

## 14 SMaSH Apollo - 5.1%

### American Pale Ale

Author: The Thirsty Otter

Type: All Grain

IBU : 31 (Tinseth)  
 Colour : 9 EBC  
 Carbonation : 2.5 CO2-vol

Pre-Boil Gravity : 1.034  
 Post-Boil Gravity : 1.045  
 Original Gravity : 1.047  
 Final Gravity : 1.008

### Fermentables (1.1 kg)

1.1 kg - Maris Otter Pale Ale Malt 5.9 EBC (1...  
 ^ Lot # 67-200827-161058-155815-1/1  
 ^ The Malt Miller (UK) MAL-00-036  
 32 g - Bottling - Sugar, Table (Sucrose) 2 EBC  
 ^ Albert Heijn (NL)

### Hops (37.1 g)

15 min - 4 g - Apollo (T90) - 16.7% (18 IBU)  
 ^ The Malt Miller (UK) HOP-05-018

### Hop Stand

7 min hopstand @ 80 °C  
 7 min - 23.8 g - Apollo (T90) - 16.7% (13 IBU)

### Dry Hops

Day 7 - 9.3 g - Apollo (T90) - 16.7%

### Miscellaneous

Mash - 2 items - pH paper strips 5.2 - 6.8  
 ^ Lot # 20200422/1  
 ^ Brouwstore (NL) 013.075.7  
 Mash - 0.45 g - Epsom Salt (MgSO4)  
 ^ Lot # /2119000091  
 ^ Brouwstore (NL) 055.027.7  
 Mash - 2.3 g - Gypsum (CaSO4)  
 ^ The Malt Miller (UK) CHE-03-004  
 Mash - 0.6 ml - Lactic Acid 80% 80%  
 ^ Lot # 20200213  
 ^ Brouwstore (NL) 003.002.3  
 Mash - 2 items - pH paper strips 5.2 - 6.8  
 ^ Lot # 20200422/1  
 ^ Brouwstore (NL) 013.075.7  
 Sparge - 1.02 ml - Lactic Acid 80% 80%  
 ^ Lot # 20200213  
 ^ Brouwstore (NL) 003.002.3  
 60 min - Boil - 0.15 g - Lipohop K  
 ^ Lot # LPK110  
 ^ The Malt Miller (UK) CH-03-013  
 10 min - Boil - 1 g - Irish Moss  
 ^ Lot # 4348  
 ^ Brouwstore (NL) 125.249.1  
 10 min - Boil - 0.05 g - Lallemand Servomyces  
 ^ Lot # 154001112904ABV  
 ^ Brouwstore (NL) 050.620.4  
 10 min - Boil - 1 items - Wort Chiller  
 ^ Brouwstore (NL) 057.020.20  
 Bottling - 15 items - 33 cl Steinie bottle (s...  
 ^ Brouwstore (NL) 017.500.0

### Yeast

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

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

Mash Water : 3.3 L  
 Sparge Water : 5.64 L

Boil Time : 60 min  
 Total Water : 8.94 L

Brewhouse Efficiency: 71.8%  
 Mash Efficiency: 73.3%



9 EBC

### Mash Profile

01 One Step Mash (60 min)  
 68.7 °C - Strike Temp  
 63 °C - 60 min - Temperature

### Fermentation Profile

Ale  
 20 °C - 14 days - Primary  
 20 °C - 45 days - Conditioning

### Water Profile

NL Hoofddorp Rein Tap Water (2020-Q3 WQR) (St...  
 Ca 100 Mg 15 Na 68 Cl 92 SO 212

SO/Cl ratio: 2.3  
 Mash pH: 5.39  
 Sparge pH: 6

### Measurements

Mash pH:

Boil Volume:

Pre-Boil Gravity:

Post-Boil Gravity:

Post-Boil Kettle Volume:

Original Gravity:

Fermenter Top-Up:

Fermenter Volume:

Final Gravity:

Bottling Volume:

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### Recipe Notes

Malt is ordered with standard crush @ The Malt Miller (<https://www.themaltmiller.co.uk/>).