

Biała Panna

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **23**
- SRM **4.3**
- Style **American Wheat or Rye Beer**

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 **26.4 liter(s)**

Mash information

- Mash efficiency **67 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **45 min**

Mash step by step

- Heat up **17.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **45 min** at **72C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Wheat Malt	4.5 kg (77.6%)	83 %	5
Grain	Viking Pilsner malt	0.5 kg (8.6%)	82 %	4
Grain	Grodziski pszeniczny wędzony dębem	0.3 kg (5.2%)	80 %	3
Grain	Płatki pszeniczne	0.5 kg (8.6%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Oktawia	25 g	60 min	8.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	11.5 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Herb	Kwiat lipy	20 g	Primary	---
Herb	Tatarak	20 g	Primary	---