Wild One (AG) 23L

Created: Saturday December 2nd 2023

Cell Division

Method: **All Grain** Style: **Saison** Boil Time: **60 min** Batch Size: **23 liters** (fermentor volume) Pre Boil Size: **28.3 liters**

Post Boil Size: **25 liters** Pre Boil Gravity: **1.048** (recipe based estimate) Post Boil Gravity: **1.054** (recipe based estimate)

Efficiency: **75%** (brew house) Source: **LoB kits** Calories: **246 calories** (Per 500ml) Carbs: **16.9 g** (Per 500ml)

Original Gravity:	Final Gravity:	ABV (standard):	IBU (tinseth):	SRM (morey):	Mash pH	Cost $
1.054	**1.005**	**6.5%**	**33.3**	**4.4**	**5.3**	**n/a**

Fermentables

Amount	Fermentable	Cost	PPG	°L	Bill %
0.30 kg	Oat hulls		0	0	5%
4 kg	Gladfield - NZ - Gladfield - Pilsner Malt		35.65	1.9	66.7%
1 kg	Gladfield - NZ - Gladfield - Vienna Malt		35.42	3.4	16.7%
0.50 kg	Gladfield - Rye Malt		37.26	3.5	8.3%
0.20 kg	Gladfield - NZ - Gladfield - Sour Grapes Acid Malt		12	2	3.3%

6 kg / $ 0.00

Hops

Amount	Variety	Cost	Type	AA	Use	Time	IBU	Bill %
10 g	Motueka		Pellet	6.8	Boil	60 min	7.65	10%
20 g	East Kent Goldings		Pellet	5.8	Boil	15 min	6.47	20%
10 g	Motueka		Pellet	6.8	Boil	15 min	3.8	10%
30 g	East Kent Goldings		Pellet	5.8	Boil	10 min	7.1	30%
30 g	Motueka		Pellet	6.8	Boil	10 min	8.32	30%

100 g / $ 0.00

Other Ingredients

Amount	Name	Cost	Type	Use	Time
4 g	Gypsum		Water Agt	Mash	1 hr.

Yeast

froth technologies - Froth Technologies-Wilding

Amount: 1 Each **Cost:** **Attenuation (custom):** 89% **Flocculation:** Medium

Optimum Temp: -18 - -18 °C **Starter:** No

Fermentation Temp: 23 °C **Pitch Rate:** 0.5 *(M cells / ml / ° P)* 153 B cells required

Priming

CO_2 Level: 2.7 Volumes

Target Water Profile Balanced Profile

Ca^{+2} 80 **Mg^{+2}** 5 **Na^{+}** 25 **Cl^{-}** 75 **SO_4^{-2}** 80 **HCO_3^{-}** 100

Mash Guidelines

Amount	Description	Type	Start Temp	Target Temp	Time
16.2 L	Beta-glucanase rest. This step is included in the mash schedule to help break down the beta glucans in the rye malt. If you choose not to include this step, the resulting beer will not suffer, but some difficulty in lautering may be experieneced.	Temperature	45 °C	45 °C	15 min
	Starch conversion	Temperature	66 °C	66 °C	60 min
	Mash out	Temperature	--	72 °C	5 min
19.4 L		Sparge	--	78 °C	--

Starting Mash Thickness: 2.7 L/kg
Starting Grain Temp: 20 °C

Quick Water Requirements

Water	Liters
Strike water volume at mash thickness of 2.7 L/kg	16.2
Mash volume with grains	20.2
Grain absorption losses	-6
Remaining sparge water volume	18.1
Pre boil volume	28.3
Boil off losses	-2.5
Hops absorption losses (first wort, boil, aroma)	-0.8
Post boil Volume	25
Kettle losses	-2
Going into fermentor	23
Total:	**34.3**
Equipment Profile Used:	G30

Notes

The suggested mineral additions assume an average NZ water profile and should be fine for most NZ water sources. The target (balanced) water profile in ppm is shown above.

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 ~5.2 - 5.3 without the need for larger amounts of acidulated malt. 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, they are available for purchase on the LoB website and will last a great many brews for a small cost.
2. 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).
3. We recommend you add kettle finings (whirlflock, Irish Moss) and yeast nutrient 15 min before the end of boil.
4. Cool the wort to 20 deg C and promptly transfer to a fermenter.
5. Pitch the yeast into well aerated wort at 20 deg C and allow to rise to 23 deg C.
6. When the primary ferment is complete, hold the fermentation temperature at 20-23 deg C for 10-14 days. Three weeks from start to finish is a good rule of thumb. It is likely that there will be no need to crash cool your beer. Time is your friend.
7. When ready, rack the beer to a CO2 purged keg and force carbonate to around 2.7 vols CO2. Alternatively, bottle or keg conditioning with priming sugar is a very rewarding option for a farmhouse style of beer such as this. Do not cold crash/clarify if you choose this option and do not rush the beer. A stable finishing gravity is a must (one week for clean beers is a good safety margin) and use a priming calculator to target around 2.7 vols C02.