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| Approved By: | Philip Woodnutt |



Technical Data Sheet

Einstein Dehydrated Yeast

Product Description

Einstein Dehydrated Yeast is developed by WHC Lab.

Elevate your lager game with our Einstein German Lager yeast, meticulously crafted based on the trusted Weihenstephan strain. This yeast strain embodies the essence of German brewing precision, offering you a tool to create lagers that truly stand out. Renowned for its clean and crisp profile, it ensures that your beer's essence shines through with unrivaled clarity and purity.

Einstein is a master of subtlety, with low ester formation during fermentation, allowing the true character of your chosen malt and hops to take center stage. Additionally, its medium sulfur production is well within the desirable range, ensuring that your lagers maintain a flawless balance of flavors. This versatile bottom-fermenting yeast strain excels in cold fermentation, making it the perfect choice for brewers looking to create authentic and refreshing lagers across a spectrum of styles.

Whether you're crafting a traditional Pilsner, a robust Bock, or a crisp Helles, our Einstein yeast is your secret ingredient for consistency, quality, and unparalleled flavor. As you aim for excellence in your lager production, let Einstein guide you to brewing brilliance. Your choice of yeast can make all the difference, and Einstein is the path to lager perfection. Make your mark in the world of brewing with the scientific precision of Einstein.

Guidelines

Oxygenation and/or rehydration may not be needed for generation 0 but may be beneficial. It

is recommended to have a pitch rate of at least 100g per hl of wort for a standard gravity brew (1.045). The pitch rate is between 100-150g/hl of wort.

The intended fermentation temperature range is 9°C to 16°C [49°F to 60°F].

Ingredient Declaration

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| Yeast | 98.8% to 99.2% |
| Emulsifier E491* | 0.8% to 1.2% (*Sorbitan Monostearate) |

Technical Specification

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|--------------------------|----------------------------------|
| Yeast Strain | <i>Saccharomyces pastorianus</i> |
| Dosage | 100-150g/hl |
| Fermentation Temperature | 9°C to 16°C 49°F to 60°F |
| ABV Tolerance | 12% |
| Nitrogen Demand | Low |
| Attenuation | 76% to 80% |
| Flocculation | Low |
| Weight | 0.5 kg |

Physical, Chemical and Microbiological properties

| Parameter | Unit of Measure | Value | Specification Value |
|-------------------------------|-----------------|--|--------------------------|
| Appearance | - | Fine granules (typically 3mm particle size) | - |
| Powder flow characteristics | - | Free flowing granules | - |
| Odor | - | Weak characteristic yeast smell | Typical |
| Color | - | Light brown/beige | Light brown/beige |
| Solubility | - | Miscible in water & ethanol solutions | - |
| Dry matter | % | 95.4 | > 92 |
| Moisture | % | 4 to 6 | < 8 |
| Total Yeast Plate Count | Cfu/g | 1.3 x 10 ¹⁰ | >10 ¹⁰ |
| Direct Live Cell Count | Cells/g | 1.9 x 10 ¹⁰ | > 1.9 x 10 ¹⁰ |
| Lactic Acid Bacteria | Cfu/g | < 10 | < 10 ³ |
| Acetic Acid Bacteria | Cfu/g | < 10 | < 10 ⁴ |
| Wild Yeasts | Cfu/g | < 10 | < 10 ⁵ |
| Moulds | Cfu/g | < 10 | < 10 ² |
| Coliforms | Cfu/g | < 10 | < 10 ² |
| <i>Escherichia coli</i> | Cfu/g | Absent in 1 g | Absent in 1 g |
| <i>Staphylococcus aureus</i> | Cfu/g | Absent in 1 g | Absent in 1 g |
| <i>Salmonella spp</i> | Cfu/g | Absent in 25 g | Absent in 25 g |
| <i>Listeria monocytogenes</i> | Cfu/g | Absent in 25 g | Absent in 25 g |

Allergens*

Einstein Dehydrated Yeast does not contain added allergens.

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

GMO

Einstein Dehydrated Yeast does not contain genetically modified organisms or materials.

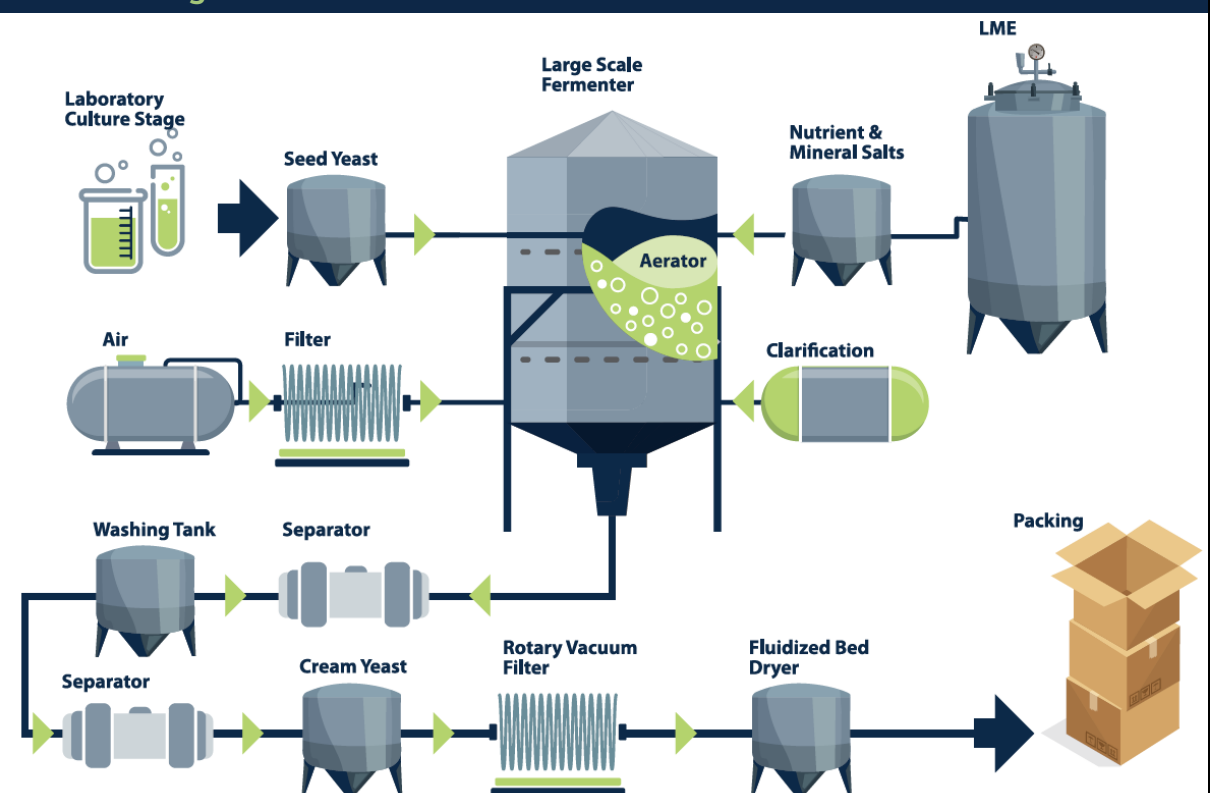
Packaging

Einstein Dehydrated Yeast is available in 500g 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

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| Storage Conditions: | Store at cool to ambient temperatures (ideally 5°C to 15°C or 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 or 32°F to 50°F) and use promptly. Please note expiry date on packs prior to opening. When added to water or a water solution, Einstein Dehydrated Yeast releases CO₂, especially on substrates high in sugars or starch. Ensure adequate ventilation to keep levels below advised exposure limits. Please request a Material Safety Data Sheet/MSDS for further advice. |

Manufacturing Chart



Flavour Chart

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

Beer Styles

German Lagers

If you have any questions or concerns about our product please contact us at lab@whclab.com