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## Technical Data Sheet

### Lactobacillus plantarum bacteria

#### Product Description

**Lactobacillus plantarum** is a product developed by WHC Lab.

A dehydrated lactobacillus culture for kettle souring and mixed fermentation. Produces a quick clean pH drop and a citrus aroma that pairs nicely with both fruit and hops.

#### Guidelines

We recommend to use no hops in the kettle at all if kettle souring, strain is hop intolerant.

Top tip: For a quick sour in the fermenter pair with one of our kveik products to get souring and fermentation at the same time at 34°C to 36°C. If you re-pitch this yeast into another IBU negative wort you will also get fermenting and souring and this can be repeated multiple times.

The intended fermentation temperature range is 34°C to 36°C [93°F to 97°F]

#### Ingredient Declaration

*Lactobacillus plantarum*, maltodextrin qsp. as carrier

#### Technical Specification

Strain	<i>Lactobacillus plantarum</i>
Dosage	10-25g/hl
Fermentation Temperature	34°C to 36°C 93°F to 97°F
Weight	0.25 kg

#### Physical, Chemical and Microbiological properties

Parameter	Unit of Measure	Value	Specification Value
Appearance	-	Powder	-
Odor	-	Free from foreign and off odors	Typical
Color	-	Yellow to brown	Light brown/beige
Moisture	%	≤ 8	≤ 8
Viable Count	Cfu/g	≥10 <sup>11</sup>	≥10 <sup>11</sup>
Moulds	Cfu/g	≤ 1000	≤ 1000
Coliform	Cfu/g	≤ 1000	≤ 1000
<i>Pathogenic Bacteria</i>	-	Negative	Negative

#### Allergens\*

Lactobacillus plantarum bacteria does not contain added allergens.

\*EU Regulation 1169/2011 (Food Information Regulations) (Annex II)

#### GMO

*Lactobacillus plantarum* bacteria does not contain genetically modified organisms or materials.

#### Packaging

Lactobacillus plantarum bacteria is available in 250g vacuum-packed silver foil packs. This material complies with relevant food-contact legislation, including, EU Regulation 1935/2004 (materials intended for contact with food), EU Regulation 1245/2020 (plastic materials intended for contact with food), EU Regulation 2023/2006 (GMP for materials intended for contact with food), and FDA CFR 21 (174-179) (USA).

#### Storage and Handling

Storage Conditions:	Store at cool to ambient temperatures (ideally 5°C to 15°C <b>or</b> 41°F to 59°F), dry, and well-ventilated environment.
Shelf life:	3 years from date of production, if vacuum seal is not broken, and if stored as outlined above.
Handling:	Once opened, re-seal to keep out air and water. For best results, store re-sealed packs in a refrigerator (0°C to 10°C <b>or</b> 32°F to 50°F) and use promptly. Please note expiry date on packs prior to opening.  <b>When added to water or a water solution, Lactobacillus plantarum bacteria releases CO<sub>2</sub>, especially on substrates high in sugars or starch. Ensure adequate ventilation to keep levels below advised exposure limits.</b> <i>Please request a Material Safety Data Sheet/MSDS for further advice.</i>

#### Flavour Chart

Dark fruit	Clean	Tropical Fruit	Banana	Green Apple	Citrus	Candy	Grassy	Bubblegum
LOW	LOW	HIGH	LOW	LOW	HIGH	MEDIUM	LOW	LOW

#### Beer Styles

Sours

If you have any questions or concerns about our product please contact us at [lab@whclab.com](mailto:lab@whclab.com)