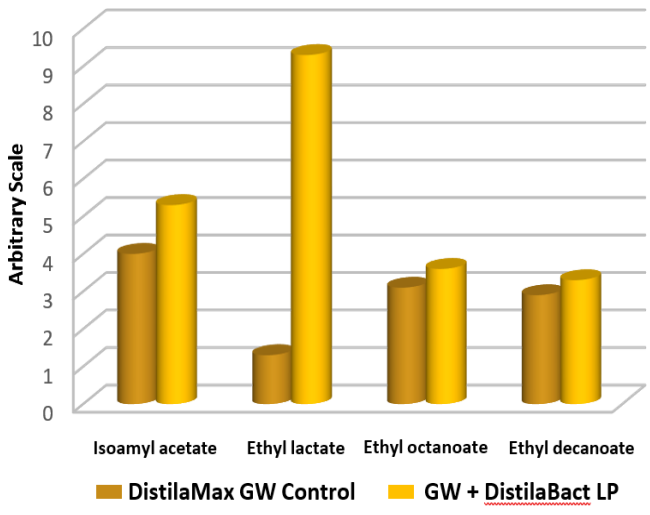

Figure 2: Impact of DistilaBact LP on ester production. LBDS Lab trials on corn mash, 2018.

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TECHNICAL DATA SHEET

DistilaBact LP

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CHARACTERISTICS

- Active freeze-dried lactic acid bacteria (*Lactiplantibacillus plantarum*).
- Viable bacteria cells (CFU/g): >10x10e11.
- DistilaBact LP is not genetically modified.

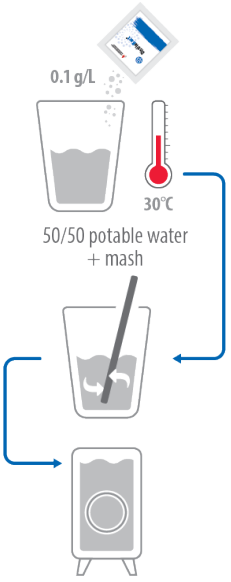
DOSAGE

- The optimal yeast dosage is 0.1 g per litre (100 ppm).
- DistilaBact LP is provided in a 100 g sachet (dose for 1000 litres of mash) and in a 1 kg sachet (dose for 10000 litres of mash).

INSTRUCTIONS OF USE

Lallemand Biofuels & Distilled Spirits recommends:

1. For a better distribution, rehydrate DistilaBact LP by using a clean container and potable water. Do not use demineralized water.
2. Rehydrate DistilaBact LP in a mix of 50/50 potable water and mash. The solution should be 10 times the weight of bacteria and at a temperature of 30°C (86 °F).
3. You may also open the sachet and add DistilaBact LP directly to the mash at a dose of 0.1g per litre.
4. Monitor pH regularly. If it did not lower during the fermentation, please make sure to follow the instructions for use (temperature and dosage) and contact your technical representative for additional guidance.
5. Once the vacuum-seal has been broken, use immediately.



STORAGE, HANDLING AND PACKAGING

- DistilaBact LP can withstand a delivery up to 25 °C for 3 weeks without affecting its quality.
- Shelf life: 18 months if stored at 4°C (40°F) from date of manufacture (if vacuum-seal is not broken).
- Packaging: DistilaBact LP is available in 100 g and 1kg vacuum-sealed foil sachets.

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