

## Porter czekoladowy

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- Gravity **19.3 BLG**
- ABV **8.4 %**
- IBU **32**
- SRM **30.4**
- Style **Baltic Porter**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **24.4 liter(s)**

### Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **17.6 liter(s)**
- Total mash volume **26.4 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **17.6 liter(s)** of strike water to **80C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (48.9%)	80 %	5
Grain	Strzegom Monachijski typ I	0.9 kg (9.8%)	79 %	16
Grain	Strzegom Monachijski typ II	0.9 kg (9.8%)	79 %	22
Grain	Słód Caramunich Typ II Weyermann	0.9 kg (9.8%)	73 %	120
Grain	Caraaroma	0.7 kg (7.6%)	78 %	400
Grain	Brown Malt (British Chocolate)	0.3 kg (3.3%)	70 %	128
Grain	Płatki owsiane	0.5 kg (5.4%)	60 %	3
Grain	Carafa	0.1 kg (1.1%)	70 %	664
Sugar	Brown Sugar, Light	0.4 kg (4.3%)	100 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Boil	Lublin (Lubelski)	30 g	15 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
BrewGO Lager	Lager	Dry	20 g	Browin

## Extras

Type	Name	Amount	Use for	Time
Flavor	Kakao kruszone	200 g	Secondary	3 day(s)