

## #5

- Gravity **16.9 BLG**
- ABV ---
- IBU **59**
- SRM **32.3**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **10 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **15.2 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

### Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **11.7 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **7.4 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	1.5 kg (38.5%)	79 %	6
Grain	Strzegom Pilzeński	1 kg (25.6%)	80 %	4
Grain	Strzegom Barwiący	0.15 kg (3.8%)	1 %	1300
Grain	Strzegom Bursztynowy	0.25 kg (6.4%)	80 %	50
Grain	Strzegom Monachijski typ I	0.5 kg (12.8%)	79 %	16
Grain	Weyermann - Carapils	0.5 kg (12.8%)	72 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Centennial	20 g	15 min	10.5 %
Aroma (end of boil)	Chinook	20 g	15 min	13 %
Aroma (end of boil)	Equinox	20 g	15 min	13.1 %
Dry Hop	Chinook	30 g	5 day(s)	13 %
Dry Hop	Centennial	30 g	5 day(s)	10.5 %

### Yeasts

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

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
Safale S-05	Ale	Dry	10 g	Safale