

Na rogi

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **24**
- SRM **16.9**
- 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 **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **19.3 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Rye Malt	2 kg (36.4%)	81 %	7
Grain	Weyermann - Bohemian Pilsner Malt	2 kg (36.4%)	81 %	4
Grain	Weyermann - Munich Malt Type 2	1 kg (18.2%)	78 %	23
Grain	weyermann - Caraaroma	0.5 kg (9.1%)	78 %	400

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	15 g	30 min	13.2 %
Boil	Simcoe	10 g	20 min	13.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M36 Liberty Bell Ale	Ale	Dry	10 g	Mangrove Jack's

Extras

Type	Name	Amount	Use for	Time
Fining	Mech irlandzki	5 g	Boil	10 min