

## #7 pilsale

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- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **25**
- SRM **4.8**
- Style **Kölsch**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **50 min**
- Evaporation rate **5 %/h**
- Boil size **24 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **24 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (90%)	81 %	4
Grain	Strzegom Karmel 30	0.5 kg (10%)	75 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	30 g	50 min	4.5 %
Boil	Saaz (Czech Republic)	10 g	40 min	4.5 %
Boil	Saaz (Czech Republic)	10 g	30 min	4.5 %
Boil	Saaz (Czech Republic)	10 g	20 min	4.5 %
Boil	Saaz (Czech Republic)	10 g	10 min	4.5 %
Aroma (end of boil)	Saaz (Czech Republic)	10 g	0 min	4.5 %
Whirlpool	Saaz (Czech Republic)	20 g	0 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Safale US-05	Ale	Slant	300 ml	Fermentis
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