League Vortex (PE)

American Pale Ale (18 B)

Type: Partial Mash
Batch Size: 23.00 L
Boil Size: 3.50 L
Boil Time: 20 min
Final Bottling Vol: 21.49 L
Fermentation: Ale with Diacetyl Rest

Date: 04 Mar 2019
Efficiency: 55.00 %
Est Mash Efficiency: 59.5 %



Brewing Notes:
The average temperature of the 20 min hop stand should be around 85C.

1. Heat 2.4L of water to 70C, remove from heat, add grains mixing thoroughly, cover and let steep for 30 min.
2. When complete, remove grains and rinse with ~2L of warm water. The boil volume should be 3.5L.
3. If flavour minerals are available, add to boil. Boil for 20 min adding boil hops as indicated.
4. When complete, remove from heat, let cool to 90C, add steep/whirlpool hops, cover and let stand for 20 min.
5. Dissolve the LME as normal.
6. Strain out hops, add liquid to the LME mixture, and top up to 23 L.
7. Pitch at 18C, maintain for 3 days then let rise to 20C.
8. Once the fermentation is near completion, add the dry hops and raise the temp to 22C for a diacetyl rest. Maintain temp for another 5 days.
9. If possible, cold crash for a few days before packaging.
10. Carbonate to 2.6 - 2.7 volumes of CO2.

Mash or Steep Grains

Mash Ingredients

Amt	Name	Type	#	%/IBU	Volume
0.400 kg	Gladfield Gladiator Malt (10.0 EBC)	Grain	1	10.0 %	0.26 L
0.400 kg	Gladfield Pilsner Malt (3.8 EBC)	Grain	2	10.0 %	0.26 L

Mash Steps

Name	Description	Step Temperature	Step Time
Mash Step	Add 2.40 L of water and heat to 67.0 C over 0 min	67.0 C	30 min

◯ Add water to achieve boil volume of 3.50 L
◯ Estimated pre-boil gravity is 1.042 SG

Boil Ingredients

Amt	Name	Type	#	%/IBU	Volume
6.30 g	Gypsum (Calcium Sulfate) (Boil)	Water Agent	3	-	-
3.30 g	Calcium Chloride (Boil)	Water Agent	4	-	-
12.00 g	Mosaic (HBC 369) [12.60 %] - Boil 15.0 min	Hop	5	11.2 IBUs	-
12.00 g	Citra [13.80 %] - Boil 5.0 min	Hop	6	8.9 IBUs	-
12.00 g	Nelson Sauvin [10.10 %] - Boil 5.0 min	Hop	7	6.5 IBUs	-

Steeped Hops

Amt	Name	Type	#	%/IBU	Volume
20.00 g	Cascade [6.80 %] - Steep/Whirlpool 20.0 min, 85.0 C	Hop	8	3.0 IBUs	-
18.00 g	Citra [13.80 %] - Steep/Whirlpool 20.0 min, 85.0 C	Hop	9	5.5 IBUs	-
18.00 g	Mosaic (HBC 369) [12.60 %] - Steep/Whirlpool 20.0 mi…	Hop	10	5.0 IBUs	-
18.00 g	Nelson Sauvin [10.10 %] - Steep/Whirlpool 20.0 min, 8…	Hop	11	4.0 IBUs	-

◯ Estimated Post Boil Vol: 3.22 L and Est Post Boil Gravity: 1.048 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
1.700 kg	Black Rock LME Unhopped Light [Primary] (5.9 EBC)	Extract	12	42.5 %	1.20 L
1.500 kg	Pure Liquid Malt Extract - Wheat (MJ) [Primary] (6.0 EBC)	Extract	13	37.5 %	1.06 L
2.0 pkg	Safale American (DCL/Fermentis #US-05) [0.05 L]	Yeast	14	-	-

◯ Measure Actual Original Gravity _____ (Target: 1.048 SG)
◯ Measure Actual Batch Volume _____ (Target: 23.00 L)

Fermentation

◯ 04 Mar 2019 - Primary Fermentation (3.00 days at 18.0 C ending at 18.0 C)
◯ 07 Mar 2019 - Secondary Fermentation (6.00 days at 20.0 C ending at 20.0 C)
◯ 13 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
30.00 g	Cascade [6.80 %] - 5.0 Days Before Bottling for 5.0 Days	Hop	15	0.0 IBUs	-
20.00 g	Citra [13.80 %] - 5.0 Days Before Bottling for 5.0 Days	Hop	16	0.0 IBUs	-
20.00 g	Mosaic (HBC 369) [12.60 %] - 5.0 Days Before Bottling…	Hop	17	0.0 IBUs	-
20.00 g	Nelson Sauvin [10.10 %] - 5.0 Days Before Bottling for…	Hop	18	0.0 IBUs	-

◯ Measure Final Gravity: _____ (Estimate: 1.011 SG)
◯ Date Bottled/Kegged: - Carbonation: Keg with 12.54 PSI