

pils 1/2019

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **31**
- SRM **5.5**
- Style **German Pilsner (Pils)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **27.9 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **20.4 liter(s)**

Steps

- Temp **52 C**, Time **20 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15.3 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **20 min** at **52C**
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **27.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (68.6%)	80 %	4
Grain	Strzegom Monachijski typ I	1 kg (19.6%)	79 %	30
Grain	Briess - Carapils Malt	0.5 kg (9.8%)	74 %	3
Grain	Pszeniczny	0.1 kg (2%)	85 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	8.8 %
Boil	Brewers Gold	20 g	60 min	4.5 %
Boil	Saaz (Czech) aromat	30 g	10 min	4.5 %
Aroma (end of boil)	Lublin (Lubelski) aromat	30 g	0 min	4 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's M84 Bohemian Lager	Lager	Dry	10 g	Mangrove Jack's
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Notes

- Dekokt ; w 21' odebrać 4L zacieru i podgrzać do 72°C i utrzymywać przez 15'. Po tym czasie gotować przez 20'. Przełąć małymi porcjami do pozostałej części zacieru ciągle mieszając.
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