

## porter

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- Gravity **20.5 BLG**
- ABV **9 %**
- IBU **33**
- SRM **25.5**
- Style **Baltic Porter**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **20.1 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.5 liter(s)**
- Total mash volume **27.7 liter(s)**

### Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **20 min**

### Mash step by step

- Heat up **21.5 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **20 min** at **72C**
- Keep mash **20 min** at **76C**
- Sparge using **4.8 liter(s)** of **76C** water or to achieve **20.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (32.5%)	81 %	4
Grain	Monachijski	3.7 kg (60.2%)	80 %	16
Grain	Karmelowy Jasny 30EBC	0.2 kg (3.3%)	75 %	30
Grain	Strzegom Czekoladowy ciemny	0.15 kg (2.4%)	68 %	1200
Grain	Barwiący	0.1 kg (1.6%)	55 %	985

### Hops

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

### Yeasts

Name	Type	Form	Amount	Laboratory
saf1	Lager	Slant	100 ml	---

## Notes

- barwiący po uzyskaniu negatywnej próby jodowej na 15 min w temp. 72 st  
*Oct 16, 2017, 10:28 AM*