

S-GIN

NEUTRAL SPIRIT FERMENT

A yeast and nutrient complex for urea-free fermentations, for the production of gin and other botanical-infused spirits. S-GIN is an active dried yeast with optimised nutrition, low congener formation, and developed to ferment wheat, potato, fruit, or refined sugar washes up to approximately 14% ABV.

Product Description & Function

S-GIN is based on a low-congener active dried yeast producing minimal fusel oils, esters and other fermentation by-products, selected for use in neutral spirit applications for making gin or other botanical-infused spirits. Formulated with optimised nutrition, S-GIN can be used with a variety of substrates including potatoes, fruit, or highly refined sugars which contain little or no natural nutrition.

S-GIN contains a chemically defined nutrient complex optimised for production of high purity neutral spirit alcohol. The nutrient complex in S-GIN contains all the 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 Gin and other botanical-infused spirits from wheat, potato grains, fruit, or refined sugar.

Organoleptic Qualities

Wash fermented with S-GIN has very low levels of higher alcohol and esters and yields a Gin with a clean and neutral flavour and aroma profile while enhancing citrus notes in the final product.

Note: S-GIN contains high levels of sodium salts and is not recommended for fermented beverage alcohol not intended for distillation.

Technical Characteristics

Yeast Classification	Saccharomyces bayanus
Temperature Tolerance	20-32°C (68-90°F) (optimum 25-32°C / 77-90°F)
Alcohol Tolerance	Approx. 18% ABV
Viable Yeast Cells	$> 1.0 \times 10^9$ cfu/g
Total bacteria	$< 2 \times 10^4$ cfu/g
Wild Yeast	$< 2 \times 10^4$ cfu/g
Coliforms	< 20 cfu/g
Pathogens (Salmonella, E. coli etc)	Absent in 25 g
Lead	< 2 mg/kg
Arsenic	< 1 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:	8%	10%	12%	14%
S-GIN dosage:	3.8 g/L	4.5 g/L	5.4 g/L	6.0 g/L

Pitching Method

S-GIN requires agitation to dissolve nutrient salts so cannot be pitched directly without a mixing facility. For indirect pitching, premix with 10x times its weight of water at 30-35°C (86-95°F) and mix for 5 minutes before pitching. Note that S-GIN 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

S-GIN can tolerate up to 32°C (90°F) and performs optimally in the 25-32°C (77-90°F) range.

pH Tolerance

S-GIN ferments optimally at pH 4-6 but can still operate outside of this range (e.g. pH 3.5-7). 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

1 kg packs or 25 kg 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.

1 kg packs: 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.