

# BS022 Belgian Wit

Witbier (24 A)

**Type:** All Grain

**Batch Size:** 45.00 l

**Boil Size:** 55.30 l

**Boil Time:** 60 min

**End of Boil Vol:** 43.57 l

**Final Bottling Vol:** 43.00 l

**Fermentation:** Ale, Two Stage

**Date:** 30 Oct 2015

**Brewer:** Charles Tucker

**Asst Brewer:**

**Equipment:** My Equipment 6

**Efficiency:** 72.00 %

**Est Mash Efficiency:** 75.0 %

**Taste Rating:** 30.0



**Taste Notes:** Flavour was superb. Very refreshing and similar to Hoegaarden.

Prepare for Brewing

- Clean and Prepare Brewing Equipment
- Total Water Needed: 71.55 l
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## Water Prep

Amt	Name	Type	#	%/IBU
75.00 l	RO Water	Water	1	-

## Mash or Steep Grains

### Mash Ingredients

Amt	Name	Type	#	%/IBU
0.40 kg	Rice Hulls (0.0 EBC)	Adjunct	2	3.8 %
4.00 kg	Pilsner (Weyermann) (3.3 EBC)	Grain	3	38.5 %
4.00 kg	Wheat, Flaked (3.2 EBC)	Grain	4	38.5 %
1.00 kg	Oats, Malted (0.5 EBC)	Grain	5	9.6 %
1.00 kg	Pale Malt Crushed, Maris Otter (5.0 EBC)	Grain	6	9.6 %
75.00 l	RO Water (Kingfishers) (Mash 0.0 mins)	Other	7	-

### Mash Steps

Name	Description	Step Temperature	Step Time
Protein Rest	Add 32.03 l of water at 53.7 C	50.0 C	15 min
Saccharification	Add 0.14 l of water and heat to 68.0 C over 15 min	68.0 C	90 min
Mash Out	Heat to 76.0 C over 10 min	76.0 C	10 min

- Fly sparge with 34.38 l water at 75.6 C
- Add water to achieve boil volume of 55.30 l
- Estimated pre-boil gravity is 1.042 SG

### Boil Ingredients

Amt	Name	Type	#	%/IBU
80.00 g	Hallertauer Mittelfruh [3.60 %] - Boil 60.0 min	Hop	8	15.2 IBUs
100.00 g	Orange Peel, Bitter (Boil 5.0 mins)	Spice	9	-
30.00 g	Crushed Coriander Seed (Boil 5.0 mins)	Spice	10	-

- Estimated Post Boil Vol: 43.57 l and Est Post Boil Gravity: 1.049 SG

### Cool and Transfer Wort

- Cool wort to fermentation temperature
- Transfer wort to fermenter
- Add water if needed to achieve final volume of 45.00 l

### Pitch Yeast and Measure Gravity and Volume

#### Fermentation Ingredients

Amt	Name	Type	#	%/IBU
4.0 pkg	Belgian Wit Ale (White Labs #WLP400) [35.49 ml]	Yeast	11	-

- Measure Actual Original Gravity \_\_\_\_\_ (Target: 1.049 SG)
- Measure Actual Batch Volume \_\_\_\_\_ (Target: 45.00 l)
- Add water if needed to achieve final volume of 45.00 l

### Fermentation

- 30 Oct 2015 - Primary Fermentation (4.00 days at 20.0 C ending at 22.0 C)
- 03 Nov 2015 - Secondary Fermentation (5.00 days at 22.0 C ending at 22.0 C)

## Dry Hop and Bottle/Keg

- Measure Final Gravity: \_\_\_\_\_ (Estimate: 1.012 SG)
- Date Bottled/Kegged: 08 Nov 2015 - Carbonation: Bottle with 330.60 g Corn Sugar
- Age beer for 30.00 days at 18.3 C
- 08 Dec 2015 - Drink and enjoy!

## Notes

RO water TDS 12.4 (as 442). Alkalinity 9 (ppm CaCO<sub>3</sub>), pH 6.47. Followed Br'un Water and added 7.29 ml of Phosphoric acid 1.5N to 75L of RO water. This gave 4.3 pH, which is too high, but carried on regardless.

Mash pH at 50C after mix in was 5.6. Added 8ml of phosphoric acid to mash to bring pH to 5.45 at 68C.

55L collected in boil kettle. pH 5.58. SG 1050. Good rolling achieved so small element switched off. OG of cooled wort was 1064, but only 40L. Topped up with 5L of RO water and SG was now 1054.

Wort was aerated with oxygen wand for 40 secs and yeast added.

Observations: Boil-off in 30 gal kettle was 5L higher than initial calculations; when running into fermenter connect up to the bottom tap rather than a hose over the top.