

Czorny wongiel

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **51**
- SRM **31.1**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **5 %**
- Size with trub loss **41 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **49.3 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **37.5 liter(s)**
- Total mash volume **50 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **37.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **24.3 liter(s)** of **76C** water or to achieve **49.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (38.5%)	80 %	5
Grain	Viking Pilsner malt	5.5 kg (42.3%)	82 %	4
Grain	Weyermann - Carafa II	1 kg (7.7%)	70 %	1100
Grain	Carahell	0.5 kg (3.8%)	77 %	26
Grain	Biscuit Malt	0.5 kg (3.8%)	79 %	45
Sugar	cukier	0.5 kg (3.8%)	--- %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	60 g	60 min	10.5 %
Boil	Cascade	50 g	45 min	6 %
Boil	Fuggles	50 g	15 min	4.5 %
Aroma (end of boil)	Cascade	50 g	0 min	6 %
Dry Hop	Cascade	110 g	3 day(s)	6 %
Dry Hop	Centennial	20 g	3 day(s)	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	23 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	10 g	Boil	15 min