

Robust

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **32**
- SRM **20.6**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.6 liter(s)**
- Total mash volume **30.2 liter(s)**

Steps

- Temp **62 C**, Time **60 min**

Mash step by step

- Heat up **22.6 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	3 kg (39.7%)	79 %	22
Grain	Viking Pale Ale malt	3 kg (39.7%)	80 %	5
Grain	Fawcett - Brown	1 kg (13.2%)	72 %	180
Grain	Castlemalting melanoidynowy	0.25 kg (3.3%)	81 %	40
Grain	Fawcett - Dark Crystal	0.3 kg (4%)	71 %	300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	First Gold	50 g	60 min	7.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	1300 ml	Fermentum Mobile