

Opłatek

- Gravity **11.1 BLG**
- ABV ---
- IBU **30**
- SRM **4.7**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.2 liter(s)**
- Total mash volume **18.2 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **50 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **14.2 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **50 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	2.05 kg (50.6%)	80 %	4
Grain	Oats, Flaked	1.2 kg (29.6%)	80 %	2
Grain	Rye, Flaked	0.6 kg (14.8%)	78.3 %	4
Grain	Weyermann - Carared	0.2 kg (4.9%)	75 %	45

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	15 g	60 min	7 %
Boil	Citra	40 g	5 min	7 %
Boil	Citra	30 g	10 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew S-33	Ale	Slant	100 ml	Safbrew

Extras

Type	Name	Amount	Use for	Time
------	------	--------	---------	------

Water Agent	Gips	10 g	Mash	---
-------------	------	------	------	-----