

.ROGGGENBIER

- Gravity **12.6 BLG**
- ABV ---
- IBU **21**
- SRM **15.5**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **19.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	2 kg (41.7%)	85 %	8
Grain	Karmelowy żytni Strzegom	0.2 kg (4.2%)	75 %	150
Grain	Monachijski	1.5 kg (31.3%)	80 %	16
Grain	Viking Pale Ale malt	1 kg (20.8%)	80 %	5
Grain	Weyermann - Carafa I	0.1 kg (2.1%)	70 %	690

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	15 g	60 min	10 %
Boil	Saaz (Czech Republic)	15 g	15 min	4.5 %
Boil	Saaz (Czech Republic)	15 g	5 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

FM41 Gwoździe i Banany	Wheat	Slant	150 ml	Fermentum Mobile
------------------------	-------	-------	--------	------------------