

robust porter

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **48**
- SRM **28.6**
- Style **Robust Porter**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.3 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.3 liter(s)**
- Total mash volume **11 liter(s)**

Steps

- Temp **67 C**, Time **60 min**

Mash step by step

- Heat up **8.3 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **13.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Best Pilsen	1.3 kg (47.3%)	80.5 %	4
Grain	Monachijski	1 kg (36.4%)	80 %	18
Grain	red crystal	0.2 kg (7.3%)	78 %	400
Grain	Black (Patent) Malt	0.15 kg (5.5%)	55 %	985
Grain	Special B Malt	0.1 kg (3.6%)	65.2 %	315

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	7.4 %
Boil	Mosaic	15 g	15 min	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	1400 ml	Fermentum Mobile