PATHFINDER

PATHFINDER-UK.CO

TY-FRUIT

TURBO YEAST

A high alcohol tolerant, high-ester active dried wine yeast, formulated with optimized nutrition for fermentation of fruit-sugar washes.

PRODUCT DESCRIPTION & FUNCTION

TY-Fruit is based on a highly alcohol tolerant, high-ester and aroma-enhancing active dried wine yeast – formulated with a complete, chemically defined nutrient complex, TY-Fruit is optimised for fermentation of fruit-sugar washes up to 18 % ABV.

The nutrient complex in TY-Fruit ensures reliable, trouble-free fermentation and so TY-Fruit is especially recommended for fermentation of fruit juice or fruit and refined sugar blends where the nutritional contribution from the fermentation substrate is low or highly variable.

TY-Fruit combines aroma and flavour enhancing yeast properties with high-performing reliability, and a nutrient complex containing all essential macro and micro-nutrients including nitrogen (urea-free source), phosphate, magnesium, B vitamins and trace minerals.

Recommended For

Fermentation of high alcohol fruit and fruit-sugar bases for use in producing fermented and distilled alcoholic beverages.

Organoleptic Qualities

TY-Fruit tends to confer moderately high levels of floral and citrus fruit notes but can also present perceptible sulfidic notes due to the high SO2 producing nature of the yeast.

Note: TY-Fruit is not recommended for ultra-clean bases such as those for use in making hard seltzer except where 'wine-like' aroma enhancement is desired and a high level of SO2 and perceptible sulphur notes can be accepted.

T: +44 (0) 151 356 5985 • **E:** info@pathfinder-uk.co • **Bevie Partners Limited**, Philip Jones House, Poole Hall Industrial Estate, Ellesmere Port, Cheshire, CH66 1ST, United Kingdom

TECHNICAL CHARACTERISTICS

Yeast Classification	Saccharomyces cerevisiae (STA+)
Temperature Tolerance	10-35°C / 50-95°F (optimum 18-24°C / 64-75°F)
Killer Factor	Positive
Alcohol Tolerance	Approx. 18% ABV
SO_2 production	High
Viable Yeast Cells	> 1.3 x 10^9 cfu/g
Total bacteria	< 2 x 10^3 cfu/g
Wild Yeast	< 2 x 10^3 cfu/g
Mould	< 2 x 10^2 cfu/g
Coliforms	< 10 cfu/g
Pathogens (Salmonella, E. coli etc)	Absent in 25 g
Lead	< 3 mg/kg
Arsenic	< 2 mg/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:	5%	8%	10%	12%	14%	18%
TY-Fruit Turbo Yeast dosage:	1.8 g/L	2.5 g/L	3.0 g/L	3.6 g/L	4.0 g/L	6.0 g/L

Pitching Method

TY-Fruit 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 TY-Fruit is not suitable for propagation or post-fermentation recovery for re-use due to nutrient depletion during fermentation.

This product contains granular materials of different particle sizes that can settle out during transportation. To ensure an even distribution, it is recommended that a full pack is used for your fermentation. If a part bag is used, product consistency can be improved by thorough agitation of the pack prior to use. An even distribution of ingredients cannot be guaranteed if part bags are used.

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

TY-Pure can tolerate up to 35°C (95 °F) but alcohol tolerance is impeded at this temperature. For optimum performance and quality, it is recommended to ferment at 18-24°C (64-75°F), although it may be possible to minimise SO2 levels by fermenting at the upper end of this range, i.e. 22-24°C (72-75°f).

Oxygenation

Oxygenation will help to minimise SO_2 production; as a guide we suggest oxygenation rates starting from 15-20 ppm for ABVs around 5%, up to 40-45 ppm for higher ABVs of up to 14%. Oxygenation rates can be optimised through trials to meet the specific requirements of the application.

pH Tolerance

TY-Fruit ferments optimally at pH 4-6 but can still operate outside of this range (e.g. pH 3-7). It is best practice to monitor pH as it is likely to drop as fermentation progresses. If possible, avoid levels below pH 3.2 to avoid prolonged fermentation times.

Clarification & Filtration

TY-Fruit is moderately flocculant but finings agents and/or centrifugation can be used to reduce the time required to achieve a clear base. If finings and/or centrifugation are not sufficient, filtration can also be used for a fine polish. The average cell diameter of the yeast is 4-10 micron – however, due to presence of smaller daughter cells a filter pore size of 2 micron (absolute rated) or less may be required for fine filtration.

PACK SIZES

1000g bags and 25kg poly-lined paper sacks.

SAFETY

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

STORAGE

25kg 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 for 6 weeks.

1000g 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 for 2 weeks.