

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **39**
- SRM **29.8**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**

### Mash step by step

- Heat up **20.4 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (71.4%)	80 %	5
Grain	Strzegom Monachijski typ II	1 kg (14.3%)	79 %	22
Grain	Simpsons - Black Malt	0.3 kg (4.3%)	70 %	1700
Grain	Płatki owsiane	0.3 kg (4.3%)	85 %	3
Grain	Strzegom Karmel 300	0.2 kg (2.9%)	70 %	299
Sugar	cukier	0.2 kg (2.9%)	--- %	---

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook PL	40 g	70 min	8 %
Boil	Chinook PL	15 g	10 min	8 %
Boil	Citra	15 g	10 min	12 %
Boil	Mosaic	10 g	0 min	10 %
Whirlpool	Citra	20 g	0 min	12.9 %
Whirlpool	Mosaic	25 g	0 min	10 %
Dry Hop	Styrian Wolf	22 g	2 day(s)	3.6 %
Dry Hop	Citra	25 g	2 day(s)	12.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Culture	100 g	---

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Węglan wapnia	9 g	Mash	60 min
Water Agent	Gips	4 g	Mash	60 min