League Casa Cerveza (AG)

International Amber Lager (2 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: California Common - Lager

Date: 09 Mar 2020
Efficiency: 75.00 %
Est Mash Efficiency: 81.5 %



Brewing Notes:
This recipe uses a lager yeast that is tolerant of warmer fermentation temperatures while maintaining a clean fermentation profile. If possible, ferment at the cool end of the range (12C - 15C). The beer will benefit from lagering for at least 2 weeks if kegged or after bottle conditioning is complete. It will continue to improve if stored cool.

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 - 70, Cl - 70.

1. If available, add sufficient lactic acid to the sparge water to lower the pH to 5.6 prior to heating (~ 0.5 - 1.5 ml depending on water source).
2. If flavour minerals are available, add to boil only as mash pH is taken care of with acid malt.
3. If available, add kettle finings and yeast nutrient 15 min before the end of boil.
4. Cool the wort to 85C, add the whirlpool hops and maintain the temp at 85C for 15 min before continuing to chill to pitching temp.
5. It is recommended that the yeast be rehydrated per the manufacturers instructions. Pitch at 12C - 15C and maintain until fermentation is nearing completion.
6. Once fermentation slows (~7 days), raise temp to 18C for a diacetyl rest.
7. Once fermentation is complete, cold crash to 2C and let lager for at least a week before packaging.
8. Carbonate to 2.7 - 2.8 volumes of CO2.

Mash or Steep Grains

Mash Ingredients

Amt	Name	Type	#	%/IBU	Volume
2.200 kg	BEST Vienna (BESTMALZ) (9.0 EBC)	Grain	1	46.8 %	1.43 L
1.400 kg	BEST Pilsen Malt (BESTMALZ) (3.5 EBC)	Grain	2	29.8 %	0.91 L
0.800 kg	Gladfield Munich Malt (15.5 EBC)	Grain	3	17.0 %	0.52 L
0.250 kg	Gladfield Sour Grapes Malt (acid malt) (4.0 EBC)	Grain	4	5.3 %	0.16 L
0.050 kg	Gladfield Dark Chocolate Malt (1300.0 EBC)	Grain	5	1.1 %	0.03 L

Mash Steps

Name	Description	Step Temperature	Step Time
Saccharification	Add 16.19 L of water at 70.0 C	65.0 C	60 min
Mash Out	Heat to 77.0 C over 10 min	77.0 C	10 min

◯ Fly sparge with 17.02 L water at 76.0 C
◯ Add water to achieve boil volume of 28.50 L

◯ Estimated pre-boil gravity is 1.041 SG

Boil Ingredients

Amt	Name	Type	#	%/IBU	Volume
20.00 g	Pacifica [3.60 %] - Boil 60.0 min	Hop	6	8.1 IBUs	-
20.00 g	Saaz [3.75 %] - Boil 60.0 min	Hop	7	8.5 IBUs	-
3.60 g	Calcium Chloride (CaCl2) (Boil)	Water Agent	8	-	-
3.30 g	Gypsum (CaSO4) (Boil)	Water Agent	9	-	-
0.50 Items	Whirlfloc Tablet (Boil 15.0 mins)	Fining	10	-	-
1.50 g	Yeast Nutrient (Boil 15.0 mins)	Other	11	-	-

Steeped Hops

Amt	Name	Type	#	%/IBU	Volume
30.00 g	Pacifica [3.60 %] - Steep/Whirlpool 15.0 min, 85.0 C	Hop	12	2.0 IBUs	-
30.00 g	Saaz [3.00 %] - Steep/Whirlpool 15.0 min, 85.0 C	Hop	13	1.7 IBUs	-

◯ Estimated Post Boil Vol: 26.00 L and Est Post Boil Gravity: 1.047 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	California Lager (Mangrove Jack's #M54)	Yeast	14	-	-

◯ Measure Actual Original Gravity _____ (Target: 1.047 SG)
◯ Measure Actual Batch Volume _____ (Target: 23.00 L)

Fermentation

◯ 09 Mar 2020 - Primary Fermentation (7.00 days at 15.0 C ending at 15.0 C)
◯ 16 Mar 2020 - Secondary Fermentation (5.00 days at 18.0 C ending at 18.0 C)

Dry Hop and Bottle/Keg

◯ Measure Final Gravity: _____ (Estimate: 1.008 SG)
◯ Date Bottled/Kegged: - Carbonation: Bottle with 182.39 g Corn Sugar