

# Żytni lager

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **22**
- SRM **10.7**
- Style **Roggenbier**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **28.5 liter(s)**

## Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **22.8 liter(s)** of strike water to **67.3C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **9.3 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (52.6%)	80 %	5
Grain	Żytni	2 kg (35.1%)	85 %	8
Grain	Weyermann Specjal W	0.3 kg (5.3%)	68 %	300
Grain	Płatki owsiane	0.2 kg (3.5%)	60 %	3
Grain	Karmelowy Jasny 30EBC	0.2 kg (3.5%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	20 g	60 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Bavarian lager	Lager	Slant	270 ml	---