

# Roggenbier

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **22**
- SRM **7.2**
- 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 **2.66 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **19.2 liter(s)**

## Steps

- Temp **44 C**, Time **20 min**
- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **79 C**, Time **2 min**

## Mash step by step

- Heat up **14 liter(s)** of strike water to **48.5C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **79C**
- Sparge using **16.6 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	3.25 kg (61.9%)	85 %	8
Grain	Monachijski	1 kg (19%)	80 %	16
Grain	Pilzneński	0.75 kg (14.3%)	81 %	4
Grain	Caramunich® typ I	0.25 kg (4.8%)	73 %	80

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Styrian Golding	30 g	60 min	5.3 %
Boil	Styrian Golding	20 g	15 min	5.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany (Starter 1l)	Wheat	Liquid	30 ml	Fermentum Mobile