

Porter

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **28**
- SRM **23.5**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **32 liter(s)**
- Trub loss **5 %**
- Size with trub loss **33.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **40.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **30.6 liter(s)**
- Total mash volume **39.4 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **30.6 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **5 min** at **76C**
- Sparge using **18.7 liter(s)** of **76C** water or to achieve **40.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5.5 kg (62.9%)	80 %	5
Grain	Strzegom Monachijski typ II	2.5 kg (28.6%)	79 %	22
Grain	Strzegom Karmel 300	0.4 kg (4.6%)	70 %	299
Grain	Strzegom Barwiący	0.2 kg (2.3%)	68 %	1300
Grain	Strzegom Czekoladowy ciemny	0.15 kg (1.7%)	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	30 g	60 min	13.5 %
Boil	Fuggles	15 g	10 min	4.5 %
Aroma (end of boil)	Fuggles	20 g	0 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	30 ml	Fermentum Mobile