

First pilsner

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **31**
- SRM **3.6**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **13.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **7.5 liter(s)**
- Total mash volume **10 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **7.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **8.2 liter(s)** of **76C** water or to achieve **13.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.5 kg (100%)	80 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zeus	4 g	60 min	15.1 %
Boil	Columbus/Tomahawk/Zeus	4 g	30 min	15.1 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	12 g	5 min	15.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
fermolager berlin	Lager	Dry	10 g	---