League Nick Danger Porter (AG)

Robust Porter (12 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: 29 Oct 2020
Efficiency: 75.00 %
Est Mash Efficiency: 81.5 %



Brewing Notes:
This recipe is based on the Denny Conn recipe Nick Danger Porter with the following modifications:
- all NZ malts have been used.
- additional Tettnang hops have been substituted for the Magnum hop bittering addition.
It is very similar to the version brewed at the 2018 Marchfest Brew Zone with Denny when he was here as a presenter for the NZ Homebrew Conference.

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 - 50, Mg - 10, Na - 30, SO4 - 60, Cl - 45.

The specialty malts in this recipe will lower the mash pH below the target of 5.4. Therefore, baking soda (sodium bicarbonate) is used in the mash water to raise the pH and also add some sodium which is beneficial to the flavour of a porter.

1. If flavour minerals are available, add to boil only as mash pH is taken care of with the baking soda.
2. Mix the baking soda with the mash water and ensure it is dissolved prior to mashing in.
3. If available, add yeast nutrient and kettle finings 15 min prior to the end of boil.
4. It is recommended that the yeast be rehydrated per the manufacturer's instructions. Pitch at 18C and maintain for 2 days then let rise to 20C.
5. Once fermentation nears completion, raise the temp to 22C for a diacetyl rest and hold until fermentation is complete.
6. If possible, cold crash for a few days prior to packaging.
7. Carbonate to 2.2 - 2.4 volumes of CO2.

Water Prep

Amt	Name	Type	#	%/IBU	Volume
1.00 g	Baking Soda (Mash)	Water Agent	1	-	-

Mash or Steep Grains

Mash Ingredients

Amt	Name	Type	#	%/IBU	Volume
4.500 kg	Gladfield Ale Malt (6.0 EBC)	Grain	2	71.5 %	2.93 L
0.675 kg	Gladfield Munich Malt (15.5 EBC)	Grain	3	10.7 %	0.44 L
0.450 kg	Gladfield Medium Crystal Malt (111.0 EBC)	Grain	4	7.1 %	0.29 L
0.340 kg	Gladfield Light Chocolate Malt (900.0 EBC)	Grain	5	5.4 %	0.22 L
0.180 kg	Gladfield Dark Crystal Malt (190.0 EBC)	Grain	6	2.9 %	0.12 L
0.090 kg	Gladfield Shepherds Delight Malt (300.0 EBC)	Grain	7	1.4 %	0.06 L
0.060 kg	Gladfield Roast Barley (1450.0 EBC)	Grain	8	1.0 %	0.04 L

Mash Steps

Name	Description	Step Temperature	Step Time
Saccharification	Add 20.50 L of water at 72.3 C	67.0 C	60 min
Mash Out	Heat to 76.0 C over 10 min	76.0 C	10 min

◯ Fly sparge with 14.31 L water at 76.0 C
◯ Add water to achieve boil volume of 28.50 L
◯ Estimated pre-boil gravity is 1.054 SG

Boil Ingredients

Amt	Name	Type	#	%/IBU	Volume
100.00 g	Tettnang (Tettnang Tettnager) [4.10 %] - Boil 60.0 min	Hop	9	40.2 IBUs	-
10.00 g	Cascade [4.50 %] - Boil 60.0 min	Hop	10	4.4 IBUs	-
3.20 g	Gypsum (Calcium Sulfate) (Boil)	Water Agent	11	-	-
2.50 g	Calcium Chloride (Boil)	Water Agent	12	-	-
0.50 Items	Whirlfloc Tablet (Boil 15.0 mins)	Fining	13	-	-
1.50 g	Yeast Nutrient (Boil 15.0 mins)	Other	14	-	-
40.00 g	Cascade [4.50 %] - Boil 10.0 min	Hop	15	6.4 IBUs	-

◯ Estimated Post Boil Vol: 26.00 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 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	16	-	-

◯ Measure Actual Original Gravity _____ (Target: 1.061 SG)
◯ Measure Actual Batch Volume _____ (Target: 23.00 L)

Fermentation

◯ 29 Oct 2020 - Primary Fermentation (2.00 days at 18.0 C ending at 18.0 C)
◯ 31 Oct 2020 - Secondary Fermentation (6.00 days at 20.0 C ending at 20.0 C)
◯ 06 Nov 2020 - Tertiary Fermentation (5.00 days at 22.0 C ending at 22.0 C)

Dry Hop and Bottle/Keg

◯ Measure Final Gravity: _____ (Estimate: 1.013 SG)
◯ Date Bottled/Kegged: - Carbonation: Bottle with 129.40 g Corn Sugar