Pale Ale

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **33**
- SRM **6.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.3 liter(s)**
- Boil time **75 min**
- Evaporation rate **5 %/h**
- Boil size **27.1 liter(s)**

Mash information

- Mash efficiency **86 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.4 liter(s)**
- Total mash volume **19.2 liter(s)**

Steps

- Temp **60 C**, Time **30 min**
- Temp **68 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **14.4 liter(s)** of strike water to **66.7C**
- Add grains
- Keep mash **30 min** at **60C**
- Keep mash **30 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **27.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2.5 kg *(52.1%)*	80 %	6
Grain	Strzegom Monachijski typ I	2 kg *(41.7%)*	79 %	16
Grain	Strzegom Karmel 30	0.3 kg *(6.3%)*	--- %	30

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Boil	Marynka	10 g	20 min	10 %
Boil	Cascade PL	25 g	10 min	5.2 %
Boil	Cascade PL	25 g	5 min	5.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M36	Ale	Dry	10 g	---

Extras

Type	Name	Amount	Use for	Time

| Other | cascade PL | 50 g | Secondary | 4 day(s) |