

# Freedom Fighter AG\*

Created Saturday March 16th 2019



NWBS

Method: **All Grain** Style: **Strong Scotch Ale** Boil Time: **60 min** Batch Size: **5.5 gallons** (ending kettle volume)

Pre Boil Size: **6.5 gallons** Pre Boil Gravity: **1.068** (recipe based estimate) Efficiency: **70%** (ending kettle)

Calories: **268 calories** (Per 12oz) Carbs: **30.4 g** (Per 12oz)

Original Gravity: **1.080** Final Gravity: **1.024** ABV (standard): **7.35%** IBU (tinseth): **25.38** SRM (morey): **17.04** Mash pH: **n/a** Cost \$: **n/a**

## Fermentables

Amount	Fermentable	Cost	PPG	°L	Bill %
6 lb	American - Pale 2-Row		37	1.8	35.5%
9 lb	United Kingdom - Maris Otter Pale		38	3.75	53.3%
0.63 lb	Briess - Bonlander Munich		36	10	3.7%
0.63 lb	American - Caramel / Crystal 80L		33	80	3.7%
0.25 lb	American - Roasted Barley		33	300	1.5%
0.25 lb	Briess - Caramel Munich 60L		35.4	60	1.5%
0.13 lb	United Kingdom - Peated Malt		38	2.5	0.8%

**16.89 lb / \$ 0.00**

## Hops

Amount	Variety	Cost	Type	AA	Use	Time	IBU	Bill %
1 oz	Centennial		Pellet	8	Boil	60 min	23.56	80%
0.25 oz	East Kent Goldings		Pellet	5	Boil	15 min	1.83	20%

**1.25 oz / \$ 0.00**

## Hops Summary

Amount	Variety	Cost	IBU	Bill %
1 oz	Centennial (Pellet)		23.56	80%
0.25 oz	East Kent Goldings (Pellet)		1.83	20%

**1.25 oz / \$ 0.00**

## Mash Guidelines

Amount	Description	Type	Temp	Time
		Infusion	155 °F	60 min

Starting Mash Thickness: 1.33 qt/lb

## Other Ingredients

Amount	Name	Cost	Type	Use	Time
4 oz	untoasted oak		Other	Secondary	7 days

## Yeast

### Wyeast - Scottish Ale 1728

Amount: 2 Each Cost: Attenuation (avg): 71% Flocculation: High

Optimum Temp: 55 - 75 °F Starter: No

Fermentation Temp: - Pitch Rate: 0.35 (M cells / ml / ° P) 141 B cells required

## Priming

CO<sub>2</sub> Level: 0 Volumes

## Target Water Profile

 Balanced Profile

Ca<sup>+2</sup> 0 Mg<sup>+2</sup> 0 Na<sup>+</sup> 0 Cl<sup>-</sup> 0 SO<sub>4</sub><sup>-2</sup> 0 HCO<sub>3</sub><sup>-</sup> 0