



# Non-Alcoholic or Low Alcohol Beer Production Technical Sheet

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Traditional, large scale non-alcoholic beers are produced using methods such as distillation or very fine membrane filtration. Additional methods, such as using a low alcohol producing yeast strain, can be used. These yeast typically dislike maltose and will produce between 15-25% attenuation depending on the mash recipe.

## YEAST SUGGESTIONS:

Low Alcohol producing yeast strains will impart lower flavor attributes than traditional brewing strains due to reduced amount of sugars fermented.

- **WLP603** - *Torulasporea delbrueckii*:  
High ester production. Suitable for a fruit- forward IPA or Saison.
- **WLP618** - *Saccharomyces ludwigii*:  
Low ethyl acetate production. Great for all styles of low alcohol beer.
- **WLP686** - *Zygosaccharomyces lentus*:  
Very neutral. Little ester production.

For a complete list of Vault strains and specifications visit [www.whitelabs.com](http://www.whitelabs.com)

These strains are now a part of our specialty Vault lineup with a 21 day lead time and 1L minimum order required.

## SUGGESTED PITCHING RATE:

200,000 cells/ml

## TIPS AND TRICKS:

- Mash recipe will need to reflect a lower amount of fermentables available for the yeast. *See recipe example on next page.*
- Hop extracts, flavoring can help reduce off flavors such as a “worty” character.
- Blending can help achieve a better tasting beer with a low ABV.
- Small scale trials are suggested to optimize nutrients, yeast, and mash for a lower alcohol fermentation.

## SUGGESTED ANALYTICAL LABORATORY TESTING SERVICE:

- **LS6670** - Sugar Profile by HPLC
- **LS6646** - Alcohol by Volume/Weight



## Low Alcohol Pilsner

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**Brew Method:** All Grain

**Style Name:** German Pilsner

**Boil Time:** 60 min

**Efficiency:** 76% (ending kettle)

### FERMENTABLES:

German - Pilsner (88.2%)

German - Wheat Malt (5.9%)

German - Caramel Pils (5.9%)

### STATS:

**Original Gravity:** 1.016

**Final Gravity:** 1.013

**ABV:** 0.5%

**IBU:** 19.19

**SRM:** 1.44

### YEAST:

WLP603 *Torulaspora delbrueckii*

**Flocculation:** Medium

**Attenuation:** 26%

**Fermentation Temperature:** 10°C

### HOPS:

Select depending on your  
desired flavor profile

### MASH GUIDELINES:

**Temperature:** 72°C

**Time:** 60 minutes