

ROGGENBIER

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **24**
- SRM **5.1**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **4 %**
- Size with trub loss **26 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **17.3 liter(s)**
- Total mash volume **22.6 liter(s)**

Steps

- Temp **42 C**, Time **15 min**
- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **17.3 liter(s)** of strike water to **45.3C**
- Add grains
- Keep mash **15 min** at **42C**
- Keep mash **50 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **30 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	3 kg (57.1%)	85 %	8
Grain	Pilzneński	2 kg (38.1%)	81 %	4
Grain	Melanoidynowy	0.25 kg (4.8%)	81 %	53

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	12 %
Boil	Magnum	10 g	20 min	12 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Liquid	30 ml	Fermentum Mobile