

## PILS 12 TB

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **57**
- SRM **4.2**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **2 %**
- Size with trub loss **17.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.1 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

### Steps

- Temp **42 C**, Time **1 min**
- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **12 liter(s)** of strike water to **45.7C**
- Add grains
- Keep mash **1 min** at **42C**
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **21.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.5 kg (87.5%)	81 %	4
Grain	Monachijski	0.5 kg (12.5%)	80 %	16

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Boil	Marynka	20 g	30 min	10 %
Boil	Lublin (Lubelski)	30 g	20 min	4 %