BirthdayGirl

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **13**
- SRM **4.7**
- Style **Witbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **28.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

Steps

- Temp **44 C**, Time **60 min**
- Temp **69 C**, Time **80 min**
- Temp **77 C**, Time **0 min**

Mash step by step

- Heat up **12 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **60 min** at **44C**
- Keep mash **80 min** at **69C**
- Keep mash **0 min** at **77C**
- Sparge using **20.2 liter(s)** of **76C** water or to achieve **28.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Abbey Malt Weyermann	0.33 kg *(7.5%)*	75 %	45
Grain	Słód Owsiany Castle Malting	0.33 kg *(7.5%)*	75 %	3
Grain	Weyermann - Pilsner Malt	1.33 kg *(30.3%)*	81 %	5
Grain	Weyermann - Pale Wheat Malt	2 kg *(45.6%)*	85 %	5
Adjunct	Płatki owsiane	0.4 kg *(9.1%)*	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Motueka	13.33 g	20 min	6.6 %
Boil	Motueka	13.33 g	10 min	6.6 %
Boil	Trawa cytrynowa	13.33 g	5 min	1 %
Aroma (end of boil)	Motueka	26.67 g	5 min	6.6 %
Whirlpool	Motueka	40 g	0 min	6.6 %

Yeasts

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

Name	Type	Form	Amount	Laboratory
Gozdawa Classic Belgian Witbier	Wheat	Dry	13.33 g	Gozdawa

Extras

Type	Name	Amount	Use for	Time
Spice	kolendra	10 g	Boil	5 min
Flavor	skórka z pomarańczy suszona	20 g	Boil	10 min
Flavor	skórka z cytryny szuszona	10 g	Boil	5 min
Flavor	skórka z pomarańczy świeża	10 g	Boil	10 min