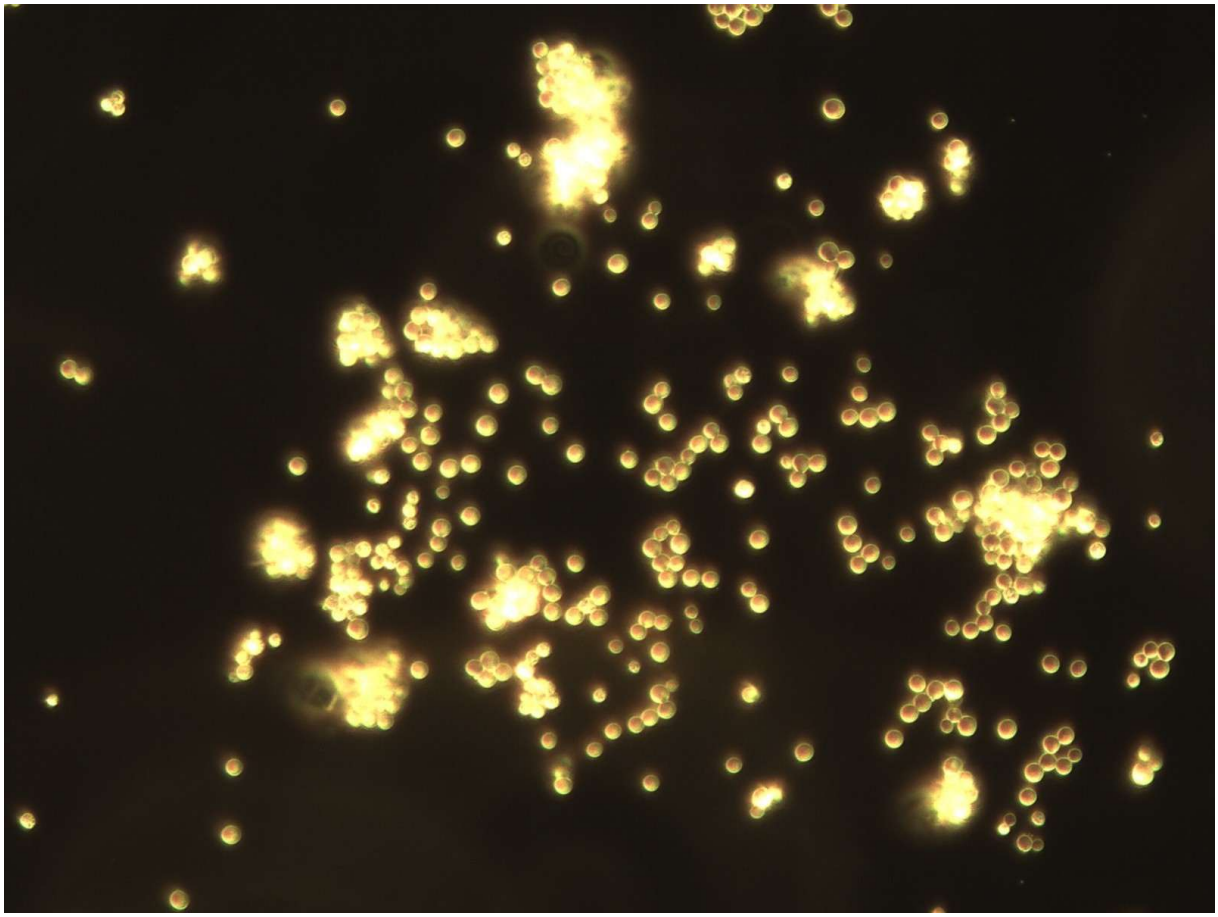
Handling, Special features and advantages of NoLow yeast BrewMasters One

Yeast strain:

Torulaspora delbrückii



Description:

BrewMasters One only ferment glucose, fructose and sucrose, means it is a maltose-negative yeast strain. These sugars make up approx. 8.5 - 16.5% of the total sugar of a beer wort, which later corresponds to a degree of fermentation of 10 - 15%.

Advantages:

With stopped fermentation, a similarly low degree of fermentation can also be achieved, but the stopped yeast cannot break down any by-products during the forced end of fermentation. In contrast to stopped fermentation, BrewMasters One runs through the complete fermentation cycle and thus produces a "clean" beer. The yeast is POF phenotype and Diastaticus NEGATIVE!

Dosage/Storage:

50 to 100g/hL depending of the beer style, which you want to produce (higher temperature wort, lower dosage and vice versa). Dry yeast should be stored in a dry place at temperatures below 10°C to prevent any loss of activity during its shelf life. Opened packages should be used as soon as possible.

Direct Pitching:

Sprinkle the yeast directly on the surface of the wort in the fermenter and ensure that it is perfectly distributed and prevent clumping.

Rehydration

Suspend the total amount of dry yeast in 10times higher volume of wort with a temperature of 20-30°C. Rehydration time: 20 Min. up to 40 Min. During the rehydration, please shake the glass, mix or stir it gentle with (100-150U/min), oxygen is also important for rehydration. After this process, the yeast is creamy and ready for fermentation! Please ensure, that the temperature difference between rehydration and fermentation is not higher than 10°C.

Production recommendation with BrewMasters One

Malts:

Pale malts to avoid excessive residual sweetness. Munich malt gives more bodied beer and color.

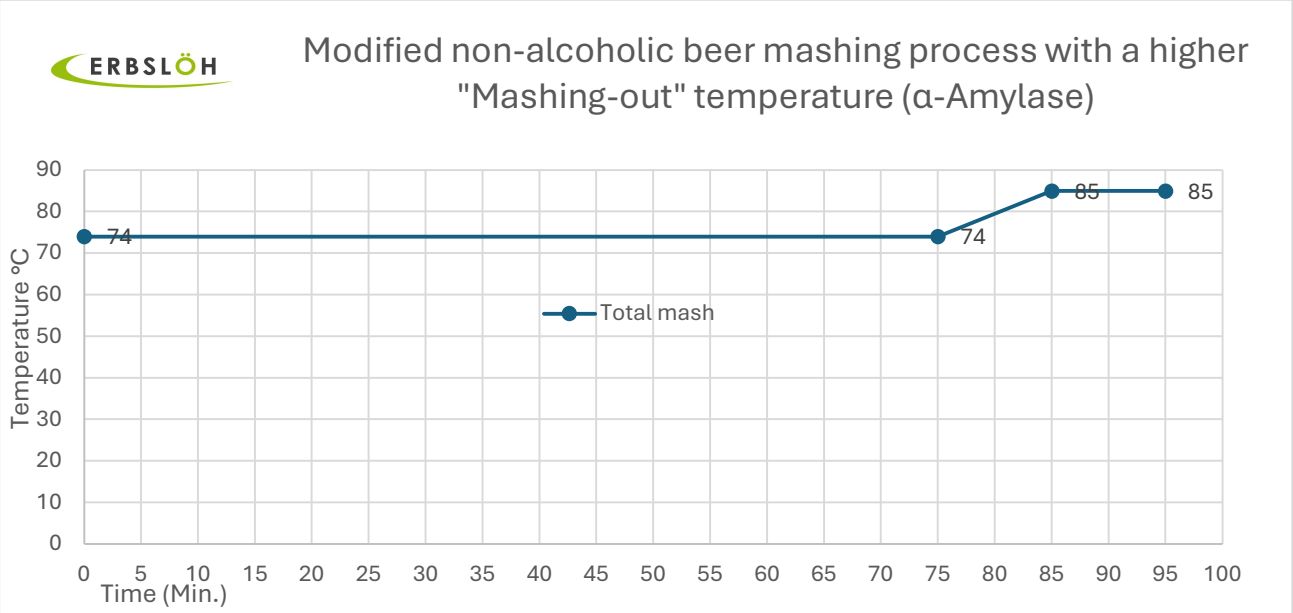
Hops:

Hop dosage should be significantly higher compared to a full beer to equalize the residual sweetness. 30% higher amount of hops/root wort compared to a full beer as a guide.

Strong aroma hops and hop cones emphasize the taste of the non-alcoholic beer.

Mashing process:

See diagram below.



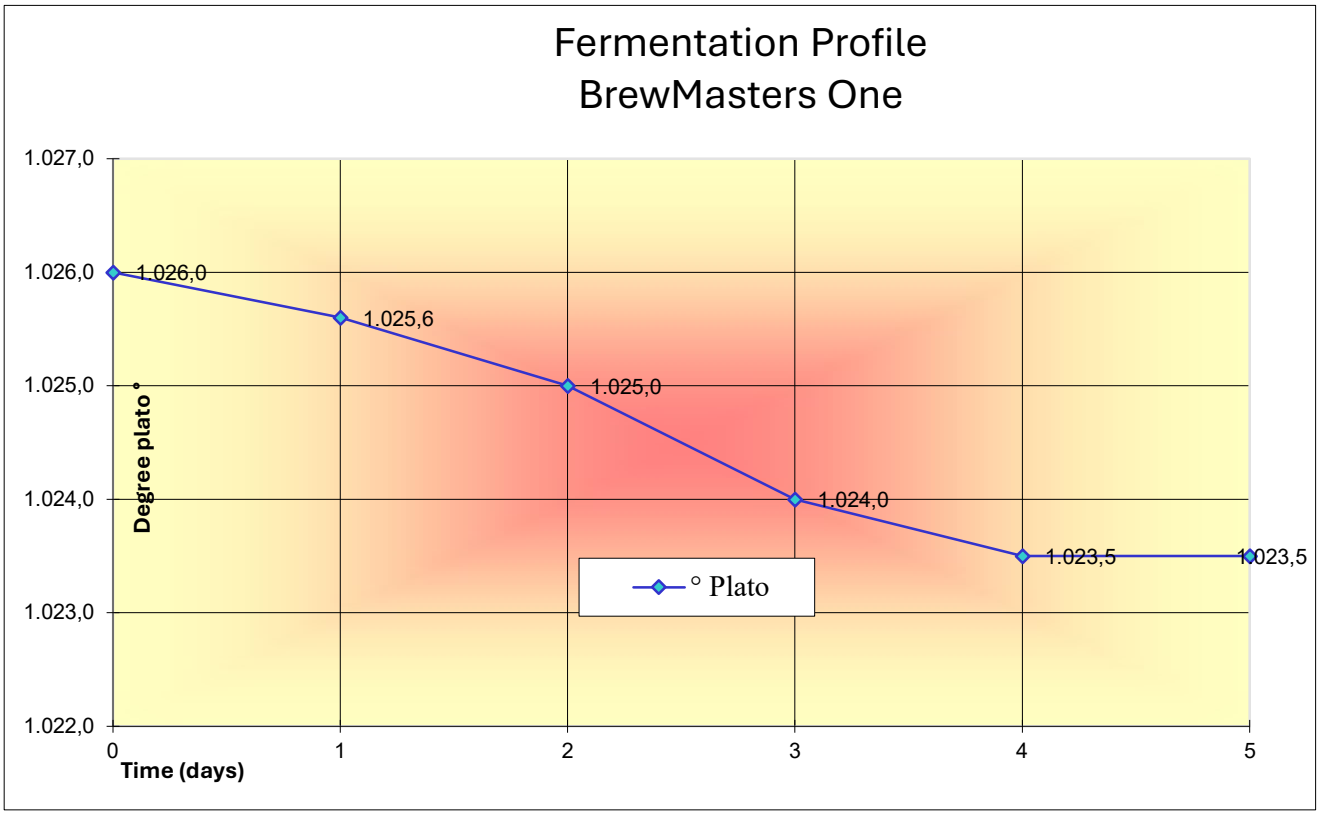
Why, “mashing-out” temperature of 85°C? With the higher temperature, we can guarantee that we have during the lautering process no α-Amylase rest activity from malt and no additional fermentable sugar content will be produced in the lauter-wort.

Original wort should be in the range of 6.0 - 6.5°P. These results will end in an alcohol content of 0.3 - 0.4 %vol.

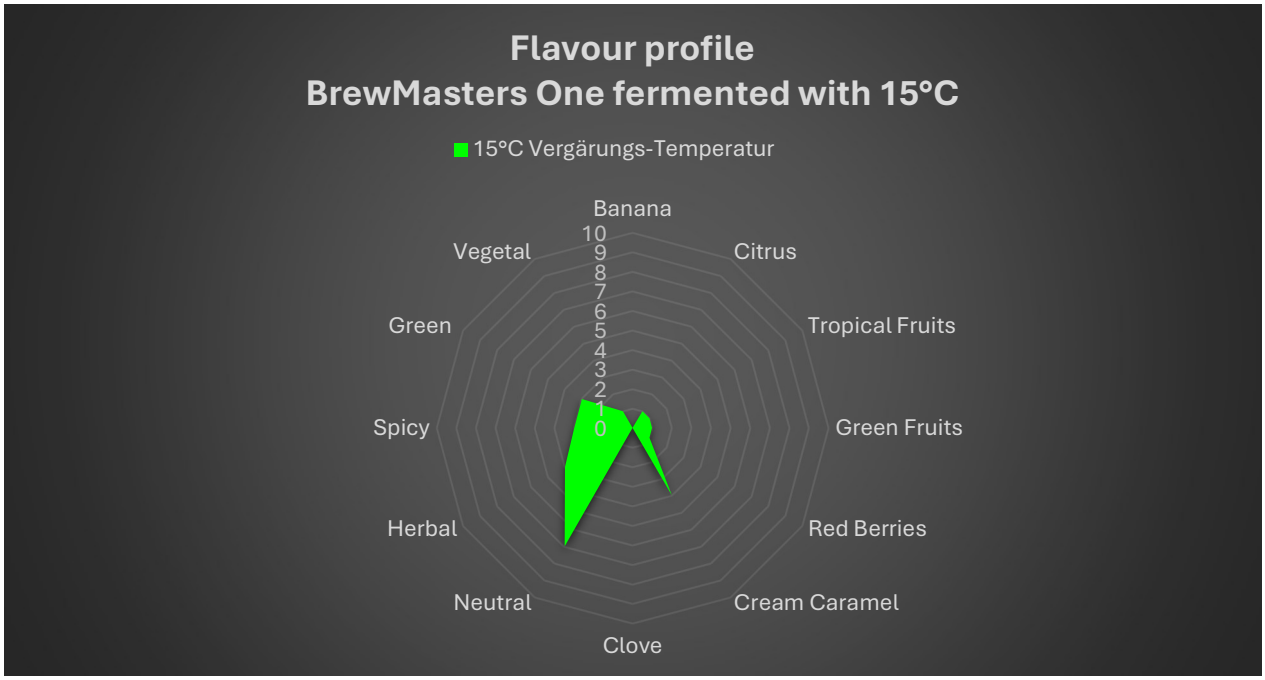
pH correction after wort boiling:

As there is no real pH drop during fermentation with the BrewMasters One, the pH value in the whirlpool must be adjusted to 4.5 - 4.6 (e.g. with 50mL/hL BOEROVIN).

Fermentation:

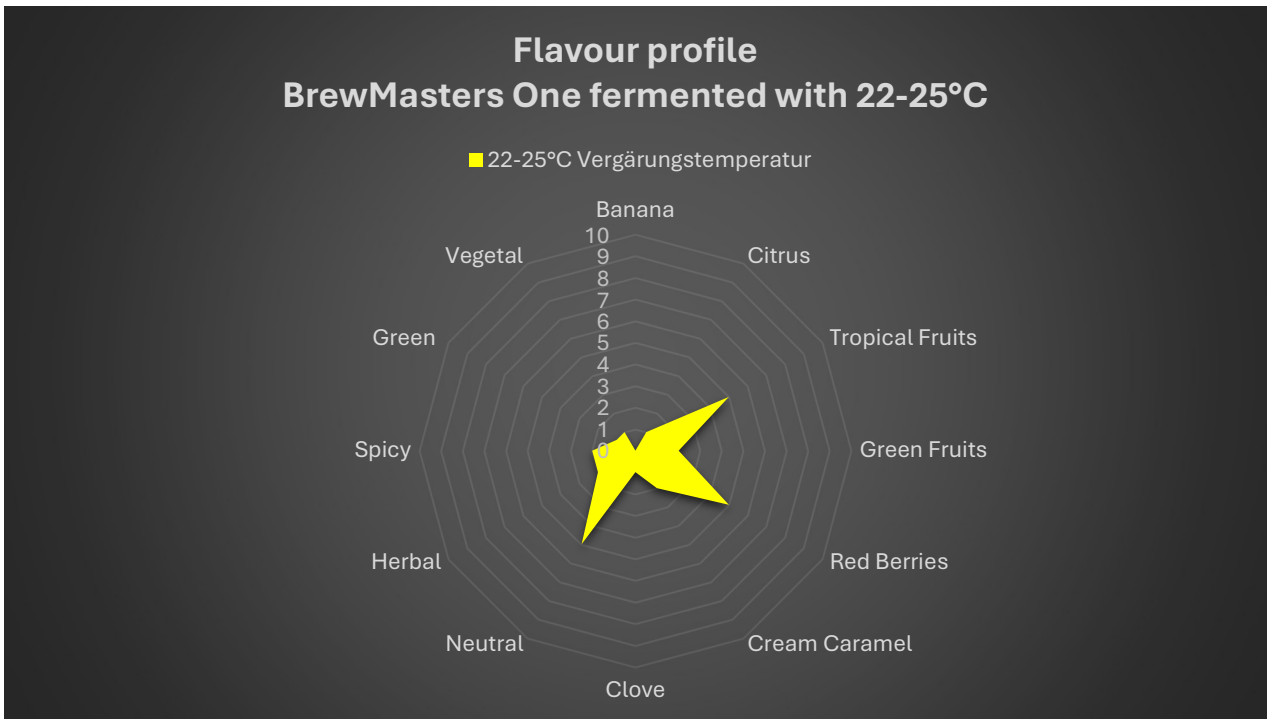


Flavor Profile finished beer, 15°C



Fermentation temperature: 15°C
Fermentation time: 3–4 days

Flavor Profile finished beer, 22-25°C



Fermentation temperature: 22-25°C
Fermentation time: 3-4 days

Evaluation of the Flavor profile

When you look at the graph of the Flavor profile, it is possible to produce 2 different beer styles, only in changing the fermentation temperature. This allows the producer, maybe with changing the amount and used Hops, a fruity aroma profile similar to IPA or Top-fermenting styles and on the other side a Bavarian Helles or Pilsner Style beer at lower temperature.

Carbonation

Beers must be subsequently adjusted to the desired CO_2 content.

Filtration process

For classic bottom fermented beer styles, we recommend filtration of the beer. Please note that the filtration must be at start of the process, to ensure that no higher alcohol or Plato° from before filtered regular beer can pass to the non-alcoholic beer.

Stabilization

When the beer gets filtered, we recommend a part of stabilization on protein and/or polyphenol contents. We know from our experiences that NA-Beers are sensitive to haze and sediment during the shelf life. With stabilization, you can guarantee the highest drinkability during the total shelf life.

Pasteurization:

Pasteurization of the bottled, canned, kegging product is mandatory as the beer still contains sufficient fermentable extract for yeasts (e.g. the normal operating yeast). The pasteurization process eliminates cross contamination, secondary fermentation and higher alcohol contents which are danger for consumers.