League Flashback (AG)

American Pale Ale (18 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: 21 Aug 2019
Efficiency: 75.00 %
Est Mash Efficiency: 81.5 %



Brewing Notes:
Mash at 65C to focus more on fermentable sugar production. The average temperature of the 20 min hop stand should be around 80C.

1. If available, acidify the sparge water with the indicated lactic acid prior to heating to sparge temp.
2. If flavour minerals are available, add to boil only as mash pH is taken care of with the acid malt.
3. Add the whirlpool hops once the wort cools to 85C. Do not apply cooling water to the wort chiller until the hop stand is complete (after 20 min).
4. It is recommended that the yeast be rehydrated per the manufacturers instructions. Pitch at 18C and let rise to 20C.
5. Add the dry hop addition near end of fermentation and raise the temp to 22C for 5 days for a diacetyl rest.
6. If possible, cold crash for a few days before packaging.
7. Carbonate to 2.6 - 2.7 volumes of CO2.

Mash or Steep Grains

Mash Ingredients

Amt	Name	Type	#	%/IBU	Volume
4.500 kg	Gladfield American Ale Malt (4.7 EBC)	Grain	1	85.7 %	2.93 L
0.400 kg	Gladfield Medium Crystal Malt (123.0 EBC)	Grain	2	7.6 %	0.26 L
0.350 kg	Gladfield Sour Grapes Malt (acid malt) (4.0 EBC)	Grain	3	6.7 %	0.23 L
1.70 ml	Lactic Acid (Sparge)	Water Agent	4	-	-

Mash Steps

Name	Description	Step Temperature	Step Time
Saccharification	Add 17.68 L of water at 70.1 C	65.0 C	60 min
Mash Out	Heat to 76.0 C over 10 min	76.0 C	10 min

◯ Fly sparge with 16.08 L water at 76.0 C
◯ Add water to achieve boil volume of 28.50 L
◯ Estimated pre-boil gravity is 1.044 SG

Boil Ingredients

Amt	Name	Type	#	%/IBU	Volume
50.00 g	Cascade [6.80 %] - Boil 60.0 min	Hop	5	33.7 IBUs	-
4.40 g	Gypsum (Calcium Sulfate) (Boil)	Water Agent	6	-	-
4.00 g	Calcium Chloride (Boil)	Water Agent	7	-	-

Steeped Hops

Amt	Name	Type	#	%/IBU	Volume
100.00 g	Taiheke (NZ Cascade) [7.00 %] - Steep/Whirlpool 2…	Hop	8	10.3 IBUs	-

◯ Estimated Post Boil Vol: 26.00 L and Est Post Boil Gravity: 1.051 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 American (DCL/Fermentis #US-05) [0.05 L]	Yeast	9	-	-

◯ Measure Actual Original Gravity _____ (Target: 1.051 SG)
◯ Measure Actual Batch Volume _____ (Target: 23.00 L)

Fermentation

◯ 21 Aug 2019 - Primary Fermentation (3.00 days at 18.0 C ending at 18.0 C)
◯ 24 Aug 2019 - Secondary Fermentation (6.00 days at 20.0 C ending at 20.0 C)
◯ 30 Aug 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	Cascade [6.80 %] - 3.0 Days Before Bottling for 5.0…	Hop	10	0.0 IBUs	-

◯ Measure Final Gravity: _____ (Estimate: 1.009 SG)
◯ Date Bottled/Kegged: - Carbonation: Bottle with 129.40 g Corn Sugar