

# Black IPA

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **33**
- SRM **31.4**
- 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 **17.9 liter(s)**
- Total mash volume **23.8 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **17.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **0 min** at **76C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	3 kg (48.4%)	80 %	5
Grain	Pilzneński	1.5 kg (24.2%)	81 %	4
Grain	Thomas Fawcett - Crystal	0.7 kg (11.3%)	70 %	160
Grain	Carafa II	0.5 kg (8.1%)	70 %	1000
Grain	Biscuit Malt	0.25 kg (4%)	79 %	45
Sugar	Cukier	0.25 kg (4%)	100 %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	20 g	50 min	10.5 %
Boil	Cascade	20 g	30 min	6 %
Boil	Willamette	20 g	15 min	5 %
Dry Hop	Centennial	30 g	2 day(s)	10.5 %
Dry Hop	Cascade	30 g	2 day(s)	6 %
Dry Hop	Willamette	30 g	2 day(s)	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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us-05	Ale	Dry	12.5 g	---
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