

# Roggenbier 50L

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **16**
- SRM **8.6**
- Style **Roggenbier**

## Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **43.6 liter(s)**
- Boil time **80 min**
- Evaporation rate **5 %/h**
- Boil size **49.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **38.5 liter(s)**
- Total mash volume **49.5 liter(s)**

## Steps

- Temp **44 C**, Time **20 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **79 C**, Time **5 min**

## Mash step by step

- Heat up **38.5 liter(s)** of strike water to **47.4C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **79C**
- Sparge using **21.6 liter(s)** of **76C** water or to achieve **49.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	7 kg (63.6%)	85 %	8
Grain	Monachijski	2 kg (18.2%)	80 %	16
Grain	Pilzneński	1 kg (9.1%)	81 %	4
Grain	Caramunich® typ I	1 kg (9.1%)	73 %	80

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau	60 g	60 min	4.5 %
Boil	Hallertau	20 g	15 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Liquid	60 ml	Fermentum Mobile