

Black IPA

- Gravity **15 BLG**
- ABV ---
- IBU **49**
- SRM **40**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **65 min**
- Evaporation rate **15 %/h**
- Boil size **32 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **21.4 liter(s)**
- Total mash volume **28.1 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **21.4 liter(s)** of strike water to **68.6C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **32 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	5.5 kg (82.1%)	80 %	7
Grain	Strzegom Karmel 600	0.5 kg (7.5%)	68 %	601
Grain	Carafa III	0.4 kg (6%)	70 %	1034
Grain	Strzegom pszenica prażona	0.3 kg (4.5%)	70 %	1000

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Cascade	20 g	60 min	8 %
Whirlpool	Cascade	30 g	30 min	6 %
Whirlpool	El Dorado	30 g	30 min	15 %
Whirlpool	ctz	30 g	30 min	15.7 %
Dry Hop	El Dorado	18 g	2 day(s)	15 %
Dry Hop	ctz	28 g	2 day(s)	13.2 %
Dry Hop	Chinook	30 g	2 day(s)	13 %
Whirlpool	Cascade	20 g	2 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	200 ml	Safale