

# Żytnie

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **21**
- SRM **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 **75 %**
- 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**
- Temp **79 C**, Time **1 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**
- Keep mash **1 min** at **79C**
- 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%)	--- %	---
Grain	Strzegom Monachijski typ I	1 kg (19%)	79 %	16
Grain	Pilzneński	1 kg (19%)	81 %	4
Grain	Caramunich® typ I	0.25 kg (4.8%)	73 %	80

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Spalt	35 g	60 min	5.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Liquid	10 ml	Fermentum Mobile

## Notes

- Fermentacja 18-19\*(  
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