

pierwszy lager

- Gravity **11.9 BLG**
- ABV ---
- IBU **32**
- SRM **4.3**
- Style **Bohemian Pilsener**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **1 min** at **78C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pilsen Malt	4 kg (80%)	80.5 %	2
Grain	Briess - Munich Malt 10L	1 kg (20%)	77 %	20

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz	60 g	60 min	4 %
Boil	Saaz (Czech Republic)	40 g	10 min	4 %