

England's Green and I

English IPA (13 1)

Type: All Grain
Batch Size: 80.00 L
Boil Size: 90.46 L
Boil Time: 60 min
End of Boil Vol: 86.46 L
Final Bottling Vol: 74.00 L
Fermentation: Ale, Two Stage

Date: 24 Apr 2022
Brewer: Nick Law
Asst Brewer:
Equipment: #
Emmanuales
WWJB2021 (80L
70% Efficiency)
Efficiency: 70.00



%

Est Mash Efficiency: 72.6 %

Taste Rating: 30.0

Taste Notes: NOTE: The grist bill quantities are slightly different than mentioned in the episode of the podcast. As my brew kettles hold 100L but my tanks hold 117L, I usually brew a higher gravity wort and liquor back to reach the correct original gravity.

Bearing this in mind, in terms of hop additions, based on IBU's and alpha acids to account for the liquoring back, this is calculated linearly by building the recipe based on the target IBU in the final volume using the following equation (which was used in this recipe):

final volume L x final IBU)/original brew length L = IBU in original brew

When it comes to flavour it becomes slightly more complicated as the greater the gravity, the greater the hop oil utilisation, a relationship which isn't linear. Without expensive equipment like HPLC's its difficult to calculate accurately, so trialling on a small scale may be useful initially to get a feel for flavour and aroma.

Ingredients

Amt	Name	Type	#	%/IBU	Volume
114.99 L	Emmanuales (2022) Ales...	Water	1	-	-
25.00 L	Murphys - Bitters & Pales	Water	2	-	-
52.90 g	Gypsum (Calcium Sulfate...	Water Agent	3	-	-
39.10 g	Calcium Chloride (Mash)	Water Agent	4	-	-
4.60 g	Chalk (Mash)	Water Agent	5	-	-
14.01 kg	Extra Pale Maris Otter® ...	Grain	6	68.8 %	9.14 L
3.74 kg	Torrefied Wheat (Crisp) (...	Grain	7	18.4 %	2.44 L
1.87 kg	Oats, Flaked (2.0 EBC)	Grain	8	9.2 %	1.22 L

0.75 kg	Cara Gold Malt (Crisp) (1...	Grain	9	3.7 %	0.49 L
42.16 g	Harlequin ® [10.50 %] - B...	Hop	10	12.4 IBUs	-
168.63 g	Most™ [8.00 %] - Steep/...	Hop	11	14.2 IBUs	-
168.63 g	Mystic [5.00 %] - Steep/...	Hop	12	8.9 IBUs	-
84.32 g	Godiva™ [7.00 %] - Stee...	Hop	13	6.8 IBUs	-
84.32 g	Olicana [7.00 %] - Steep/...	Hop	14	6.2 IBUs	-
1.0 pkg	Verdant IPA Yeast (Lalle...	Yeast	15	-	-
1000.00 g	Jester® [8.00 %] - Dry H...	Hop	16	0.0 IBUs	-
500.00 g	Most™ [8.00 %] - Dry Ho...	Hop	17	0.0 IBUs	-
500.00 g	Mystic [5.00 %] - Dry Hop...	Hop	18	0.0 IBUs	-

Gravity, Alcohol Content and Color

Est Original Gravity: 1.056
SG

Est Final Gravity: 1.010 SG

Estimated Alcohol by Vol:
6.1 %

Bitterness: 48.6 IBUs

Est Color: 7.8 EBC

**Measured Original
Gravity:** 1.058 SG

Measured Final Gravity:
1.012 SG

Actual Alcohol by Vol: 6.1
%

Calories: 545.8 kcal/l

Mash Profile

Mash Name: # WWJB 64C
Single Infusion

Sparge Water: 70.11 L

Sparge Temperature: 78.0 C

Adjust Temp for Equipment:
TRUE

Est Mash PH: 5.69

Measured Mash PH: 5.21

Total Grain Weight: 20.38
kg

Grain Temperature: 11.0 C

Tun Temperature: 45.0 C

Target Mash PH: 5.20

Mash Acid Addition: None

Sparge Acid Addition:

None

Mash Steps

Name	Description	Step Temperature	Step Time
Mash Step	Add 41.76 L of water at 75.2 C	64.0 C	70 min

Sparge: Fly sparge with 70.11 L water at 78.0 C

Mash Notes:

Carbonation and Storage

Carbonation Type: Bottle

Pressure/Weight: 435.27 g

Keg/Bottling Temperature:
21.1 C

Volumes of CO2: 2.3

Carbonation Est: Bottle
with 435.27 g Corn Sugar

Carbonation (from Meas

Fermentation: Ale, Two
Stage

Fermenter:

C

Vol): Bottle with 376.45 g
Corn Sugar

Age for: 30.00 days

Storage Temperature: 18.3

Notes

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