

# Black IPA 11

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **76**
- SRM **28**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **14.2 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.3 liter(s)**
- Total mash volume **12.4 liter(s)**

## Steps

- Temp **62 C**, Time **90 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **9.3 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **90 min** at **62C**
- Keep mash **30 min** at **72C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **14.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (76.9%)	80 %	4
Grain	Weyermann - Dehusked Carafa II	0.3 kg (9.2%)	70 %	837
Grain	Abbey Castle	0.15 kg (4.6%)	80 %	45
Grain	Carahell	0.15 kg (4.6%)	77 %	26
Sugar	Brown Sugar, Dark	0.15 kg (4.6%)	100 %	99

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	60 min	16.8 %
Boil	Centennial	15 g	45 min	9.7 %
Aroma (end of boil)	Fuggles	15 g	15 min	4.5 %
Aroma (end of boil)	Centennial	15 g	0 min	9.7 %
Dry Hop	Centennial	25 g	4 day(s)	9.7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	250 ml	Fermentis