

Pils

- Gravity **12.1 BLG**
- ABV ---
- IBU **40**
- SRM **4.7**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **33 liter(s)**
- Trub loss **5 %**
- Size with trub loss **34.6 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **43.7 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **30.4 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **70 min**
- Temp **76 C**, Time **15 min**

Mash step by step

- Heat up **22.8 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **64C**
- Keep mash **70 min** at **72C**
- Keep mash **15 min** at **76C**
- Sparge using **28.5 liter(s)** of **76C** water or to achieve **43.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	7 kg (92.1%)	82 %	4
Grain	Viking Munich Malt	0.4 kg (5.3%)	78 %	18
Grain	Weyermann - Acidulated Malt	0.2 kg (2.6%)	80 %	6

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Boil	Marynka	25 g	50 min	10 %
Boil	Lublin (Lubelski)	20 g	15 min	4 %
Boil	Sybilla	20 g	15 min	3.5 %
Boil	Lublin (Lubelski)	20 g	3 min	4 %
Boil	Sybilla	20 g	3 min	3.5 %
Boil	Marynka	10 g	0 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Saflager S-23	Lager	Dry	11.5 g	Fermentis Division of S.I.Lesaffre

Notes

- 32 litry, 13,5 blg, Drożdże ze startera.
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