

Rye Ale z resztek

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **57**
- SRM **6.8**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.3 liter(s)**
- Total mash volume **15 liter(s)**

Steps

- Temp **69 C**, Time **60 min**

Mash step by step

- Heat up **11.3 liter(s)** of strike water to **77.1C**
- Add grains
- Keep mash **60 min** at **69C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszeniczny	2.4 kg (64%)	85 %	4
Grain	Żytni	1 kg (26.7%)	85 %	8
Grain	Caramel/Crystal Malt - 40L	0.35 kg (9.3%)	74 %	79

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	24 g	60 min	10 %
Boil	Citra	15 g	40 min	12 %
Aroma (end of boil)	Amarillo	15 g	0 min	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM53 Voss kveik	Ale	Liquid	100 ml	FM