

Żytnie

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **32**
- SRM **16.2**
- 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 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

Steps

- Temp **44 C**, Time **10 min**
- Temp **54 C**, Time **10 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **17.4 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **10 min** at **44C**
- Keep mash **10 min** at **54C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	3 kg (51.7%)	85 %	8
Grain	Monachijski	1 kg (17.2%)	80 %	16
Grain	Pilzneński	1 kg (17.2%)	81 %	4
Grain	Caraaroma	0.2 kg (3.4%)	78 %	400
Grain	Carafa III	0.1 kg (1.7%)	70 %	1034
Grain	Płatki owsiane	0.5 kg (8.6%)	60 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Perle	40 g	60 min	7 %
Boil	Perle	10 g	15 min	7 %

Yeasts

Name	Type	Form	Amount	Laboratory
safale wb 06	Wheat	Dry	11 g	---