## Altbier

5 gallons, all-grain, Anvil Foundry OG = 1.048 FG = 1.010 IBU = 41 SRM = 16 ABV = 5.3%

## Ingredients

Stone Path Nor'East Pilsner Malt (1.8°L) 1.5 lb. Dark Munich Malt (8.5°L) 8 oz. Melanoidan Malt (35.0°L) 8 oz. Cara Munich II (45.7°L) 4 oz. Carafa Special II (413.0°L) 0.5 oz Warrior hops (60 min.) 0.4 oz. Spalt hops, 4.3% (60 mins) 0.6 oz. Spalt hops, 4.3% (20 mins) 2.2 grams Wyeast yeast nutrient ½ Whirlfloc tablet SafAle K97 (German Ale)

## Step by Step

Target Water Profile Ca 42; Mg 15; Na 25; Su 113; Cl 56; target pH 5.4 Mash all grains at 149°F for 60 minutes. Sparge with 1 gallon water treated with .25 ml 88% lactic acid Boil the wort for 90 minutes, adding hops at the times indicated in the recipe. Add whirfloc and yeast nutrient 15 minutes before the end of the boil. Chill the wort to 62°F, aerate the wort with oxygen, pitch the yeast, and ferment until complete. Keg and carbonate to 2.5 volumes.

## Notes from the Brewer

Brewed in the Anvil Foundry with sparge, your process may vary. I added 1.16 grams chalk to the fermenter for a higher Ca content in the finished beer. Next time, I would try to change the mash water chemistry to achieve a ~20 ppm higher Ca concentration than shown above.