

Black IPA

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **29**
- SRM **23.2**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **17.3 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **12.8 liter(s)**
- Total mash volume **16 liter(s)**

Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **12.8 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **7.7 liter(s)** of **76C** water or to achieve **17.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (74.6%)	80 %	5
Grain	Platki owsiane	0.4 kg (11.9%)	60 %	3
Grain	Briess - Chocolate Malt	0.2 kg (6%)	60 %	690
Grain	Carafa II	0.1 kg (3%)	70 %	812
Sugar	Brown Sugar, Light	0.15 kg (4.5%)	100 %	16

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	4.7 g	60 min	13.9 %
Boil	Simcoe	35 g	5 min	12.7 %
Whirlpool	Amarillo	50 g	1 min	8 %
Dry Hop	Amarillo	50 g	7 day(s)	8 %
Dry Hop	Citra	50 g	7 day(s)	12.2 %
Dry Hop	Simcoe	50 g	7 day(s)	12.7 %

Yeasts

Name	Type	Form	Amount	Laboratory
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WLP066 - London Fog	Ale	Slant	100 ml	White Labs
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Extras

Type	Name	Amount	Use for	Time
Water Agent	łuska ryżowa	100 g	Mash	90 min