

## ES Black IPA

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **70**
- SRM **26.3**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **26.2 liter(s)**

### Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.2 liter(s)**
- Total mash volume **29.6 liter(s)**

### Steps

- Temp **67 C**, Time **70 min**
- Temp **77 C**, Time **1 min**

### Mash step by step

- Heat up **22.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **70 min** at **67C**
- Keep mash **1 min** at **77C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **26.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	6 kg (81.1%)	79 %	6
Grain	Strzegom Wiedeński	1.1 kg (14.9%)	79 %	10
Grain	Weyermann - Dehusked Carafa III	0.3 kg (4.1%)	70 %	1400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	30 g	60 min	15.5 %
Boil	Chinook	10 g	45 min	13 %
Boil	Citra	10 g	15 min	12 %
Boil	Chinook	10 g	15 min	13 %
Whirlpool	Cascade	30 g	0 min	6 %
Whirlpool	Citra	10 g	0 min	12 %
Dry Hop	Cascade	30 g	4 day(s)	6 %
Dry Hop	Citra	20 g	4 day(s)	12 %
Dry Hop	Chinook	20 g	4 day(s)	13 %

### Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Safale US-05	Ale	Slant	100 ml	Fermentis
--------------	-----	-------	--------	-----------