

## Black IPA 4

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- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **45**
- SRM **22.3**
- 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 **24.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

### Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **17.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.8 kg (84.2%)	80 %	5
Grain	Karmelowy Jasny 30EBC	0.5 kg (8.8%)	75 %	30
Grain	Czekoladowy Special II	0.4 kg (7%)	60 %	788

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Centennial	25 g	30 min	10.5 %
Boil	Simcoe	25 g	5 min	13.2 %
Dry Hop	Centennial	25 g	4 day(s)	10.5 %
Dry Hop	Simcoe	50 g	4 day(s)	13.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11 g	---

### Notes

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

- Ferm. burzliwa 21 dni w temp. 18-20C.  
Ferm. cicha 4 dni w temp 18-20C.  
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