League Shelby Wright (AG)

American IPA (21 A)

Type: All Grain
Batch Size: 23.00 L
Boil Size: 28.50 L
Boil Time: 60 min
Final Bottling Vol: 22.00 L
Fermentation: Ale with Diacetyl Rest

Date: 06 Jun 2023
Efficiency: 75.00 %
Est Mash Efficiency: 81.5 %



Brewing Notes:
Note, this recipe uses a very high sulphate to chloride ratio (6:1) when the flavour minerals are used. This is meant to accentuate the dryness and hoppiness of the beer.

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 - 145, Mg - 10, Na - 10, SO4 - 300, Cl - 50.

1. If flavour minerals are available, add to boil only as mash pH is taken care of with acid malt.
2. 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 depending on water source).
3. If available, add kettle finings and yeast nutrient 15 min before the end of boil.
4. Cool the wort to 80C, add the whirlpool hops and maintain the temp at 80C for 15 min before continuing to quickly chill to pitching temp.
5. It is recommended that the yeast be rehydrated per the manufacturers instructions. Pitch at 18C and maintain for 3 days then let rise 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 for 1 - 2 days prior to packaging.
9. Carbonate to 2.6 - 2.7 volumes of CO2.

Mash or Steep Grains

Mash Ingredients

Amt	Name	Type	#	%/IBU	Volume
5.300 kg	Gladfield Ale Malt (6.0 EBC)	Grain	1	87.7 %	3.46 L
0.325 kg	Gladfield Sour Grapes Malt (acid malt) (4.0 EBC)	Grain	2	5.4 %	0.21 L
0.230 kg	Gladfield Light Crystal Malt (63.0 EBC)	Grain	3	3.8 %	0.15 L
0.185 kg	Gladfield Gladiator Malt (10.0 EBC)	Grain	4	3.1 %	0.12 L

Mash Steps

Name	Description	Step Temperature	Step Time
Saccharification	Add 19.81 L of water at 71.3 C	66.0 C	60 min
Mash Out	Heat to 76.0 C over 10 min	76.0 C	10 min

◯ Fly sparge with 14.74 L water at 76.0 C

◯ Add water to achieve boil volume of 28.50 L
◯ Estimated pre-boil gravity is 1.052 SG

Boil Ingredients

Amt	Name	Type	#	%/IBU	Volume
16.20 g	Gypsum (Calcium Sulfate) (Boil)	Water Agent	5	-	-
2.80 g	Calcium Chloride (Boil)	Water Agent	6	-	-
2.80 g	Epsom Salt (MgSO4) (Boil)	Water Agent	7	-	-
30.00 g	Pacific Jade [11.10 %] - Boil 45.0 min	Hop	8	31.9 IBUs	-
10.00 g	Taiheke [7.90 %] - Boil 45.0 min	Hop	9	7.6 IBUs	-
29.00 g	Taiheke [7.90 %] - Boil 10.0 min	Hop	10	13.0 IBUs	-
19.00 g	Centennial [9.80 %] - Boil 10.0 min	Hop	11	10.6 IBUs	-

Steeped Hops

Amt	Name	Type	#	%/IBU	Volume
25.00 g	Amarillo [7.90 %] - Steep/Whirlpool 15.0 min, 80.0 C	Hop	12	2.2 IBUs	-
25.00 g	Simcoe [14.20 %] - Steep/Whirlpool 15.0 min, 80.0 C	Hop	13	4.0 IBUs	-

◯ Estimated Post Boil Vol: 26.00 L and Est Post Boil Gravity: 1.059 SG

Cool and Transfer Wort

◯ Cool wort to fermentation temperature
◯ Transfer wort to fermenter
◯ Add water if needed to achieve final volume of 23.00 L

Pitch Yeast and Measure Gravity and Volume

Fermentation Ingredients

Amt	Name	Type	#	%/IBU	Volume
2.0 pkg	US West Coast (Mangrove Jack's #M44)	Yeast	14	-	-

◯ Measure Actual Original Gravity _____ (Target: 1.059 SG)
◯ Measure Actual Batch Volume _____ (Target: 23.00 L)

Fermentation

◯ 06 Jun 2023 - Primary Fermentation (3.00 days at 18.0 C ending at 18.0 C)
◯ 09 Jun 2023 - Secondary Fermentation (6.00 days at 20.0 C ending at 20.0 C)
◯ 15 Jun 2023 - Tertiary Fermentation (5.00 days at 22.0 C ending at 22.0 C)

Dry Hop and Bottle/Keg

Dry Hop/Bottling Ingredients

Amt	Name	Type	#	%/IBU	Volume
31.00 g	Centennial [9.80 %] - 5.0 Days Before Bottling for 5…	Hop	15	0.0 IBUs	-
25.00 g	Amarillo [7.90 %] - 5.0 Days Before Bottling for 5.0…	Hop	16	0.0 IBUs	-
25.00 g	Simcoe [14.20 %] - 5.0 Days Before Bottling for 5.0…	Hop	17	0.0 IBUs	-

◯ Measure Final Gravity: _____ (Estimate: 1.009 SG)
◯ Date Bottled/Kegged: - Carbonation: Keg with 13.72 PSI