League Flashback (AG) 38L

American Pale Ale (18 B)

Type: All Grain
Batch Size: 38.00 L
Boil Size: 44.00 L
Boil Time: 60 min
End of Boil Vol: 41.50 L
Final Bottling Vol: 38.00 L
Fermentation: Ale with Diacetyl Rest

Date: 09 Mar 2023
Brewer: LoB Kit
Asst Brewer:
Equipment: Grainfather G40 LoB Kits 10A
Efficiency: 75.00 %
Est Mash Efficiency: 79.9 %
Taste Rating: 30.0



Taste Notes:

Ingredients

Amt	Name	Type	#	%/IBU	Volume
7.400 kg	Gladfield American Ale Malt (4.7 EBC)	Grain	1	87.3 %	4.82 L
0.650 kg	Gladfield Medium Crystal Malt (123.0 EBC)	Grain	2	7.7 %	0.42 L
0.425 kg	Gladfield Sour Grapes Malt (acid malt) (4.0 EBC)	Grain	3	5.0 %	0.28 L
100.00 g	Cascade [5.20 %] - Boil 60.0 min	Hop	4	30.6 IBUs	-
6.60 g	Gypsum (Calcium Sulfate) (Boil)	Water Agent	5	-	-
6.00 g	Calcium Chloride (Boil)	Water Agent	6	-	-
1.00 Items	Whirlfloc Tablet (Boil 15.0 mins)	Fining	7	-	-
2.50 g	Yeast Nutrient (Boil 15.0 mins)	Other	8	-	-
175.00 g	Taiheke (NZ Cascade) [6.90 %] - Steep/Whirlpool 20.…	Hop	9	10.8 IBUs	-
3.0 pkg	Safale American (DCL/Fermentis #US-05) [0.05 L]	Yeast	10	-	-
90.00 g	Cascade [5.20 %] - 3.0 Days Before Bottling for 5.0 D…	Hop	11	0.0 IBUs	-

Gravity, Alcohol Content and Color

Est Original Gravity: 1.050 SG
Est Final Gravity: 1.012 SG
Estimated Alcohol by Vol: 5.1 %
Bitterness: 41.4 IBUs
Est Color: 16.4 EBC

Measured Original Gravity: 1.053 SG
Measured Final Gravity: 1.010 SG
Actual Alcohol by Vol: 5.7 %
Calories: 494.4 kcal/l

Mash Profile

Mash Name: Grainfather Single Temperature Mash, Light Body
Sparge Water: 22.70 L
Sparge Temperature: 76.0 C
Adjust Temp for Equipment: FALSE
Est Mash PH: 5.62
Measured Mash PH: 5.30

Total Grain Weight: 8.475 kg
Grain Temperature: 20.0 C
Tun Temperature: 20.0 C
Target Mash PH: 5.30
Mash Acid Addition: None
Sparge Acid Addition: None

Mash Steps

Name	Description	Step Temperature	Step Time
Saccharification	Add 29.78 L of water at 69.9 C	65.0 C	60 min
Mash Out	Heat to 76.0 C over 10 min	76.0 C	10 min

Sparge: Fly sparge with 22.70 L water at 76.0 C

Mash Notes: Grainfather single saccharification temp mash for light body beers (e.g., highly fermentable wort).

Carbonation and Storage

Carbonation Type: Keg
Pressure/Weight: 16.06 PSI
Keg/Bottling Temperature: 7.2 C
Fermentation: Ale with Diacetyl Rest
Fermenter:

Volumes of CO2: 2.6
Carbonation Est: Keg with 16.06 PSI
Carbonation (from Meas Vol): Keg with 16.06 PSI
Age for: 2.00 days
Storage Temperature: 2.0 C

Notes

This beer is mashed at 65C to produce a more fermentable wort. Add the dry hops once fermentation slows but while there is still active fermentation to ensure the yeast cleans up any oxygen that is introduced.

The suggested mineral additions assume an average NZ water profile and should be fine for most NZ water sources. The target water profile in ppm is Ca - 70, Mg - 10, Na - 10, SO4 - 80, Cl - 65.

1. If available, add sufficient lactic acid to the sparge water to lower the pH to ~5.6 prior to heating (~ 0.5 - 1.0 ml/10l lactic acid depending on water source).
2. If flavour minerals are available, add to boil only as mash pH is taken care of with the acid malt. The amount of acid malt in this recipe targets a mash pH of ~5.3 (5.2 - 5.4).
3. If available, add kettle finings and yeast nutrient 15 min before the end of boil.
4. At the end of the boil, cool the wort to 80C, add the whirlpool hops and maintain the temp at 80C for 20 min before continuing to chill to pitching temp.
5. It is recommended that the yeast be rehydrated per the manufacturer;s instructions. Pitch at 18C, hold for 3 days and the raise to 20C.
6. Once fermentation slows, add the dry hops and raise the temp to 22C for a diacetyl rest.
7. Ferment for another 5 days to ensure full attenuation and diacetyl removal by the yeast.
8. Once fermentation is complete, lower the temperature to 2C and hold for 2 - 3 days prior to packaging.
9. Carbonate to 2.6 - 2.7 volumes of CO2.

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