

Black IPA

- Gravity **14 BLG**
- ABV ---
- IBU **68**
- SRM **30.4**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **10 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **29.1 liter(s)**

Mash information

- Mash efficiency **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

Steps

- Temp **65 C**, Time **60 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **18.5 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner (2 Row) Bel	4 kg (75.5%)	79 %	4
Grain	Strzegom Karmel 150	0.2 kg (3.8%)	75 %	150
Grain	Strzegom Wiedeński	0.75 kg (14.2%)	79 %	10
Grain	Czekoladowy	0.15 kg (2.8%)	60 %	1000
Grain	carafa II	0.2 kg (3.8%)	60 %	1000

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Admiral	20 g	60 min	14.3 %
Boil	Chinook	20 g	60 min	13.4 %
Aroma (end of boil)	Cascade	10 g	10 min	6 %
Aroma (end of boil)	Chinook	10 g	10 min	13 %
Aroma (end of boil)	Centennial	10 g	10 min	10.5 %
Aroma (end of boil)	Cascade	10 g	5 min	6 %
Aroma (end of boil)	Chinook	10 g	5 min	13 %
Aroma (end of boil)	Centennial	10 g	5 min	10.5 %
Whirlpool	Cascade	20 g	0 min	6 %
Whirlpool	Chinook	20 g	0 min	13 %
Whirlpool	Centennial	20 g	0 min	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Water Agent	kwas mlekowy	5 g	Mash	60 min
Water Agent	kwas mlekowy	3 g	Mash	0 min