

Hello darkness

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **87**
- SRM **32.1**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **62 %**
- Liquor-to-grist ratio **5.1 liter(s) / kg**
- Mash size **19 liter(s)**
- Total mash volume **22.8 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **19 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **-0.1 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	GlobalMalt Pale Ale/Pils	2.6 kg (69.7%)	82 %	5
Grain	Monachijski	0.33 kg (8.8%)	80 %	16
Grain	Płatki owsiane	0.33 kg (8.8%)	60 %	3
Grain	GlobalMalt Pszeniczny	0.12 kg (3.2%)	84 %	5
Grain	Jęczmień palony	0.35 kg (9.4%)	1 %	985
Na koniec zacierania (76°C)				

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	30 g	60 min	12.4 %
Whirlpool	Mosaic	60 g	5 min	12.4 %
Dry Hop	Mosaic	60 g	3 day(s)	12.4 %