

# polpils

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **57**
- SRM **4.4**
- Style **German Pilsner (Pils)**

## Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **50.6 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27 liter(s)**
- Total mash volume **36 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

## Mash step by step

- Heat up **27 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **32.6 liter(s)** of **76C** water or to achieve **50.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	8 kg (88.9%)	81 %	4
Grain	Carahell	1 kg (11.1%)	77 %	26

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	100 g	50 min	10 %
Boil	Lublin (Lubelski)	100 g	5 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	23 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Water Agent	kwas mlekowy	2 g	Mash	50 min