

## Robust porter

- Gravity **14.4 BLG**
- ABV ---
- IBU **24**
- SRM **36.9**
- Style **Brown Porter**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **21 liter(s)**

### Steps

- Temp **64 C**, Time **20 min**
- Temp **68 C**, Time **40 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **20 min** at **64C**
- Keep mash **40 min** at **68C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Karmel 600	0.5 kg (9.5%)	68 %	601
Grain	Pilzneński	3 kg (57.1%)	81 %	4
Grain	Biscuit Malt	1 kg (19%)	79 %	45
Grain	Caraaroma	0.25 kg (4.8%)	78 %	400
Grain	Strzegom Monachijski typ I	0.5 kg (9.5%)	79 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	30 g	60 min	4 %
Boil	Lublin (Lubelski)	30 g	40 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

### Extras

Type	Name	Amount	Use for	Time
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Flavor	chipsy z dębu francuskiego średnio opiekane	50 g	Secondary	7 day(s)
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