

## Witbier #3

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **15**
- SRM **3.2**
- Style **Witbier**

### Batch size

- Expected quantity of finished beer **36 liter(s)**
- Trub loss **3 %**
- Size with trub loss **37.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **42 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

### Steps

- Temp **65 C**, Time **80 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **13.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **80 min** at **65C**
- Keep mash **20 min** at **72C**
- Sparge using **33 liter(s)** of **76C** water or to achieve **42 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.5 kg (46.7%)	81 %	4
Grain	Pszeniczny	1 kg (13.3%)	85 %	4
Adjunct	Pszenica niesłodowana	2 kg (26.7%)	70 %	3
Adjunct	Owies niesłodowany	1 kg (13.3%)	70 %	2

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	50 g	60 min	3.3 %
Aroma (end of boil)	Cascade	50 g	10 min	3.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M21 Belgian Wit	Wheat	Dry	10 g	Mangrove Jack's
1l starter przygotowany rano				

### Extras

Type	Name	Amount	Use for	Time
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Spice	Trawa Cytrynowa	30 g	Boil	5 min
Spice	Kolendra	30 g	Boil	5 min
Flavor	Skórka Cytryny	50 g	Boil	5 min
Flavor	Skórka Pomarańczy	100 g	Boil	5 min