

## Black IPA nowe

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **65**
- SRM **29.1**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.3 liter(s)**
- Total mash volume **28.4 liter(s)**

### Steps

- Temp **76 C**, Time **60 min**

### Mash step by step

- Heat up **21.3 liter(s)** of strike water to **85.3C**
- Add grains
- Keep mash **60 min** at **76C**
- Sparge using **13.6 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (70.4%)	80 %	5
Grain	Strzegom Karmel 150	0.5 kg (7%)	75 %	150
Grain	Pszeniczny	0.5 kg (7%)	85 %	4
Grain	Jęczmień palony	0.5 kg (7%)	55 %	1000
Grain	Jęczmień niesłodowany	0.4 kg (5.6%)	75 %	2
Grain	Płatki owsiane	0.2 kg (2.8%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Boil	Cascade PL	50 g	15 min	5.2 %
Boil	Chinook	50 g	15 min	13 %
Dry Hop	Cascade PL	50 g	3 day(s)	5.2 %
Dry Hop	Chinook	50 g	3 day(s)	13 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Slant	30 ml	---