

# Stout Żytni

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **36**
- SRM **32.8**
- Style **Dry Stout**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **52 C**, Time **5 min**
- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **5 min** at **52C**
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **19.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (50%)	80 %	4
Grain	Żytni	2 kg (33.3%)	85 %	8
Grain	Strzegom Czekoladowy ciemny	0.25 kg (4.2%)	68 %	1200
Grain	Strzegom Karmel 300	0.5 kg (8.3%)	70 %	299
Grain	Strzegom pszenica prażona	0.25 kg (4.2%)	70 %	1393

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	35 g	60 min	8.8 %
Aroma (end of boil)	Marynka	30 g	10 min	8.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Slant	200 ml	Fermentum Mobile