

# Black IPA

- Gravity **17.3 BLG**
- ABV **7.4 %**
- IBU **47**
- SRM **30.9**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **23.4 liter(s)**

## Steps

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

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (78.7%)	90 %	4
Grain	Karmelowy żytni Strzegom	0.1 kg (1.6%)	75 %	220
Grain	Carafa II	0.5 kg (7.9%)	70 %	1150
Grain	Biscuit Malt	0.25 kg (3.9%)	79 %	50
Sugar	Cukier kandyzowany	0.5 kg (7.9%)	100 %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	30 g	60 min	8.5 %
Boil	Cascade PL	30 g	45 min	7.6 %
Boil	Willamette	30 g	15 min	4.8 %
Dry Hop	Cascade	60 g	7 day(s)	7.6 %

## Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
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Flavor	Skórka Pomarańczy	70 g	Boil	30 min
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