

## 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 %       |