

Rye Porter

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **32**
- SRM **23.7**
- Style **Brown 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 **22 %/h**
- Boil size **14.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **9.5 liter(s)**
- Total mash volume **11.9 liter(s)**

Steps

- Temp **67 C**, Time **600 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **9.5 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **600 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **7.7 liter(s)** of **76C** water or to achieve **14.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	0.54 kg (22.7%)	81 %	4
Grain	Żytni	1 kg (42%)	85 %	8
Grain	Fawcett - Pale Chocolate	0.18 kg (7.6%)	71 %	600
Grain	Brown Malt (British Chocolate)	0.18 kg (7.6%)	70 %	500
Grain	Monachijski	0.24 kg (10.1%)	80 %	16
Grain	Płatki żytnie	0.24 kg (10.1%)	75 %	8

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	10 g	60 min	11 %
Boil	Fuggles	15 g	15 min	4.5 %
Whirlpool	Fuggles	45 g	1 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Novalager	Lager	Slant	80 ml	Lallemand

Extras

Type	Name	Amount	Use for	Time
Water Agent	Łuska ryżowa	150 g	Mash	600 min