

## 05 SMaSH Centennial - 5.1%

### American Pale Ale

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Type: All Grain

IBU : 41 (Tinseth)  
Color : 9 EBC  
Carbonation : 2.3 CO<sub>2</sub>-vol

Pre-Boil Gravity : 1.036  
Post-Boil Gravity: 1.048  
Original Gravity : 1.051  
Final Gravity : 1.012

### Fermentables (1.23 kg)

1.2 kg - Pale Malt, Maris Otter 5.9 EBC (97.6%)  
30 g - Bottling - Sugar, Table (Sucrose) 2 EB...

### Hops (24 g)

20 min - 4 g - Centennial - 9% (12 IBU)  
10 min - 5 g - Centennial - 9% (11 IBU)  
5 min - 7.5 g - Centennial - 9% (12 IBU)

### Hop Stand

30 min hopstand @ 80 °C  
30 min - 7.5 g - Centennial - 9% (6 IBU)

### Miscellaneous

Mash - 0.94 ml - Calcium Chloride (CaCl<sub>2</sub>) 33...  
Mash - 0.33 g - Epsom Salt (MgSO<sub>4</sub>)  
Mash - 1.05 g - Gypsum (CaSO<sub>4</sub>)  
Sparge - 1.48 ml - Calcium Chloride (CaCl<sub>2</sub>) 3...  
Sparge - 0.52 g - Epsom Salt (MgSO<sub>4</sub>)  
Sparge - 1.66 g - Gypsum (CaSO<sub>4</sub>)  
Sparge - 1.1 ml - Lactic Acid 80% 80%  
60 min - Boil - 0.15 g - Lipohop K  
10 min - Boil - 1 g - Irish Moss  
10 min - Boil - 0.05 g - Servomyces

### Yeast

0.5 pkg - Lallemmand (LalBrew) New England

### 01 Brouwpunt 5L (60min) (rev 2)

Batch Size : 5.6 L  
Boil Size : 7.99 L  
Post-Boil V.: 5.99 L

Mash Water : 3.6 L  
Sparge Water: 5.69 L  
Boil Time : 60 min  
Total Water : 9.29 L



9 EBC

Brewhouse Efficiency: 71.4%  
Mash Efficiency : 73.3%

### Mash Profile

01 One Step Mash (60 min)  
73.3 °C - Strike Temp  
67 °C - 60 min - Temperature

### Fermentation Profile

Ale  
20 °C - 10 days - Primary  
20 °C - 45 days - Conditioning

### Water Profile

NL Hoofddorp Rein Tap Water (2020-Q1 WQR) (Pa...  
Ca 140 Mg 18 Na 67 Cl 55 SO 242

SO/Cl ratio: 4.4  
Mash pH : 5.7  
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:

### Recipe Notes

Single Mash and Single Hop exBEERiment