

## 14 SMaSH Apollo - 5.1%

### American Pale Ale

Author: The Thirsty Otter

Type: All Grain

IBU : 31 (Tinseth)  
 BU/GU : 0.65  
 Colour : 9 EBC  
 Carbonation : 2.5 CO2-vol

Pre-Boil Gravity : 1.034  
 Original Gravity : 1.045  
 Total 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

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

### Miscellaneous

Mash - 0.79 g - Baking Soda (NaHCO3)  
 ^ Lot # 41190621/3  
 ^ Brouwstore (NL) 003.106.2  
 Mash - 0.5 g - Calcium Chloride (CaCl2) 33 % 33%  
 ^ Lot # 115038  
 ^ Brouwstore (NL) 055.035.0  
 Mash - 0.49 g - Canning Salt (NaCl)  
 ^ Albert Heijn (NL)  
 Mash - 1.18 g - Epsom Salt (MgSO4)  
 ^ Lot # /2119000091  
 ^ Brouwstore (NL) 055.027.7  
 Mash - 3.12 g - Gypsum (CaSO4)  
 ^ The Malt Miller (UK) CHE-03-004  
 Mash - 0.5 ml - Lactic Acid 80% 80%  
 ^ Lot # 20200213  
 ^ Brouwstore (NL) 003.002.3  
 Mash - 3.3 l - NL Spa Reine Flat Mineral Water  
 ^ AH (NL)  
 Sparge - 5.64 l - NL Spa Reine Flat Mineral W...  
 ^ AH (NL)  
 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

### 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



9 EBC

Brewhouse Efficiency: 71.8%  
 Mash Efficiency: 73.3%

### Mash Profile

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

### Fermentation Profile

01 Ale + DR + Conditioning  
 20 °C - 10 days - Primary  
 23 °C - 4 days - Diacetyl rest  
 20 °C - 14 days - Carbonation  
 20 °C - 28 days - Conditioning

### Water Profile

NL Spa Reine Flat Mineral Water (www.ah.nl) (...  
 Ca 93 Mg 15 Na 49 Cl 50 SO 250

SO/Cl ratio: 5  
 Mash pH: 5.38  
 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:

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### Recipe Notes

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