

# Czarna IPA

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **56**
- SRM **23.4**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **26.3 liter(s)**

## Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **21 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4 kg (76.2%)	81 %	4
Grain	Carahell	0.5 kg (9.5%)	77 %	26
Grain	Weyermann - Carafa II	0.5 kg (9.5%)	70 %	837
Grain	Biscuit Malt	0.25 kg (4.8%)	79 %	45

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	30 g	50 min	13 %
Boil	Cascade	30 g	30 min	6 %
Boil	Fuggles	30 g	15 min	4.5 %
Dry Hop	Chinook	70 g	10 day(s)	13 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale