

# Witless on Citrus

- Gravity **15.2 BLG**
- ABV ---
- IBU **16**
- SRM **4**
- Style **Witbier**

## Batch size

- Expected quantity of finished beer **22.7 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.61 liter(s) / kg**
- Mash size **14.9 liter(s)**
- Total mash volume **20.9 liter(s)**

## Steps

- Temp **66.7 C**, Time **60 min**

## Mash step by step

- Heat up **14.9 liter(s)** of strike water to **75.7C**
- Add grains
- Keep mash **60 min** at **66.7C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **28.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner (2 Row) Bel	2.45 kg (37.5%)	79 %	4
Grain	Wheat, Flaked	3.27 kg (50.1%)	77 %	4
Adjunct	Rice Hulls	0.54 kg (8.3%)	1 %	0
Sugar	Candi Sugar, Clear	0.27 kg (4.2%)	78.3 %	2

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Styrian Golding	35.44 g	60 min	3.6 %
Boil	Saaz (USA)	21.26 g	15 min	3.75 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - Belgian Witbier 3944	Ale	Liquid	29.6 ml	Wyeast Labs

## Extras

Type	Name	Amount	Use for	Time
Spice	Cumin, crushed	8.5 g	Boil	15 min
Spice	Grains of Paradise, crushed	17.01 g	Boil	15 min
Spice	Corriander, ground	17.01 g	Boil	15 min

Other	Cumquat, whole frozen (bitter)	680.39 g	Boil	15 min
Spice	Gorriander, ground	8.5 g	Boil	5 min
Other	Meiwa Cumquat, whole frozen (sweet)	340.19 g	Primary	7 day(s)

## Notes

- Added Candi Sugar at 5 min boil remaining (stir/whirlpool until dissolved)  
 FG 1.003  
 Higher efficiency than expected at 87%  
<http://imgur.com/a/1CkbA>  
*Feb 14, 2017, 5:45 PM*