

X warka APA

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **22**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **5 %**
- Size with trub loss **14.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **19.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.7 liter(s)**
- Total mash volume **15.6 liter(s)**

Steps

- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **2 min**

Mash step by step

- Heat up **11.7 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **11.5 liter(s)** of **76C** water or to achieve **19.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2.33 kg (59.9%)	79 %	6
Grain	Strzegom Monachijski typ I	0.78 kg (20.1%)	79 %	16
Grain	Płatki owsiane	0.39 kg (10%)	85 %	3
Grain	Bestmalz Carmel Pils	0.39 kg (10%)	75 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Equinox	3.89 g	60 min	13.1 %
Boil	Mosaic	7.78 g	60 min	10 %
Aroma (end of boil)	Equinox	3.89 g	5 min	13.1 %
Aroma (end of boil)	Mosaic	3.89 g	5 min	10 %
Dry Hop	Equinox	13.89 g	4 day(s)	13.1 %
Dry Hop	Mosaic	27.78 g	4 day(s)	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Lager	Dry	11.5 g	Fermentis