

Lagere

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **17**
- SRM **4.8**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **28 liter(s)**
- Trub loss **5 %**
- Size with trub loss **30.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **36.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

Steps

- Temp **65 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **19.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **15 min** at **65C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **23.3 liter(s)** of **76C** water or to achieve **36.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (38.5%)	80 %	5
Grain	Pale Ale Flagon	1.5 kg (23.1%)	80 %	5
Grain	Pilznieński	1.5 kg (23.1%)	81 %	4
Grain	Monachijski	0.5 kg (7.7%)	80 %	16
Grain	Karmelowy Jasny 30EBC	0.5 kg (7.7%)	75 %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	30 g	20 min	10.5 %
Aroma (end of boil)	Liberty	30 g	5 min	4.5 %
Dry Hop	Lemon drop	40 g	7 day(s)	4.6 %
Dry Hop	Centennial	20 g	7 day(s)	10.5 %
Dry Hop	Liberty	20 g	7 day(s)	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's M76 Bavarian Lager	Lager	Dry	20 g	Mangrove Jack's
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Extras

Type	Name	Amount	Use for	Time
Fining	Whirfloc	3 g	Boil	5 min