

Laggy shit

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **39**
- SRM **4.9**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13 liter(s)**
- Total mash volume **16.7 liter(s)**

Steps

- Temp **67 C**, Time **0 min**
- Temp **72 C**, Time **60 min**
- Temp **80 C**, Time **70 min**

Mash step by step

- Heat up **13 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **0 min** at **67C**
- Keep mash **60 min** at **72C**
- Keep mash **70 min** at **80C**
- Sparge using **9.7 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3.5 kg (94.6%)	82 %	4
Grain	Viking Caramel Red	0.2 kg (5.4%)	75 %	60

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	8.4 %
Boil	Lublin (Lubelski)	10 g	60 min	4 %
Aroma (end of boil)	Lublin (Lubelski)	20 g	10 min	4 %
Aroma (end of boil)	Marynka	10 g	10 min	8.4 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	11.5 g	---