

# ROBUST PORTER

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **45**
- SRM **20.2**
- Style **Robust Porter**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.2 liter(s)**
- Total mash volume **23.4 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **18.2 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **76C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód pale ale Viking Malt (Strzegom)	4 kg (76.9%)	--- %	5
Grain	Słód karmelowy 200 - Viking Malt (Strzegom)	0.4 kg (7.7%)	--- %	200
Grain	Słód Castle Malting - Château Crystal®	0.4 kg (7.7%)	--- %	150
Grain	Słód czekoladowy jasny Viking Malt (Strzegom)	0.4 kg (7.7%)	--- %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	30 g	60 min	10.5 %
Boil	Willamette	15 g	15 min	6.1 %
Whirlpool	East Kent Golding	30 g	20 min	6.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Fermentis Safale S-04	Ale	Dry	23 g	Fermentis Safale

## Notes

- schłodzenie brzożki do temp. 16-17°C;  
fermentacja - temperatura piwa w głównej fazie fermentacji 17-18°C, dojrzewanie w temp. 19-20°C;  
rozlew - poziom nasycenia 1,8-1,9 vol.;  
refermentacja - 14 dni

profil wody (ppm): Ca 75-125; Mg 20; SO<sub>4</sub> 100-150; Cl 100-150; Alk. całk. 100-150; RA 50-100  
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