

Black Rye IPA

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **91**
- SRM **33.6**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **21.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.6 liter(s)**

Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **27.7 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (60.8%)	80 %	5
Grain	Żytni	1.5 kg (18.2%)	85 %	8
Grain	Karmelowy żytni Strzegom	0.4 kg (4.9%)	75 %	150
Grain	Weyermann - Dehusked Carafo III	0.45 kg (5.5%)	70 %	1114
Grain	Briess - Black Malt	0.17 kg (2.1%)	55 %	1150
Grain	Płatki owsiane	0.4 kg (4.9%)	85 %	3
Adjunct	Rice Hulls	0.3 kg (3.6%)	1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	23 g	60 min	12 %
Boil	Chinook	28.3 g	60 min	11.6 %
Boil	Centennial	28.3 g	15 min	10.2 %
Boil	Cascade	28.3 g	5 min	8.1 %
Whirlpool	Centennial	28.3 g	30 min	10.2 %
Whirlpool	Chinnok	28.3 g	30 min	11.6 %
Whirlpool	Cascade	28.3 g	30 min	8.1 %
Dry Hop	Centennial	56.6 g	3 day(s)	10.2 %
Dry Hop	Chinook	56.6 g	3 day(s)	11.6 %
Dry Hop	Cascade	28.3 g	3 day(s)	8.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis