

## pils 3

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- Gravity **14.6 BLG**
- ABV ---
- IBU **35**
- SRM **5.7**
- Style **Classic American Pilsner**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **15 %/h**
- Boil size **32.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **19.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19.3 liter(s)** of **76C** water or to achieve **32.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (76.9%)	81 %	4
Grain	Strzegom Monachijski typ I	1 kg (15.4%)	79 %	16
Grain	caramel pils	0.5 kg (7.7%)	80 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	70 min	13.5 %
Boil	Magnum	15 g	30 min	13.5 %
Boil	Perle	20 g	10 min	7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M84 Bohemian Lager	Lager	Slant	100 ml	Mangrove Jack's