

# Black IPA

- Gravity **16.9 BLG**
- ABV ---
- IBU **82**
- SRM **40**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

## Steps

- Temp **63 C**, Time **15 min**
- Temp **67 C**, Time **30 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **16.8 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **15 min** at **63C**
- Keep mash **30 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (71.4%)	80 %	4
Grain	Strzegom Monachijski typ II	1 kg (17.9%)	79 %	22
Grain	Strzegom Karmel 150	0.2 kg (3.6%)	75 %	150
Grain	Strzegom Czekoladowy 1200	0.2 kg (3.6%)	68 %	1202
Grain	Strzegom Barwiący	0.2 kg (3.6%)	68 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	35 g	60 min	11.8 %
Boil	Columbus/Tomahawk/Zeus	25 g	15 min	14 %
Boil	Centennial	25 g	5 min	11 %
Dry Hop	Simcoe	75 g	7 day(s)	13 %
Dry Hop	Centennial	25 g	7 day(s)	11 %
Boil	Simcoe	25 g	15 min	13 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-05	Ale	Slant	100 ml	Safale