

Niskoalkoholowe

- Gravity **7.1 BLG**
- ABV ---
- IBU **12**
- SRM **4.4**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **14.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **17.2 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **5.6 liter(s)**
- Total mash volume **7.2 liter(s)**

Steps

- Temp **72 C**, Time **60 min**
- Temp **80 C**, Time **1 min**

Mash step by step

- Heat up **5.6 liter(s)** of strike water to **79.4C**
- Add grains
- Keep mash **60 min** at **72C**
- Keep mash **1 min** at **80C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **17.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	0.6 kg (37.5%)	81 %	4
Grain	Żytni	0.3 kg (18.8%)	85 %	8
Grain	Płatki owsiane	0.2 kg (12.5%)	85 %	3
Grain	Karmelowy żytni Strzegom	0.1 kg (6.3%)	75 %	150
Grain	Rye, Flaked	0.2 kg (12.5%)	78.3 %	4
Grain	Pszeniczny	0.2 kg (12.5%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	10 g	15 min	11.8 %
Whirlpool	Citra	10 g	0 min	12 %
Whirlpool	Amarillo	10 g	0 min	9.5 %
Dry Hop	Citra	15 g	3 day(s)	12 %
Dry Hop	Amarillo	15 g	3 day(s)	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	50 ml	Safale