

Żytnie

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **23**
- SRM **6.7**
- Style **Roggenbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **80 %**
- 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 **64 C**, Time **40 min**
- Temp **72 C**, Time **20 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 **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	2.5 kg (53.2%)	85 %	8
Grain	Monachijski	1.2 kg (25.5%)	80 %	16
Grain	Pilzneński	0.8 kg (17%)	81 %	4
Grain	Caramunich® typ I	0.2 kg (4.3%)	73 %	80

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	22 g	65 min	8 %
Boil	Perle	3 g	17 min	8 %
Boil	Lublin (Lubelski)	7 g	17 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safbrew WB-06	Wheat	Dry	1 g	Safbrew