

## German pils

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **44**
- SRM **4**
- Style **German Pilsner (Pils)**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.3 liter(s)**
- Total mash volume **23.5 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **18.3 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **76C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Bohemian Pilsner Malt	5.04 kg (96.4%)	81 %	4
Grain	Weyermann - Acidulated Malt	0.06 kg (1.2%)	80 %	6
Grain	Melanoiden Malt	0.12 kg (2.4%)	80 %	39

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	magnum	31.11 g	60 min	12.7 %
Boil	Hallertau Mittelfruh	31.11 g	10 min	3.4 %
Aroma (end of boil)	Saaz (Czech Republic)	30 g	0 min	4.5 %
Dry Hop	Hallertau Mittelfruh	31.11 g	3 day(s)	3.4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
2007 Pilsen Lager	Lager	Liquid	2777.78 ml	Wyeast