

## Porter wędzony

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **30**
- SRM **18.2**
- Style **Robust Porter**

### Batch size

- Expected quantity of finished beer **12.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.8 liter(s)**

### Mash information

- Mash efficiency **79 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.1 liter(s)**
- Total mash volume **10.8 liter(s)**

### Steps

- Temp **66 C**, Time **70 min**

### Mash step by step

- Heat up **8.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **70 min** at **66C**
- Sparge using **10.4 liter(s)** of **76C** water or to achieve **15.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Malt (2 Row) UK	2.1 kg (77.5%)	85 %	6
Grain	Black Barley (Roast Barley)	0.1 kg (3.7%)	55 %	1300
Grain	Caramel/Crystal Malt - 40L	0.06 kg (2.2%)	74 %	170
Grain	Grodziski pszeniczny wędzony dębem	0.3 kg (11.1%)	80 %	3
Grain	Brown Malt (British Chocolate)	0.15 kg (5.5%)	70 %	128

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	25 g	60 min	5.1 %
Whirlpool	East Kent Goldings	20 g	25 min	5.1 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	100 ml	Fermentis