

# Żytnie

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **15**
- SRM **9.1**
- Style **Roggenbier**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **29.1 liter(s)**

## Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

## Steps

- Temp **45 C**, Time **20 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **18.9 liter(s)** of strike water to **48.6C**
- Add grains
- Keep mash **20 min** at **45C**
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **29.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann Żytni	3 kg (55.6%)	81 %	8
Grain	Strzegom Pilzneński	1.25 kg (23.1%)	80 %	4
Grain	Strzegom Monachijski typ I	1 kg (18.5%)	79 %	16
Grain	Weyermann Caraaroma	0.15 kg (2.8%)	78 %	400

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	40 g	60 min	3.8 %
Aroma (end of boil)	Lublin (Lubelski)	10 g	5 min	3.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM41 Gwoździe i Banany	Wheat	Slant	150 ml	Fermentum Mobile

## Notes

- Fermentacja w 18°C.  
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