biały kłos

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **28**
- SRM **3.6**
- Style **Witbier**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.8 liter(s)**
- Total mash volume **13.9 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **10.8 liter(s)** of strike water to **69.2C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **8.1 liter(s)** of **76C** water or to achieve **15.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Płatki orkiszowe	1.2 kg *(38.7%)*	60 %	4
Grain	Pszeniczny	1.5 kg *(48.4%)*	85 %	4
Grain	Płatki owsiane	0.4 kg *(12.9%)*	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	15 g	60 min	10.5 %
Aroma (end of boil)	Lublin (Lubelski)	5 g	5 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's - Belgian Wit M21	Ale	Slant	200 ml	Fermentis

Extras

Type	Name	Amount	Use for	Time
Flavor	curacao	15 g	Boil	10 min
Spice	kolendra	7 g	Boil	10 min

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