

## 21. PILS

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **45**
- SRM **3.9**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **6.8 liter(s)**
- Total mash volume **9 liter(s)**

### Steps

- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **10 min**

### Mash step by step

- Heat up **6.8 liter(s)** of strike water to **72.4C**
- Add grains
- Keep mash **50 min** at **65C**
- Keep mash **10 min** at **72C**
- Sparge using **8.7 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (88.9%)	81 %	4
Grain	Monachijski	0.25 kg (11.1%)	80 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau	25 g	50 min	4.5 %
Boil	Hallertau	32 g	25 min	4.5 %