

Pils

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **93**
- SRM **5.1**
- Style **Classic American Pilsner**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **4 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **27.9 liter(s)**

Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.8 liter(s)**
- Total mash volume **29.3 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **75 C**, Time **1 min**

Mash step by step

- Heat up **22.8 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **75C**
- Sparge using **11.6 liter(s)** of **76C** water or to achieve **27.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale	5 kg (76.9%)	80 %	7
Grain	Pszeniczny	1.15 kg (17.7%)	85 %	4
Grain	Cara-Pils/Dextrine	0.35 kg (5.4%)	72 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum szyszki	60 g	60 min	13.5 %
Boil	Sybilla szyszki	60 g	60 min	3.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M84 Bohemian Lager	Lager	Slant	100 ml	Mangrove Jack's