



# Kolsch-High Temp

## WLP029

### German Ale/Kolsch Yeast

#### TASTING NOTES:

Red Apple | Herbal Spice | Black Tea

#### TALKING POINTS:

- This temperature creates a noticeable red apple ester aroma not seen in the low temperature version.
- Herbal spice and tea aromas from the hops are accentuated.

#### PAIRINGS:

- Brussels
- Margherita Pizza

| STATS   |            |
|---------|------------|
| ABV:    | 4.8%       |
| IBU:    | 24         |
| OG:     | 11.3 Plato |
| FG:     | 2.3 Plato  |
| GLUTEN: | <10ppm     |
| SRM:    | 4.6        |

ABV (alcohol by volume)  
 IBU (international bitterness units)  
 OG (original gravity)  
 FG (final gravity)

#### STORY:

If you enjoy fun beer experiments, then you will definitely enjoy tasting the difference between these two beers. Using our WLP029 German Ale/Kolsch Yeast we conducted fermentations of the same beer at two different temperatures. Temperature is one of the most impactful parameters a brewer can control. So how do you find the best temperature? Using general guidelines for specific strains and styles, a brewer can perform trials using a general range of temperatures to see how it may affect flavor, aroma, and fermentation speed.



#### YEAST:

WLP029 German Ale/Kolsch Yeast



#### HOPS:

Perle - Boil 60min. (15 IBUs)  
 Sterling - Whirlpool 20min. (9 IBUs)



#### MALT:

Pilsner (89%)  
 Acidulated (5.5%)  
 Carafoam (5.5%)



#### OTHER:

Servomyces  
 Clarity Ferm

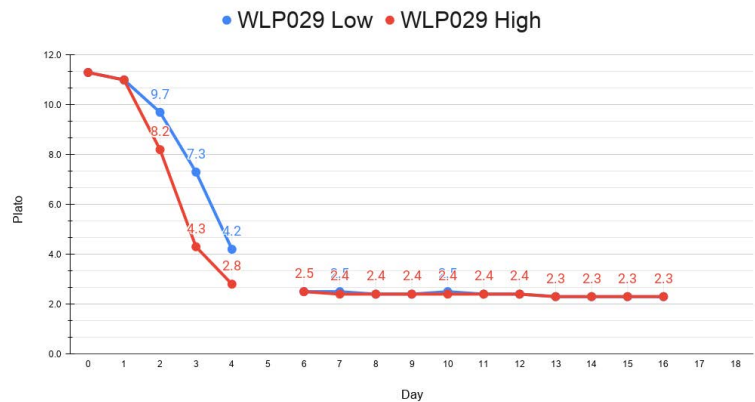
# Kolsch

## WLP029

**BATCH: 227**

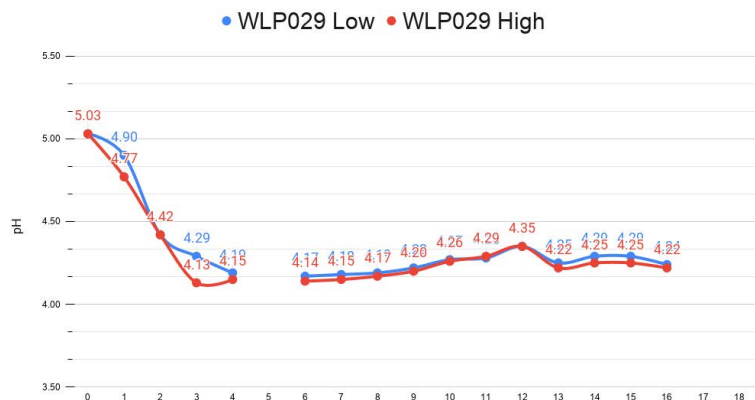
|                         | Low Temp          | High Temp         |
|-------------------------|-------------------|-------------------|
| <b>Starting Gravity</b> | <b>11.3 Plato</b> | <b>11.3 Plato</b> |
| <b>24 Hours</b>         | <b>11 Plato</b>   | <b>11 Plato</b>   |
| <b>48 Hours</b>         | <b>9.7 Plato</b>  | <b>8.2 Plato</b>  |
| <b>Final Gravity</b>    | <b>2.3 Plato</b>  | <b>2.3 Plato</b>  |

Gravity (Plato)



|                        | Low Temp          | High Temp         |
|------------------------|-------------------|-------------------|
| <b>Diacetyl as-is</b>  | <b>&lt;15 ppb</b> | <b>&lt;15 ppb</b> |
| <b>Diacetyl total</b>  | <b>30.7 ppb</b>   | <b>18 ppb</b>     |
| <b>Acetaldehyde</b>    | <b>3.7 ppm</b>    | <b>4.1 ppm</b>    |
| <b>Ethyl acetate</b>   | <b>22.7 ppm</b>   | <b>30.1 ppm</b>   |
| <b>Isoamyl acetate</b> | <b>0.9 ppm</b>    | <b>1.27 ppm</b>   |

pH



### Fermentation Profile:

Pitch Low Temp at 57°F (14°C)

Pitch High Temp at 63°F (17°C)

Raise low temperature fermentation to 64°F (18°C) on Day 3

Raise high temperature fermentation to 68°F (20°C) on Day 3

Crash temperature to 34°F (1°C) for conditioning and lagering once at terminal gravity.