

## #7 Porter angielski

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- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **33**
- SRM **23.8**

### Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.5 liter(s)**
- Total mash volume **30 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **22.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **1 min** at **78C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom pale ale	6.6 kg (88%)	79 %	6
Grain	Strzegom Karmel 300	0.6 kg (8%)	70 %	299
Grain	Carafa II	0.15 kg (2%)	70 %	812
Grain	jęczmień	0.15 kg (2%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	45 g	60 min	7 %
Boil	Styrian Golding	22.5 g	20 min	3.6 %
Boil	Styrian Golding	22.5 g	10 min	3.6 %

### Yeasts

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