

# Roggen

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **31**
- SRM **10.4**
- 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 **13.9 liter(s)**
- Total mash volume **18.6 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

## Mash step by step

- Heat up **13.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	2 kg (43%)	85 %	8
Grain	Strzegom Pilzneński	1.5 kg (32.3%)	80 %	4
Grain	Strzegom Monachijski typ II	1 kg (21.5%)	79 %	22
Grain	Caraaroma	0.1 kg (2.2%)	78 %	400
Grain	Weyermann - Carafa I	0.05 kg (1.1%)	70 %	690

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	25 g	60 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Liquid	1000 ml	Fermentum Mobile