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YN-RUM

S P I R I T F E R M E N T

Highly robust distillers' yeast and nutrient with high tolerance to temperature and osmotic pressure – optimised for sugarcane or molasses wash fermentations up to approx. 15 % ABV.

PRODUCT DESCRIPTION & FUNCTION

YN-Rum is based on a non-diastatic, highly robust distillers' yeast with high tolerance to temperature and osmotic pressure – formulated with a complete, chemically-defined nutrient complex, YN-Rum is optimised for sugarcane or molasses wash fermentations up to approx. 15 % ABV.

Although primarily intended for use molasses or sugarcane juice, YN-Rum can be used with any fermentable sugar substrate for production of alcohol wash for up to approx. 15 % ABV. For optimum results, YN-Rum should be used to ferment sugarcane juice up to 15% ABV or molasses solution with a gravity of up to 1.150 (34.2 °Plato) to achieve a maximum ABV approx. 12%.

The nutrient complex in YN-Rum contains all essential macro and micro-nutrients required for healthy fermentation, including nitrogen (urea-free source), phosphate, magnesium, B vitamins and trace minerals.

Recommended for: Fermentation of wash to produce rum or cachaça spirit.

Organoleptic qualities: Wash fermented with YN-Rum has high levels of esters and yields a rum spirit with a rich and complex, well-rounded flavour and aroma profile.

Note: Due to the osmotic pressure, maximum alcohol from pure molasses solutions is approx. 12% ABV.

TECHNICAL CHARACTERISTICS

Yeast Classification	Saccharomyces cerevisiae
Temperature tolerance	20-37 °C (68-99 °F) (optimum 30-37 °C / 86-99 °F)
Killer factor	Neutral
Alcohol Tolerance	Approx. 15% ABV
Viable Yeast Cells	> 1.8 x 10 ⁹ cfu/g
Total Bacteria	< 3 x 10 ³ cfu/g
Wild Yeast	< 3 x 10 ² cfu/g
Moulds	< 3 x 10 ² cfu/g
Coliforms	< 30 cfu/g
Pathogens (salmonella, E. coli etc)	Absent in 25g
Lead	< 6 mg/kg
Arsenic	< 2mg/kg
Heavy Metals (as Pb)	< 10 mg/kg
GMO Status	GMO Free

DOSAGE & APPLICATION

Pitch rates: suggested rates are as follows (optimisation through bench trials is recommended):

Target ABV for fermentation:	8 %	10 %	12 %	14 %
YN-Rum Dosage:	2.5 g/L	3.0 g/L	3.6 g/L	4.0 g/L

Pitching method: YN-Rum requires agitation to dissolve nutrient salts so cannot be pitched directly without mixing facility. For indirect pitching, pre-mix with 10x times its weight of water at 25-30 °C (77-86 °F) and mix for 5 minutes before pitching. Note that YN-Rum is not suitable for propagation or post-fermentation recovery for re-use due to nutrient depletion during fermentation.

Note: Rehydration is only required for pre-dissolving nutrients rather than yeast activation. It is important to minimise contact-time (ideally < 15 minutes) to avoid high nutrient concentrations harming the yeast. Trials may be required to determine impacts of longer contact periods on yeast viability and fermentation kinetics.

Fermentation temperature: YN-Rum can tolerate up to 37 °C (98.6 °F) and performs optimally in the 30-37 °C (86-99 °F) range.

pH Tolerance: YN-Rum ferments optimally at pH 4-5 but can still operate outside of this range (e.g. pH 3.5-6). It is best practice to monitor pH as it is likely to drop as fermentation progresses. If possible, avoid levels below pH 3.5 to avoid prolonged fermentation times.

PACK SIZES

1000g bags, or 25kg poly-lined paper sacks.

SAFETY

This material is non-hazardous when used as directed. SDS available on request.

STORAGE

25 kg sacks: Store in original, sealed packaging away from direct sunlight. If stored below 10 °C / 50 °F this product will have a shelf life of up to 24 months. At 20 °C / 68 °F storage temperature, shelf life will be reduced to 12 months. After opening, re-seal tightly and keep refrigerated below 10 °C / 50 °F for up to 6 weeks.

1000 g bags: Store in a cool, dry place away from direct sunlight for a shelf life of 18 months. After opening re-seal tightly and keep refrigerated below 10 °C / 50 °F for up to 2 weeks.