

# black ipa

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **48**
- SRM **36.8**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

## Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.8 liter(s)**
- Total mash volume **10.4 liter(s)**

## Steps

- Temp **63 C**, Time **40 min**
- Temp **70 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

## Mash step by step

- Heat up **7.8 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **70C**
- Keep mash **2 min** at **78C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (76.9%)	81 %	4
Grain	Płatki pszeniczne	0.2 kg (7.7%)	85 %	3
Grain	Carafa II	0.25 kg (9.6%)	70 %	812
Grain	Strzegom Barwiący	0.15 kg (5.8%)	68 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	10 g	60 min	12 %
Boil	Citra	15 g	15 min	12 %
Aroma (end of boil)	Citra	15 g	2 min	12 %
Dry Hop	Citra	10 g	2 day(s)	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-04	Ale	Slant	250 ml	Safale