

## #16 Pils

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **57**
- SRM **4.7**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **27.8 liter(s)**
- Trub loss **2 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **32.1 liter(s)**

### Mash information

- Mash efficiency **68 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

### Steps

- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **21 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **18.1 liter(s)** of **76C** water or to achieve **32.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	5 kg (71.4%)	80 %	4
Grain	Strzegom Wiedeński	2 kg (28.6%)	79 %	10

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Nugget	40 g	40 min	13 %
Boil	Amarillo	10 g	20 min	9.5 %
Boil	Amarillo	10 g	15 min	9.5 %
Boil	Amarillo	15 g	10 min	9.5 %
Aroma (end of boil)	Amarillo	15 g	10 min	9.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Lager	Dry	11 g	---