

#APA piwowarzone

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **33**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.5 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **19.8 liter(s)**

Steps

- Temp **68 C**, Time **45 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **45 min** at **68C**
- Keep mash **1 min** at **78C**
- Sparge using **3.3 liter(s)** of **76C** water or to achieve **16.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	2.8 kg (84.8%)	79 %	6
Grain	Pszeniczny	0.5 kg (15.2%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	13.5 %
Whirlpool	Simcoe	50 g	0 min	13.2 %
Dry Hop	Galaxy	100 g	3 day(s)	15 %

Yeasts

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