

# Oszukany pils

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **31**
- SRM **4.5**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.1 liter(s)**
- Total mash volume **11.7 liter(s)**

## Steps

- Temp **50 C**, Time **20 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **9.1 liter(s)** of strike water to **54.3C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **6.7 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.4 kg (92.3%)	81 %	4
Grain	Strzegom Karmel 30	0.2 kg (7.7%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10 g	60 min	10 %
Boil	Saaz (Czech Republic)	20 g	15 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	100 ml	---