

## Helicopter APA - 4.7%

### American Pale Ale

Author: Cheshire Cat@homebrewinguk.com

Type: All Grain

IBU : 41 (Tinseth)  
 BU/GU : 0.85  
 Colour : 9 EBC  
 Carbonation : 2.4 CO2-vol

Pre-Boil Gravity : 1.037  
 Original Gravity : 1.048  
 Final Gravity : 1.012

### Fermentables (1.2 kg)

1.123 kg - Planet Pale Ale Malt 6.3 EBC (93.9%)  
 49 g - Naked Malted Oats 2 EBC (4.1%)  
 24 g - Carapils 4 EBC (2%)  
 ^ Brouwmaatje (NL) BM-BL.051.307.7/1

### Hops (12.9 g)

60 min - 1.8 g - Chinook (T90) - 11.8% (11 IBU)  
 ^ The Malt Miller (UK) HOP-05-000  
 30 min - 3.7 g - Chinook (T90) - 11.8% (18 IBU)  
 ^ The Malt Miller (UK) HOP-05-000  
 10 min - 3.7 g - Chinook (T90) - 11.8% (10 IBU)  
 ^ The Malt Miller (UK) HOP-05-000

### Hop Stand

20 min hopstand @ 80 °C  
 20 min - 3.7 g - Chinook (T90) - 11.8% (3 IBU)  
 ^ The Malt Miller (UK) HOP-05-000

### Miscellaneous

Mash - 0.8 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 - 0.5 g - Canning Salt (NaCl)  
 ^ Albert Heijn (NL)  
 Mash - 1.19 g - Epsom Salt (MgSO4)  
 ^ Lot # /2119000091  
 ^ Brouwstore (NL) 055.027.7  
 Mash - 3.15 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

### Yeast

4 g - Sanders

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

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

Mash Water : 3.59 L  
 Sparge Water : 5.44 L  
 Boil Time : 60 min  
 Total Water : 9.03 L



9 EBC

Brewhouse Efficiency: 71.8%  
 Mash Efficiency: 73.3%

### Mash Profile

01 One Step Mash (60 min)  
 71 °C - Strike Temp  
 65 °C - 60 min - Temperature

### Fermentation Profile

01 Ale + DR + Conditioning  
 18 °C - 10 days - Primary  
 21 °C - 4 days - Diacetyl rest  
 18 °C - 14 days - Carbonation  
 18 °C - 28 days - Conditioning

### Water Profile

02 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: 5.39  
 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

Assumed hop additions.