

Czarna Ipa ala awaria

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **24**
- SRM **28.6**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **26.8 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **20.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **2 min** at **78C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	6 kg (89.6%)	79 %	6
Grain	Fawcett - Pale Chocolate	0.4 kg (6%)	71 %	600
Grain	Weyermann - Carafa II	0.1 kg (1.5%)	70 %	837
Grain	Weyermann - Carafa III	0.1 kg (1.5%)	70 %	1024
Grain	Black (Patent) Malt	0.1 kg (1.5%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	45 min	15.5 %
Aroma (end of boil)	Simcoe	35 g	1 min	13.2 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	35 g	1 min	15.5 %
Dry Hop	Simcoe	60 g	5 day(s)	13.2 %
Dry Hop	Columbus/Tomahawk/Zeus	60 g	3 day(s)	15.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	10 g	Fermentis