

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 |