

# Żytnie

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **16**
- SRM **6.2**
- Style **Roggenbier**

## Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **13.5 liter(s)**

## Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **5 min**

## Mash step by step

- Heat up **10.5 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **8.9 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	1.5 kg (50%)	85 %	8
Grain	BESTMALZ - Best Pilsen	1.3 kg (43.3%)	80.5 %	4
Grain	Caramunich® typ I	0.2 kg (6.7%)	73 %	80

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau Tradition	15 g	60 min	5 %
Aroma (end of boil)	Hallertau Tradition	15 g	5 min	5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
WLP380 - Hefeweizen IV Ale Yeast	Wheat	Liquid	900 ml	---