

Roggenbier

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **18**
- SRM **17.7**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **22.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **70 C**, Time **1 min**
- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **16.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **1 min** at **70C**
- Keep mash **10 min** at **76C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **28.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	2.75 kg (51%)	85 %	8
Grain	Monachijski	1.25 kg (23.2%)	80 %	16
Grain	Pilzneński	1 kg (18.5%)	81 %	4
Grain	Caraaroma	0.25 kg (4.6%)	78 %	400
Grain	Carafa III	0.145 kg (2.7%)	70 %	1034

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	30 g	60 min	5.1 %
Boil	Lublin (Lubelski)	15 g	10 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Liquid	30 ml	Fermentum Mobile