League Darkside (AG) 38L

Oatmeal Stout (16 B)

Type: All Grain
Batch Size: 38.00 L
Boil Size: 44.00 L
Boil Time: 60 min
Final Bottling Vol: 38.00 L
Fermentation: Ale with Diacetyl Rest

Date: 07 Jun 2024
Efficiency: 75.00 %
Est Mash Efficiency: 79.9 %



Brewing Notes:
This beer is mashed at 69C to produce a fuller body. 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 - 60, Mg - 10, Na - 30, 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 - 1.0 ml/10L depending on water source).
2. If flavour minerals are available, add to boil only as mash pH is taken care of with the dark grains.
3. For the salt addition, use plain (non-iodised) table salt or canning salt. This is included because the added sodium can enhance dark beer flavour.
4. If available, add kettle finings and yeast nutrient 15 min before the end of boil.
5. It is recommended that the yeast be rehydrated per the manufacturer;s instructions. Pitch at 18C and maintain for 3 days then let rise to 20C.
6. Once fermentation slows, raise the temp to 22C for a diacetyl rest.
7. Ferment for another 5 days to ensure full attenuation and diacetyl removal by the yeast.
8. Once fermentation is complete, lower the temperature to 2C and hold for 2 - 3 days prior to packaging.
9. Carbonate to 2.6 - 2.7 volumes of CO2.

Mash or Steep Grains

Mash Ingredients

Amt	Name	Type	#	%/IBU	Volume
7.000 kg	Gladfield Ale Malt (6.0 EBC)	Grain	1	72.5 %	4.56 L
0.760 kg	Harraway's Rolled Oats (2.8 EBC)	Grain	2	7.9 %	0.50 L
0.570 kg	Gladfield Biscuit Malt (60.0 EBC)	Grain	3	5.9 %	0.37 L
0.570 kg	Gladfield Light Chocolate Malt (900.0 EBC)	Grain	4	5.9 %	0.37 L
0.380 kg	Gladfield Dark Crystal Malt (190.0 EBC)	Grain	5	3.9 %	0.25 L
0.380 kg	Gladfield Roast Barley (1450.0 EBC)	Grain	6	3.9 %	0.25 L

Mash Steps

Name	Description	Step Temperature	Step Time
Saccharification	Add 32.98 L of water at 74.5 C	69.0 C	60 min
Mash Out	Heat to 76.0 C over 10 min	76.0 C	10 min

◯ Fly sparge with 20.69 L water at 76.0 C
◯ Add water to achieve boil volume of 44.00 L
◯ Estimated pre-boil gravity is 1.054 SG

Boil Ingredients

Amt	Name	Type	#	%/IBU	Volume
25.00 g	East Kent Goldings (EKG) [5.80 %] - Boil 60.0 min	Hop	7	8.7 IBUs	-
5.90 g	Gypsum (Calcium Sulfate) (Boil)	Water Agent	8	-	-
3.20 g	Calcium Chloride (Boil)	Water Agent	9	-	-
2.70 g	Salt (Boil)	Water Agent	10	-	-
125.00 g	East Kent Goldings (EKG) [5.80 %] - Boil 20.0 min	Hop	11	26.4 IBUs	-
1.00 Items	Whirlfloc Tablet (Boil 15.0 mins)	Fining	12	-	-
2.50 g	Yeast Nutrient (Boil 15.0 mins)	Other	13	-	-

◯ Estimated Post Boil Vol: 41.50 L and Est Post Boil Gravity: 1.059 SG

Cool and Transfer Wort

◯ Cool wort to fermentation temperature
◯ Transfer wort to fermenter
◯ Add water if needed to achieve final volume of 38.00 L

Pitch Yeast and Measure Gravity and Volume

Fermentation Ingredients

Amt	Name	Type	#	%/IBU	Volume
3.0 pkg	Safale American (DCL/Fermentis #US-05) [0.05 L]	Yeast	14	-	-

◯ Measure Actual Original Gravity _____ (Target: 1.059 SG)
◯ Measure Actual Batch Volume _____ (Target: 38.00 L)

Fermentation

◯ 07 Jun 2024 - Primary Fermentation (3.00 days at 18.0 C ending at 18.0 C)
◯ 10 Jun 2024 - Secondary Fermentation (6.00 days at 20.0 C ending at 20.0 C)
◯ 16 Jun 2024 - Tertiary Fermentation (5.00 days at 22.0 C ending at 22.0 C)

Dry Hop and Bottle/Keg

◯ Measure Final Gravity: _____ (Estimate: 1.016 SG)
◯ Date Bottled/Kegged: - Carbonation: Keg with 16.06 PSI