

## Porter Angielski HB

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- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **24**
- SRM **12.5**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.1 liter(s)**
- Total mash volume **20.7 liter(s)**

### Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **16.1 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **16 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (87%)	80 %	4
Grain	Strzegom Monachijski typ I	0.3 kg (6.5%)	79 %	16
Grain	Caraaroma	0.2 kg (4.3%)	78 %	400
Grain	Weyermann - Carafa I	0.1 kg (2.2%)	70 %	690

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Boil	Lublin (Lubelski)	10 g	20 min	4 %

### Yeasts

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