

# Black IPA

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **72**
- SRM **25.5**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.1 liter(s)**

## Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

## Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **19.2 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **18.3 liter(s)** of **76C** water or to achieve **31.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4.4 kg (68.8%)	80 %	4
Grain	Strzegom Karmel 30	0.5 kg (7.8%)	75 %	30
Grain	Strzegom Czekoladowy ciemny	0.4 kg (6.3%)	68 %	1200
Grain	Strzegom Pilzneński	1 kg (15.6%)	80 %	4
Grain	Caraaroma	0.1 kg (1.6%)	78 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Mosaic	20 g	30 min	11.7 %
Boil	Simcoe	15 g	30 min	13.2 %
Aroma (end of boil)	Mosaic	15 g	15 min	11.7 %
Aroma (end of boil)	Simcoe	15 g	15 min	13.2 %
Aroma (end of boil)	Centennial	16 g	15 min	10.5 %
Aroma (end of boil)	Rakau (NZ)	20 g	15 min	10.2 %

## Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
Safale US-05	Ale	Dry	11 g	Fermentis