Grizzly American Brown (AG) 60L

American Brown Ale (19 C)

Type: All Grain
Batch Size: 60.00 L
Boil Size: 69.12 L
Boil Time: 60 min
Final Bottling Vol: 57.00 L
Fermentation: Ale with Diacetyl Rest

Date: 20 Jul 2022
Efficiency: 75.00 %
Est Mash Efficiency: 78.8 %



Brewing Notes:
This recipe is designed at the top end of the style in terms of strength and with a just touch more IBU's than the 2021 style guide indicates.

The suggested mineral additions assume an average NZ water profile and should work well for most NZ water sources. The target (balanced) water profile in ppm is Ca - 90, Mg – 5, Na – 5, SO4 - 115, Cl - 70.

1. This recipe is designed to include mineral additions in the mash. If you do not have scales, 1 flat tsp/4g each of gypsum and calcium chloride will be a close approximation. The mineral additions are designed to target an optimal mash pH of 5.4. Calcium is also essential for stabilising mash enzymes and for yeast health. The mineral additions are also very important for the flavour profile of the beer. If you do not have brewing salts in your home brewery, these are available for purchase on The League of Brewers website and will last a great many brews for a small cost.
2. All of our hops are packaged in 50, 100 and 200 g packs. This means that for this recipe you will have and extra 10g of Simcoe hops. You may wish to add this at 0 min for some added hop aroma or just use it in another brew.
3. If you wish (particularly if your system requires excessive sparging, below SG 1.012), add sufficient lactic acid to the sparge water to lower the pH to 5.6 prior to heating (~ 0.5 - 1.0 ml/10l lactic acid depending on water source).
4. We recommend adding kettle finings (whirlflock, Irish Moss) and yeast nutrient 15 min before the end of boil.
5. Quickly cool the wort to 18C and promptly transfer to a fermenter.
6. We strongly recommend that the yeast be rehydrated in sterile warm water per the manufacturer's instructions. If not, you may lose up to 50% cell viability. Pitch into well aerated wort at 18C and follow the recipes fermentation guidelines.
7. When ready, rack the beer to a CO2 purged keg and force carbonate.

Water Prep

Amt	Name	Type	#	%/IBU	Volume
16.00 g	Gypsum (Mash)	Water Agent	1	-	-
10.00 g	Calcium Chloride (dihydrate) (Mash)	Water Agent	2	-	-

Mash or Steep Grains

Mash Ingredients

Amt	Name	Type	#	%/IBU	Volume
14.300 kg	Gladfield Ale Malt (5.5 EBC)	Grain	3	88.0 %	9.32 L
0.650 kg	Gladfield Brown Malt (178.0 EBC)	Grain	4	4.0 %	0.42 L
0.650 kg	Gladfield Light Chocolate Malt (960.0 EBC)	Grain	5	4.0 %	0.42 L
0.650 kg	Gladfield Medium Crystal Malt (100.0 EBC)	Grain	6	4.0 %	0.42 L

Mash Steps

Name	Description	Step Temperature	Step Time
Saccharification	Add 50.77 L of water at 72.7 C	67.0 C	60 min
Mash Out	Heat to 76.0 C over 10 min	76.0 C	10 min

◯ Fly sparge with 34.62 L water at 76.0 C
◯ Add water to achieve boil volume of 69.12 L
◯ Estimated pre-boil gravity is 1.056 SG

Boil Ingredients

Amt	Name	Type	#	%/IBU	Volume
30.00 g	Centennial [9.30 %] - Boil 60.0 min	Hop	7	10.7 IBUs	-
50.00 g	Simcoe [12.80 %] - Boil 15.0 min	Hop	8	12.1 IBUs	-
40.00 g	Centennial (10 AA) [9.30 %] - Boil 10.0 min	Hop	9	5.1 IBUs	-
40.00 g	Simcoe (12.7 AA) [12.80 %] - Boil 10.0 min	Hop	10	7.1 IBUs	-
50.00 g	Simcoe (12.7 AA) [12.80 %] - Boil 0.0 min	Hop	11	0.0 IBUs	-
30.00 g	Centennial (10 AA) [9.30 %] - Boil 0.0 min	Hop	12	0.0 IBUs	-

◯ Estimated Post Boil Vol: 65.62 L and Est Post Boil Gravity: 1.061 SG

Cool and Transfer Wort

◯ Cool wort to fermentation temperature
◯ Transfer wort to fermenter
◯ Add water if needed to achieve final volume of 60.00 L

Pitch Yeast and Measure Gravity and Volume

Fermentation Ingredients

Amt	Name	Type	#	%/IBU	Volume
6.0 pkg	American West Coast Ale (LalBrew #BRY-97)	Yeast	13	-	-

◯ Measure Actual Original Gravity _____ (Target: 1.061 SG)
◯ Measure Actual Batch Volume _____ (Target: 60.00 L)

Fermentation

◯ 20 Jul 2022 - Primary Fermentation (3.00 days at 18.0 C ending at 18.0 C)
◯ 23 Jul 2022 - Secondary Fermentation (6.00 days at 20.0 C ending at 20.0 C)
◯ 29 Jul 2022 - Tertiary Fermentation (5.00 days at 22.0 C ending at 22.0 C)

Dry Hop and Bottle/Keg

◯ Measure Final Gravity: _____ (Estimate: 1.015 SG)
◯ Date Bottled/Kegged: - Carbonation: Keg with 11.86 PSI