

Porter

- Gravity **19.1 BLG**
- ABV **8.3 %**
- IBU **31**
- SRM **29.1**
- Style **Baltic Porter**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **90 min**
- Evaporation rate **5 %/h**
- Boil size **18.6 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **55 C**, Time **5 min**
- Temp **64 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **15 min** at **64C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **5.8 liter(s)** of **76C** water or to achieve **18.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Wiedeński	3.8 kg (59.4%)	79 %	10
Grain	Strzegom Monachijski typ I	1 kg (15.6%)	79 %	16
Grain	Karmelowy żytni Strzegom	0.5 kg (7.8%)	75 %	200
Grain	Strzegom Czekoladowy ciemny	0.2 kg (3.1%)	68 %	1200
Grain	Karmelowy Jasny 30EBC	0.5 kg (7.8%)	75 %	30
Grain	Płatki owsiane	0.4 kg (6.3%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Iunga	20 g	60 min	11 %
Boil	Lublin (Lubelski)	40 g	10 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
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w 34/70	Lager	Dry	11 g	---
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