

Żytnie

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **16**
- SRM **13.5**
- 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 **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **21 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 **15.8 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 **14.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	3 kg (57.1%)	85 %	8
Grain	Monachijski typ II 20-25 EBC Weyermann	1 kg (19%)	80 %	20
Grain	Weyermann - Pilsner Malt	1 kg (19%)	81 %	4
Grain	Caraaroma	0.15 kg (2.9%)	--- %	400
Grain	Carafa	0.1 kg (1.9%)	70 %	664

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Styrian Goldings	40 g	60 min	3.6 %
Boil	Styrian Golding	10 g	15 min	3.6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale wb06	Wheat	Dry	11.5 g	---