

# PILS

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **23**
- SRM **3.1**

## Batch size

- Expected quantity of finished beer **130 liter(s)**
- Trub loss **5 %**
- Size with trub loss **136.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **164.4 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **90 liter(s)**
- Total mash volume **120 liter(s)**

## Steps

- Temp **63 C**, Time **30 min**
- Temp **73 C**, Time **30 min**

## Mash step by step

- Heat up **90 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **73C**
- Sparge using **104.4 liter(s)** of **76C** water or to achieve **164.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	25 kg (83.3%)	80 %	4
Grain	słód monachijski	5 kg (16.7%)	80 %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	120 g	59 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	75 g	10 min	4 %
Aroma (end of boil)	Lublin (Lubelski)	75 g	5 min	4 %
Dry Hop	Styrian Golding	150 g	---	3.6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Fermentis Saflager	Lager	Dry	57.5 g	---