

## porter

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- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **16**
- SRM **35**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **20.8 liter(s)**
- Total mash volume **29.1 liter(s)**

### Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

### Mash step by step

- Heat up **20.8 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (30.1%)	80 %	4
Grain	Strzegom Monachijski typ II	2 kg (24.1%)	79 %	22
Grain	Strzegom Wiedeński	2 kg (24.1%)	79 %	10
Grain	Caramunich® typ I	0.5 kg (6%)	73 %	80
Grain	Caraaroma	0.5 kg (6%)	78 %	400
Grain	Carafa III	0.2 kg (2.4%)	70 %	1034
Grain	pszeniczny czekoladowy	0.2 kg (2.4%)	70 %	900
Grain	Jęczmień palony	0.1 kg (1.2%)	55 %	900
Grain	Płatki owsiane	0.3 kg (3.6%)	60 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	15 g	60 min	12.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	23 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Flavor	suszona sliwka	400 g	Boil	15 min