

Biały kruk

- Gravity **15.9 BLG**
- ABV **6.7 %**
- IBU **41**
- SRM **12.2**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **25.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **28.9 liter(s)**

Steps

- Temp **68 C**, Time **65 min**
- Temp **78 C**, Time **13 min**

Mash step by step

- Heat up **22.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **65 min** at **68C**
- Keep mash **13 min** at **78C**
- Sparge using **9.8 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (62.3%)	80 %	5
Grain	Płatki owsiane	1.02 kg (15.9%)	85 %	3
Grain	Caramel/Crystal Malt - 120L	0.5 kg (7.8%)	72 %	236
Grain	Jęczmień niesłodowany	0.4 kg (6.2%)	75 %	2
Grain	Viking Malt Wędzony Czereśnią	0.5 kg (7.8%)	82 %	10

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	22 g	60 min	11.2 %
Boil	lunga	33 g	15 min	11 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale