Roggenbier

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **18**
- SRM **11.6**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **11.5 liter(s)**
- Total mash volume **14.8 liter(s)**

Steps

- Temp **44 C**, Time **15 min**
- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **11.5 liter(s)** of strike water to **47.4C**
- Add grains
- Keep mash **15 min** at **44C**
- Keep mash **30 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **5.8 liter(s)** of **76C** water or to achieve **14 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Munich Malt	1 kg *(30.3%)*	78 %	20
Grain	Rye Malt	2 kg *(60.6%)*	63 %	10
Grain	Słód Caramunich Typ II Weyermann	0.3 kg *(9.1%)*	73 %	120

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	8 g	60 min	11 %
Boil	Izabella	10 g	1 min	5.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Liquid	0.8 ml	Fermentum Mobile

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.