

## 39 BLACK IPA

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- Gravity **18 BLG**
- ABV **7.7 %**
- IBU **58**
- SRM **34.3**

### Batch size

- Expected quantity of finished beer **18.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.4 liter(s)**

### Mash information

- Mash efficiency **73.2 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.1 liter(s)**
- Total mash volume **28.1 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **21.1 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **9.3 liter(s)** of **76C** water or to achieve **23.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5.5 kg (78.2%)	80 %	5
Grain	Strzegom Wiedeński	1 kg (14.2%)	79 %	10
Grain	Carafa III	0.3 kg (4.3%)	70 %	1034
Grain	Strzegom Barwiący	0.23 kg (3.3%)	68 %	1300

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	50 min	12.9 %
Boil	Chinook	20 g	45 min	13 %
Boil	Citra	10 g	0 min	12 %
Aroma (end of boil)	Cascade	30 g	0 min	6 %
Dry Hop	Cascade	30 g	3 day(s)	6 %
Dry Hop	Citra	20 g	3 day(s)	12 %
Dry Hop	Chinook	10 g	3 day(s)	13 %