

# Black IPA

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **63**
- SRM **33**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.1 liter(s)**
- Total mash volume **24.1 liter(s)**

## Steps

- Temp **66 C**, Time **45 min**
- Temp **66 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **18.1 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **15 min** at **66C**
- Keep mash **45 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Malt (2 Row) US	5 kg (79.7%)	79 %	10
Grain	Weyermann Caramunich 3	0.1 kg (1.6%)	76 %	150
Grain	Weyermann - Carapils	0.1 kg (1.6%)	78 %	4
Grain	Biscuit Malt	0.25 kg (4%)	79 %	45
Grain	Carafa II	0.57 kg (9.1%)	70 %	1100
Sugar	Brown Sugar	0.25 kg (4%)	100 %	0

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	60 min	13.5 %
Boil	Cascade	15 g	30 min	6 %
Boil	Cascade	15 g	15 min	6 %
Boil	Falconer's Flight	30 g	15 min	9.5 %
Boil	Cascade	20 g	0 min	6 %
Dry Hop	Cascade	30 g	---	6 %
Dry Hop	Falconer's Flight	30 g	---	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Flavor	Skórka pomarańczy	150 g	Boil	15 min