The League "Phazers" NEIPA (AG)

Specialty IPA (21 B)

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: 08 Mar 2019
Efficiency: 75.00 %
Est Mash Efficiency: 81.5 %



Brewing Notes:
This recipe has no boil hop additions, all bitterness comes from the 30 min steep/whirlpool addition. It is best consumed fresh.

1. If flavour minerals are available, add to boil only as mash pH is taken care of with acid malt.
2. Add the whirlpool hops at the start of cooling down the wort (i.e., when the cooling water is applied to the wort chiller).
3. Pitch at 18C and and let rise to 20C.
4. After 3 days, add the first dry hop addition.
5. Add second dry hop addition near end of fermentation and raise the temp to 22C for a diacetyl rest.
6. If possible, cold crash for a few days before packaging.
7. Carbonate to 2.7 volumes of CO2.

Water Prep

Amt	Name	Type	#	%/IBU	Volume
33.50 L	Nelson, NZ	Water	1	-	-

Mash or Steep Grains

Mash Ingredients

Amt	Name	Type	#	%/IBU	Volume
3.500 kg	Gladfield American Ale Malt (4.7 EBC)	Grain	2	63.1 %	2.28 L
0.900 kg	Harraway's Rolled Oats (2.8 EBC)	Grain	3	16.2 %	0.59 L
0.450 kg	Gladfield Wheat Malt (4.2 EBC)	Grain	4	8.1 %	0.29 L
0.400 kg	Gladfield Sour Grapes Malt (4.0 EBC)	Grain	5	7.2 %	0.26 L
0.300 kg	Warminster Caragold (7.9 EBC)	Grain	6	5.4 %	0.20 L
1.60 ml	Lactic Acid (Sparge)	Water Agent	7	-	-

Mash Steps

Name	Description	Step Temperature	Step Time
Saccharification	Add 18.49 L of water and heat to 70.0 C over 15 min	70.0 C	60 min
Mash Out	Heat to 77.0 C over 10 min	77.0 C	10 min

Fly sparge with 15.57 L water at 77.0 C
Add water to achieve boil volume of 28.50 L
Estimated pre-boil gravity is 1.047 SG

Boil Ingredients

Amt	Name	Type	#	%/IBU	Volume
10.00 g	Calcium Chloride (Boil)	Water Agent	8	-	-
4.40 g	Gypsum (Calcium Sulfate) (Boil)	Water Agent	9	-	-

Steeped Hops

Amt	Name	Type	#	%/IBU	Volume
70.00 g	HORT 4337 [11.00 %] - Steep/Whirlpool 30.0 min, 90.0 C	Hop	10	30.1 IBUs	-
50.00 g	Galaxy [13.60 %] - Steep/Whirlpool 30.0 min, 90.0 C	Hop	11	26.6 IBUs	-

Estimated Post Boil Vol: 26.00 L and Est Post Boil Gravity: 1.054 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	SafAle English Ale (DCL/Fermentis #S-04) [0.02 L]	Yeast	12	-	-

Measure Actual Original Gravity _____ (Target: 1.054 SG)
Measure Actual Batch Volume _____ (Target: 23.00 L)

Fermentation

08 Mar 2019 - Primary Fermentation (3.00 days at 18.0 C ending at 18.0 C)
11 Mar 2019 - Secondary Fermentation (6.00 days at 20.0 C ending at 20.0 C)
17 Mar 2019 - 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
50.00 g	Galaxy [13.60 %] - Dry Hop 5.0 Days	Hop	13	0.0 IBUs	-
40.00 g	HORT 4337 [11.00 %] - Dry Hop 5.0 Days	Hop	14	0.0 IBUs	-
50.00 g	Galaxy [13.60 %] - Dry Hop 4.0 Days	Hop	15	0.0 IBUs	-
40.00 g	HORT 4337 [11.00 %] - Dry Hop 4.0 Days	Hop	16	0.0 IBUs	-

Measure Final Gravity: _____ (Estimate: 1.018 SG)
Date Bottled/Kegged: - Carbonation: Keg with 12.54 PSI