

# Polski Chmielowy Pils

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **28**
- SRM **5.3**

## Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **31.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

## Steps

- Temp **60 C**, Time **20 min**
- Temp **66 C**, Time **30 min**
- Temp **70 C**, Time **10 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **17.4 liter(s)** of strike water to **66.7C**
- Add grains
- Keep mash **20 min** at **60C**
- Keep mash **30 min** at **66C**
- Keep mash **10 min** at **70C**
- Keep mash **1 min** at **78C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **31.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	3 kg (51.7%)	80 %	4
Grain	Weyermann - Carapils	0.8 kg (13.8%)	78 %	4
Grain	Monachijski	2 kg (34.5%)	80 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Lublin (Lubelski)	30 g	10 min	4 %
Aroma (end of boil)	Saaz	30 g	10 min	2.7 %
Aroma (end of boil)	Hallertau Mittelfruh	30 g	10 min	3 %
Boil	lunga	30 g	20 min	10 %
Whirlpool	Lublin (Lubelski)	20 g	10 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	11.5 g	fermentis