

# Czarne Oko

- Gravity **17.3 BLG**
- ABV **7.4 %**
- IBU **68**
- SRM **30**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **6 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **18 %/h**
- Boil size **30 liter(s)**

## Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.5 liter(s)**
- Total mash volume **24.7 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **18.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **78C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **30 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (78.4%)	80 %	4
Grain	Strzegom Karmel 30	0.45 kg (7.1%)	75 %	35
Grain	Biscuit Malt	0.23 kg (3.6%)	79 %	50
Grain	Carafa II Specjal	0.5 kg (7.8%)	70 %	1150
Na początek mash-out				
Sugar	Cukier biały	0.2 kg (3.1%)	--- %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	35 g	70 min	12.8 %
Boil	Cascade	30 g	45 min	5.4 %
Boil	Willamette	30 g	15 min	6.1 %
Aroma (end of boil)	Citra	30 g	5 min	13.1 %
Aroma (end of boil)	Cascade	20 g	5 min	5.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	22 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Other	kwaskorbinowy	4 g	Secondary	1 day(s)