

# Roggenbier

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **17**
- SRM **8**
- Style **Roggenbier**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **29.1 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.6 liter(s)**
- Total mash volume **26.2 liter(s)**

## Steps

- Temp **44 C**, Time **20 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **19.6 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 **5 min** at **78C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	4 kg (61.1%)	85 %	8
Grain	Strzegom Monachijski typ I	1.2 kg (18.3%)	79 %	16
Grain	Strzegom Pilzneński	1 kg (15.3%)	80 %	4
Grain	Caramunich® typ I	0.35 kg (5.3%)	73 %	80

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition	30 g	60 min	5.4 %
Aroma (end of boil)	Hallertau Tradition	20 g	5 min	5.4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Liquid	200 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Other	łuska orkiszowa	100 g	Mash	0 min
Fining	Whirlfloc	1 g	Boil	5 min