

Roggenbeer

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **14**
- SRM **8.5**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4.1 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **25 liter(s)**

Steps

- Temp **45 C**, Time **30 min**
- Temp **65 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **79 C**, Time **10 min**

Mash step by step

- Heat up **20.1 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **30 min** at **45C**
- Keep mash **40 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **79C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **22.8 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	2.6 kg (53.1%)	85 %	8
Grain	Strzegom Monachijski typ II	1 kg (20.4%)	79 %	22
Grain	Pilznieński	1 kg (20.4%)	81 %	4
Grain	Weyermann - Carawheat	0.3 kg (6.1%)	77 %	97

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau	20 g	60 min	4.8 %
Boil	Hallertau	10 g	10 min	4.8 %

Yeasts

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

Extras

Type	Name	Amount	Use for	Time
Other	łuska	200 g	Mash	60 min