

# Roggenbier HB

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **13**
- SRM **9.5**
- 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 **14.1 liter(s)**
- Total mash volume **18.8 liter(s)**

## Steps

- Temp **44 C**, Time **20 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **14.1 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Sparge using **15.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	2.2 kg (46.8%)	85 %	8
Grain	Viking Munich Malt	2.2 kg (46.8%)	78 %	18
Grain	Karmelowy żytni Strzegom	0.3 kg (6.4%)	75 %	150

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tettnang	30 g	55 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
wb 06	Wheat	Dry	11.5 g	Fermentis