

## Whitehorse Brewery - Wayward Smithy v1 - 4.5%

### Best Bitter

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Type: All Grain

IBU : 32 (Tinseth)  
BU/GU : 0.73  
Colour : 21 EBC  
Carbonation : 2.4 CO2-vol

Pre-Boil Gravity : 1.034  
Original Gravity : 1.044  
Final Gravity : 1.010

### Fermentables (1.09 kg)

517 g - Maris Otter 5.5 EBC (47.6%)  
^ The Malt Miller (UK) MAL-00-038  
517 g - Pale Moon 7.9 EBC (47.6%)  
^ <https://www.blacklandsmalt.com/malts/>  
39 g - Dark Crystal Malt 240 EBC (3.6%)  
^ The Malt Miller (UK) MAL-01-002  
14 g - Chocolate Malt 950 EBC (1.3%)  
^ The Malt Miller (UK) MAL-02-004

### Hops (14.2 g)

60 min - 4.1 g - First Gold (T90) - 7.5% (16...  
^ The Malt Miller (UK) HOP-04-006  
20 min - 4.2 g - First Gold (T90) - 7.5% (9 IBU)  
^ The Malt Miller (UK) HOP-04-006  
10 min - 5.9 g - Bramling Cross - 7% (7 IBU)  
^ The Malt Miller (UK) HOP-04-004

### Miscellaneous

Mash - 0.63 g - Baking Soda (NaHCO3)  
^ Lot # 41190621/3  
^ Brouwstore (NL) 003.106.2  
Mash - 1.15 g - Calcium Chloride (CaCl2) 33 %...  
^ Lot # 115038  
^ Brouwstore (NL) 055.035.0  
Mash - 0.63 g - Canning Salt (NaCl)  
^ Albert Heijn (NL)  
Mash - 1.18 g - Epsom Salt (MgSO4)  
^ Lot # /2119000091  
^ Brouwstore (NL) 055.027.7  
Mash - 1.51 g - Gypsum (CaSO4)  
^ The Malt Miller (UK) CHE-03-004  
Mash - 0.4 ml - Lactic Acid 80% 80%  
^ Lot # 20200213  
^ Brouwstore (NL) 003.002.3

### Yeast

0.5 pkg - Wyeast Labs Thames Valley Ale 1275

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

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

Mash Water : 3.26 L  
Sparge Water : 5.66 L  
Boil Time : 60 min  
Total Water : 8.92 L



21 EBC

Brewhouse Efficiency: 71.8%  
Mash Efficiency: 73.3%

### Mash Profile

01 One Step Mash (90 min)  
72.1 °C - Strike Temp  
66 °C - 90 min - Temperature

### Fermentation Profile

Ale  
20 °C - 14 days - Primary

### Water Profile

02 NL Spa Reine Flat Mineral Water ([www.ah.nl](http://www.ah.nl)...  
Ca 60 Mg 15 Na 50 Cl 75 SO 150 HCO 67

SO/Cl ratio: 2  
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

Target: ABV = 4.4 %, IBU = 32, EBC = 40, OG = 1.044, FG = 1.011.  
<https://whitehorsebrewery.co.uk/product/wayland-smithy-4-4/>