

## Black IPA sm 4

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- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **46**
- SRM **83.9**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **6 liter(s)**
- Trub loss **7 %**
- Size with trub loss **6.4 liter(s)**
- Boil time **90 min**
- Evaporation rate **14 %/h**
- Boil size **8.5 liter(s)**

### Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **2.7 liter(s) / kg**
- Mash size **7.2 liter(s)**
- Total mash volume **9.8 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**

### Mash step by step

- Heat up **7.2 liter(s)** of strike water to **73.3C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **4 liter(s)** of **76C** water or to achieve **8.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2 kg (75.5%)	82 %	4
Grain	Viking Barwiący	0.4 kg (15.1%)	65 %	1400
Grain	Viking Czekoladowy ciemny	0.25 kg (9.4%)	67 %	900

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	30 g	15 min	10 %
Dry Hop	Azacca	30 g	3 day(s)	14 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	5.5 g	Fermentis