## Killer Kölsch – All Grain Kölsch

Recipe for 5 gallons (18.93 L) Boil Time: 90 minutes Original Gravity: 1.046 (11° P) Final Gravity: 1.011 (3° P) SRM: 3° IBU: 16 ABV: 4.8% Brewhouse Effi ciency: 70%

### Fermentables

8.5 lbs (3.9 kg) Pilsner malt
3.1 oz (88 g) Vienna malt
3.1 oz (88 g) Caravienne® malt

#### Hops

0.3 oz (9 g) Liberty pellet hops, 4.5% aa (first wort hop)
1 oz (23 g) German Hallertauer pellet hops, 4.3% aa (30 min)
0.3 oz (9 g) Crystal pellet hops, 3.5% aa (5 min)

#### Yeast

White Labs WLP029 German Ale/Kolsch or Wyeast 2565 German Kölsch

# Water (optional, your usual brewing water will work, this just gets you closer to style)

Reverse osmosis water treated with ¼ tsp 10% phosphoric acid per 5 gallons 1 tsp CaCl2 in the mash

#### Process

- Mash at 150 °F for 60 minutes
- Mash out at 168° F (76° C) to obtain your pre-boil volume
- Bring to a rolling boil for 90 minutes, add hops at specified intervals from end of boil
- Chill wort to 58° F (14° C) and pitch yeast
- Allow temp to rise to 68° F (20° C) after 4 days
- Lager for 2 months at 40° F (4° C)