

# Black IPA

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- Gravity **15.9 BLG**
- ABV ---
- IBU **86**
- SRM **37.6**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **12.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **16.1 liter(s)**

## Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.6 liter(s)**
- Total mash volume **16.2 liter(s)**

## Steps

- Temp **68 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **12.6 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **7.1 liter(s)** of **76C** water or to achieve **16.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2.7 kg (75%)	79 %	6
Grain	Strzegom Monachijski typ I	0.5 kg (13.9%)	79 %	16
Grain	Strzegom pszeniczny	0.2 kg (5.6%)	81 %	6
Grain	Carafa special III	0.2 kg (5.6%)	70 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	20 g	60 min	15.5 %
Boil	Mosaic	10 g	20 min	10 %
Boil	Simcoe	10 g	20 min	13 %
Boil	Mosaic	5 g	10 min	10 %
Boil	Simcoe	5 g	10 min	13 %
Boil	Cascade	10 g	10 min	6 %
Aroma (end of boil)	Mosaic	5 g	0 min	10 %
Aroma (end of boil)	Simcoe	5 g	0 min	13 %
Aroma (end of boil)	Cascade	10 g	0 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	60 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	2 g	Mash	60 min