

imperialny Porter

- Gravity **19.8 BLG**
- ABV **8.7 %**
- IBU **43**
- SRM **30.2**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **25.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **30.4 liter(s)**

Steps

- Temp **66 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **22.8 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **10.7 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	6 kg (78.9%)	81 %	4
Grain	Pszeniczny	0.7 kg (9.2%)	85 %	4
Grain	Strzegom Czekoladowy 400	0.2 kg (2.6%)	68 %	400
Grain	Fawcett - Pale Chocolate	0.2 kg (2.6%)	71 %	600
Grain	Strzegom Karmel 600	0.2 kg (2.6%)	68 %	601
Grain	Carafa	0.2 kg (2.6%)	70 %	664
Grain	Black (Patent) Malt	0.1 kg (1.3%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	25 g	60 min	10 %
Boil	Marynka	25 g	30 min	10 %
Boil	Citra	30 g	5 min	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	150 ml	Safale