

## xBmt-20201207 Acidulated Malt vs. Phosphoric Acid - 4.9%

### American Pale Ale

Author: Cade Jobe

Type: All Grain

IBU : 48 (Tinseth)  
BU/GU : 0.94  
Colour : 14 EBC  
Carbonation : 2.3 CO2-vol

Pre-Boil Gravity : 1.039  
Original Gravity : 1.051  
Final Gravity : 1.014

### Fermentables (1.34 kg)

1.195 kg - Pale Malt (2 Row) US 3.9 EBC (89.5%)  
78 g - Acid Malt (or additional Pale Malt) 5....  
63 g - Caramel/Crystal Malt - 60L 118 EBC (4.7%)

### Hops (31.4 g)

60 min - 4.8 g - Hallertau Magnum - 14% (33 IBU)  
30 min - 3.8 g - Centennial - 10% (14 IBU)  
1 min - 7.5 g - Cascade - 5.5% (1 IBU)

### Dry Hops

3 days - 15.3 g - Cascade - 5.5%

### Miscellaneous

Mash - 0.25 g - Baking Soda (NaHCO3)  
^ Lot # 41190621/3  
^ Brouwstore (NL) 003.106.2  
Mash - 0.24 g - Calcium Chloride (CaCl2) 33 %...  
^ Lot # 115038  
^ Brouwstore (NL) 055.035.0  
Mash - 0.22 g - Canning Salt (NaCl)  
^ Albert Heijn (NL)  
Mash - 0.4 g - Epsom Salt (MgSO4)  
^ Lot # /2119000091  
^ Brouwstore (NL) 055.027.7  
Mash - 0.41 g - Gypsum (CaSO4)  
^ The Malt Miller (UK) CHE-03-004

### Yeast

0 ml - Imperial Yeast Independence A15

### 01 Brouwpunt 5L (60min) (rev 4)

Batch Size : 5.6 L  
Boil Size : 7.76 L  
Post-Boil Vol : 5.96 L

Mash Water : 4.01 L  
Sparge Water : 5.15 L  
Boil Time : 60 min  
Total Water : 9.16 L



14 EBC

Brewhouse Efficiency: 71.8%

Mash Efficiency: 73.3%

### Mash Profile

BIAB, Medium Body  
72.9 °C - Strike Temp  
66.7 °C - 60 min - Saccharification

### Fermentation Profile

Imported  
17.8 °C - 4 days - Primary  
22.2 °C - 10 days - Secondary  
-1.1 °C - 30 days - Conditioning

### Water Profile

02 NL Spa Reine Flat Mineral Water ([www.ah.nl](https://www.ah.nl))  
Ca 19 Mg 6 Na 20 Cl 25 SO 46

SO/Cl ratio: 1.8

Mash pH: 5.15

Sparge pH: 6

### Measurements

Mash pH:

Boil Volume:

Pre-Boil Gravity:

Post-Boil Kettle Volume:

Original Gravity:

Fermenter Top-Up:

Fermenter Volume:

Final Gravity:

Bottling Volume:

### Recipe Notes

Water Profile: Ca 25 | Mg 7 | Na 20 | SO4 46 | Cl 25

<https://brulosophy.com/2020/12/07/water-chemistry-phosphoric-acid-vs-acidulated-malt-in-american-pale-ale-exbeeriment-results/>