

# pils 1 2020

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **39**
- SRM **5.7**
- Style **Bohemian Pilsener**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **27.9 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

## Steps

- Temp **52 C**, Time **20 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**

## Mash step by step

- Heat up **16.2 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **20 min** at **52C**
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Sparge using **17.1 liter(s)** of **76C** water or to achieve **27.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (74.1%)	80 %	4
Grain	Strzegom Monachijski typ I	1 kg (18.5%)	79 %	30
Grain	Bestmalz Carmel Pils	0.4 kg (7.4%)	75 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga goryczkowy	20 g	50 min	11 %
Boil	lunga goryczkowy	15 g	30 min	11 %
Boil	Sladek aromat	30 g	10 min	6.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
mangrove jacks M76	Lager	Dry	10 g	---