

salty rye porter + kakaowiec

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **33**
- SRM **33.5**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.1 liter(s)**
- Total mash volume **28.4 liter(s)**

Steps

- Temp **67 C**, Time **75 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **22.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **75 min** at **67C**
- Keep mash **5 min** at **76C**
- Sparge using **10.7 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (47.6%)	80 %	5
Grain	Strzegom Monachijski typ II	1 kg (15.9%)	79 %	22
Grain	Żytni	1 kg (15.9%)	85 %	8
Grain	Karmelowy żytni Strzegom	0.5 kg (7.9%)	75 %	150
Grain	Strzegom Czekoladowy jasny	0.5 kg (7.9%)	68 %	400
Grain	Carafa III	0.3 kg (4.8%)	70 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Admiral	20 g	60 min	15.7 %
Boil	Fuggles	25 g	10 min	5.9 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	22 g	Fermentis

Extras

Type	Name	Amount	Use for	Time
Other	łuska ryżowa	300 g	Mash	10 min
Flavor	ziarna kakaowca	150 g	Secondary	10 day(s)
Fining	mech irlandzki	5 g	Boil	10 min
Flavor	sól himalajska	20 g	Boil	5 min