

Kisiel

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **15**
- SRM **13.6**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **8 liter(s)**
- Trub loss **5 %**
- Size with trub loss **8.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **10.1 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **7.4 liter(s)**
- Total mash volume **9.4 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **7.4 liter(s)** of strike water to **67.7C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **4.7 liter(s)** of **76C** water or to achieve **10.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	1 kg (50%)	85 %	8
Grain	Monachijski	0.9 kg (45%)	80 %	16
Grain	Strzegom Karmel 600	0.06 kg (3%)	68 %	601
Grain	Special B Malt	0.04 kg (2%)	65.2 %	315

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	5 g	60 min	8.5 %
Boil	Saaz (Czech Republic)	5 g	10 min	3.5 %
Boil	Saaz (Czech Republic)	5 g	5 min	3.5 %