

German Lager

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **24**
- SRM **3.6**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.4 liter(s)**
- Total mash volume **24.9 liter(s)**

Steps

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

Mash step by step

- Heat up **19.4 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	2.77 kg (50%)	80 %	4
Grain	Viking Pale Ale malt	1.85 kg (33.3%)	82 %	5
Grain	Pszeniczny	0.92 kg (16.7%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Saaz (Czech Republic)	18.46 g	15 min	3.24 %
Boil	Cascade	36.92 g	60 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	10.62 g	Fermentis