

porter

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **29**
- SRM **25.1**
- Style **Baltic Porter**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **10 %**
- Size with trub loss **25.3 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **30.8 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

Steps

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

Mash step by step

- Heat up **20.4 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.2 liter(s)** of **76C** water or to achieve **30.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.5 kg (22.1%)	80 %	5
Grain	Strzegom Pilzneński	4 kg (58.8%)	80 %	4
Grain	brown	0.3 kg (4.4%)	80 %	190
Grain	Fawcett - Pale Chocolate	0.3 kg (4.4%)	71 %	600
Grain	Strzegom Czekoladowy 1200	0.2 kg (2.9%)	68 %	1200
Grain	Karmelowy Czerwony	0.5 kg (7.4%)	75 %	59

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka (goryczkowy)	30 g	50 min	10 %
Boil	Sybilla	24 g	10 min	3.5 %
Boil	Lublin (Lubelski) aromat	20 g	15 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M84 Bohemian Lager	Lager	Slant	200 ml	Mangrove Jack's