Haymaker Saison (AG) 23L LoB

Created: Friday July 22nd 2022

League of Brewers

Method: **All Grain** Style: **Saison** Boil Time: **90 min** Batch Size: **23 liters** (fermentor volume)

Pre Boil Size: **29.55 liters** Post Boil Size: **25 liters** Pre Boil Gravity: **1.040** (recipe based estimate)

Post Boil Gravity: **1.047** (recipe based estimate) Efficiency: **75%** (brew house) Source: **Jamie McQuillan**

Calories: **213 calories** (Per 500ml) Carbs: **14.3 g** (Per 500ml)

Original Gravity:	Final Gravity:	ABV (standard):	IBU (tinseth):	SRM (morey):	Mash pH	Cost $
1.047	**1.004**	**5.7%**	**24.2**	**5.7**	**5.2**	**n/a**

Fermentables

Amount	Fermentable	Cost	PPG	°L	Bill %
3.70 kg	Gladfield - NZ - Gladfield - Pilsner Malt		35.65	1.93	76.3%
0.80 kg	Gladfield - NZ - Gladfield - Wheat Malt		37.26	2.05	16.5%
0.15 kg	Gladfield - NZ - Gladfield - Sour Grapes Malt		34	2.03	3.1%
0.20 kg	Gladfield - Gladfield - NZ - Medium Crystal Malt		35.88	52.5	4.1%

4.85 kg / $ 0.00

Hops

Amount	Variety	Cost	Type	AA	Use	Time	IBU	Bill %
20 g	Saaz (3.5 AA)		Pellet	2.1	Boil	90 min	5.42	20%
35 g	East Kent Goldings (5 AA)		Pellet	4.7	Boil	20 min	12.02	35%
15 g	Saaz (3.5 AA)		Pellet	2.1	Boil	20 min	2.3	15%
15 g	East Kent Goldings (5 AA)		Pellet	4.7	Boil	10 min	3.08	15%
15 g	Saaz (3.5 AA)		Pellet	2.1	Boil	10 min	1.38	15%

100 g / $ 0.00

Other Ingredients

Amount	Name	Cost	Type	Use	Time
4 g	Calcium Chloride (dihydrate)		Water Agt	Mash	1 hr.
4 g	Gypsum		Water Agt	Mash	1 hr.

Yeast

Fermentis - Safale - Belgian Saison Ale Yeast BE-134

Amount: 2 Each **Cost:** **Attenuation (avg):** 90% **Flocculation:** Low

Optimum Temp: 18 - 28 °C **Starter:** No

Fermentation Temp: 24 °C **Pitch Rate:** 0.5 *(M cells / ml / ° P)* 134 B cells required

Priming

Method: co2 Amount: 0.97 bar Temp: 4 °C CO_2 Level: 2.7 Volumes

Target Water Profile Balanced Profile

Ca^{+2} 70 **Mg^{+2}** 3 **Na^{+}** 5 **Cl^{-}** 65 **SO_4^{-2}** 75 **HCO_3^{-}** 0

Mash Guidelines

Amount	Description	Type	Start Temp	Target Temp	Time
13.1 L	Satrch conversion	Infusion	65 °C	65 °C	75 min
	Mash out	Temperature	65 °C	76 °C	15 min
21.1 L		Sparge	--	78 °C	--

Starting Mash Thickness: 2.7 L/kg
Starting Grain Temp: 65 °C

Quick Water Requirements

Water	Liters
Strike water volume at mash thickness of 2.7 L/kg	13.1
Mash volume with grains	16.3
Grain absorption losses	-4.9
Remaining sparge water volume	21.3
Pre boil volume	29.6
Boil off losses	-3.8
Hops absorption losses (first wort, boil, aroma)	-0.8
Post boil Volume	25
Kettle losses	-2
Going into fermentor	23
Total:	**34.4**
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 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 adding kettle finings (whirlflock, Irish Moss) and yeast nutrient 15 min before the end of boil.
4. Cool the wort to 18C and promptly transfer to a fermenter.
5. 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 allow to rise to 24C.
6. When the primary ferment is complete, hold the fermentation temperature at 22-24 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 cold crash your beer. If the beer needs more time, let it have it. A month on yeast is not a problem, especially with small scale home brewed batches. Time is your friend.
7. When ready, rack the beer to a CO2 purged keg and force carbonate. Alternatively, bottle or keg conditioning with priming sugar is a very nice option for Belgian styles. Do not cold crash 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.