

# Roggenbier

- Gravity **14 BLG**
- ABV ---
- IBU **23**
- SRM **9.9**
- Style **Roggenbier**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 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 **0 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **79C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	3 kg (60%)	85 %	8
Grain	Strzegom Monachijski typ I	1 kg (20%)	79 %	16
Grain	Strzegom Pilzneński	0.75 kg (15%)	80 %	4
Grain	weyermann caramunich	0.25 kg (5%)	73 %	90

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertauer Tradition	25 g	60 min	6.1 %
Boil	Hallertauer Tradition	15 g	15 min	6.1 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM41	Wheat	Slant	1 ml	Fermentum Mobile