

ACTIVE DRY BREWING YEAST

Crisp Sour

product information

for **Craft Brewers**
from craft beer lovers

Pitching Rate

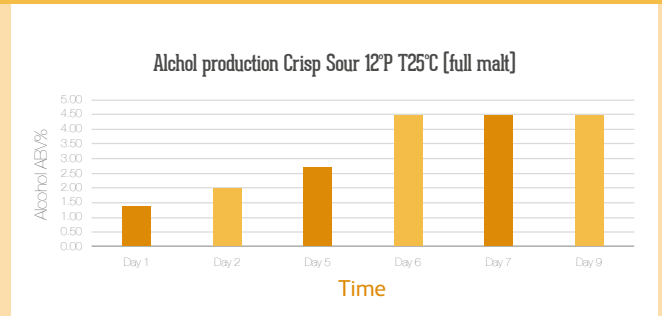
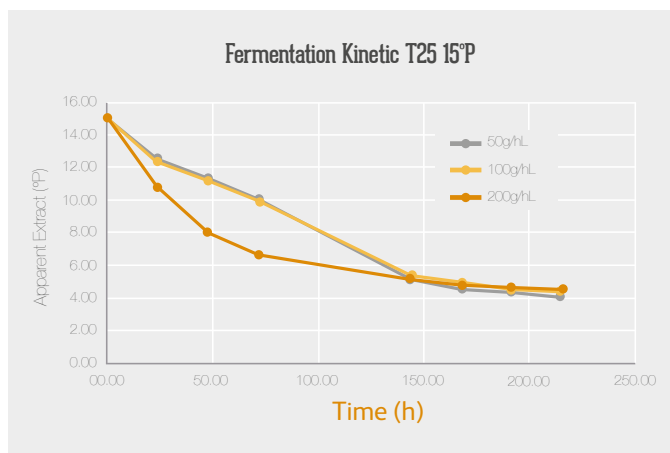
Wort Gravity	Pitching Rate g/hL	Sequential Inoculation
8°P-10°P	50	no
10°P-12°P	100	no
12°P-15°P	200	no
>15°P	200	after 4 days

For brewers looking to increase the alcohol content beyond 6.5%, a secondary inoculation with our yeast strain American Ale™ can be performed. This secondary yeast is effective in clearing any remaining fermentable sugars and can elevate the ethanol concentration. This two-step fermentation process allows the creation of stronger beers without compromising on flavour. If a secondary yeast will be used, it should be added after 4 days of fermentation to avoid competition for simple sugars.

Fermentation Kinetic

The fermentation kinetic of the Crisp Sour is different from other yeasts. The yeast can take up to 10 days to fully ferment the beer. There is a first sharp decrease in Plato at day 1, a slow down from day 1 up to day 4 and a fermentation speed increase after day 4 and until the fermentation completion.

The wort sugar composition influence greatly the impact of the acidity in the final beer. To enhance the smoothness and limit acetic acid production it is suggested to add up to 20% of glucose to the grain bill. To obtain a flavour profile more similar to a spontaneous fermentation, it is suggested to have a full malt grain bill.



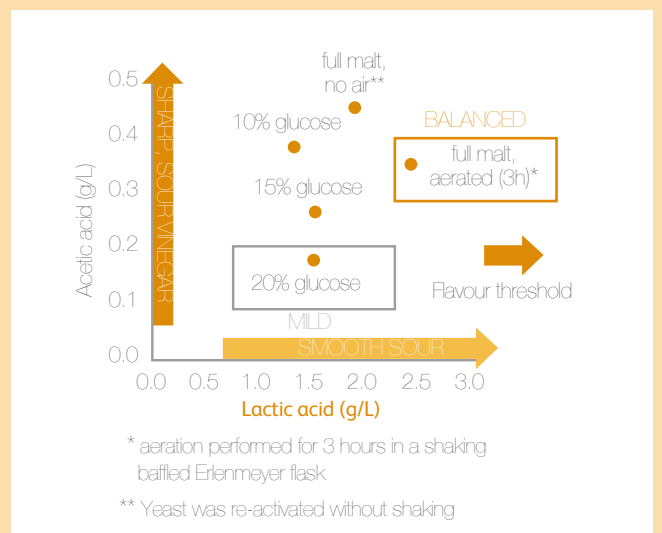
Fruit Additions

The timing of fruit additions can significantly affect the flavour and acidity profile of the beer. Introducing fruit can increase the fermentable sugar content, which may require careful management to ensure complete fermentation.

Early Addition (within the first 24-48 hours): Adding fruit early reduces the acetic acid production and increase the smoothness of beer.

Late Addition (post-active fermentation): Adding fruit late in the fermentation process can result in higher residual sugars and incomplete fermentation, as Crisp Sour™ may not efficiently metabolize all the additional sugars. To address this, a secondary yeast such as American Ale™ is recommended to complete the fermentation and ensure that all fermentable sugars are fully processed. This approach helps to prevent over-sweetness and potential issues with carbonation and bottle conditioning.

Addition at the end of fermentation: adding fruit after fermentation is complete is possible but we recommend to pasteurize the beer afterward to avoid that the fermentation continues in the bottle.



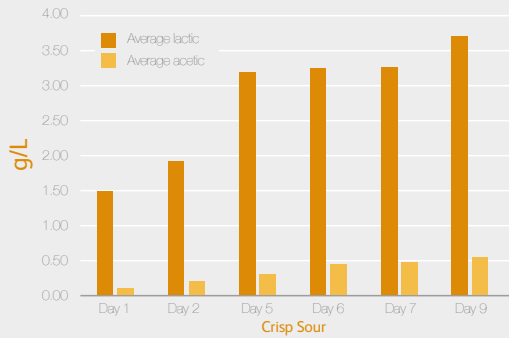
PINNACLE™

ACTIVE DRY BREWING YEAST

Origin of Pinnacle Crisp Sour



Lactic and acetic acid production in g/L Crisp Sour 12°P T25°C [full malt]



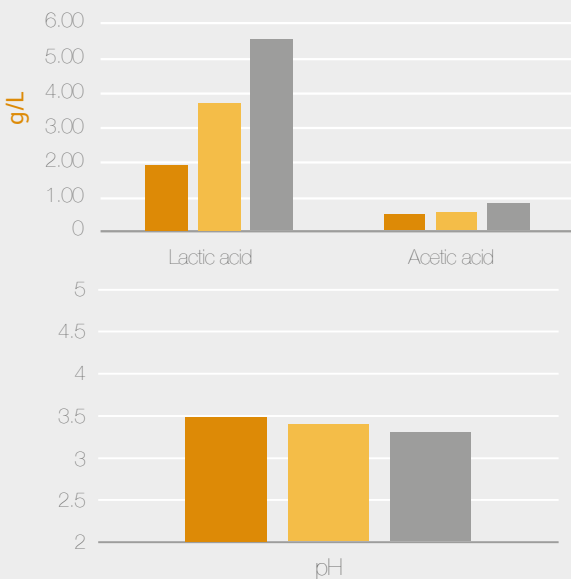
- Data obtained for a 12 Plato wort with starting pH 5.5
- Lower initial wort gives lower final pH up to 3.3

Tuning the Acidity

Crisp Sour™ is known for its balanced acid production, typically yielding lactic acid levels that are 4 to 7 times higher than acetic acid. This balance is crucial for creating a well-rounded sourness without the harshness that high levels of acetic acid can bring. Brewers can control the ratio and overall strength of these acids through careful fermentation temperature management.

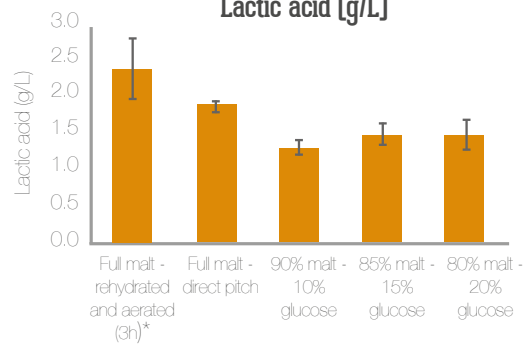
To achieve the optimal balance between fermentation speed, lactic and acetic acid formation, we suggest to ferment at 25°C.

Concentration in g/L

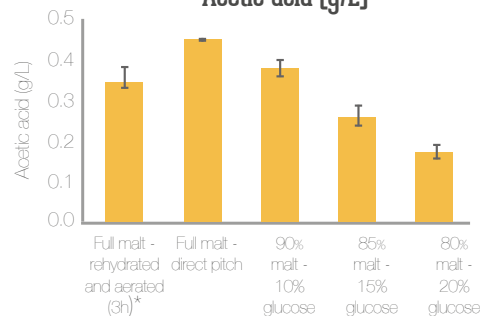


■ 18°C ■ 25°C ■ 30°C

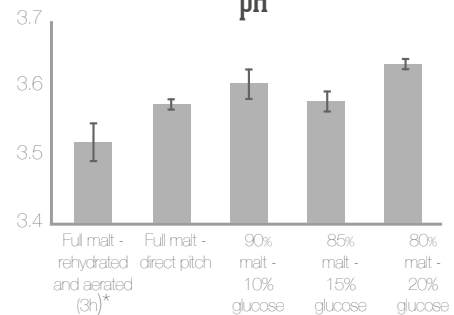
Lactic acid [g/L]



Acetic acid [g/L]



pH



* aeration performed for 3 hours in a baffled Erlenmeyer

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