39 BLACK IPA

- 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 %

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