

APA

- Gravity **11.4 BLG**
- ABV ---
- IBU **28**
- SRM **4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.2 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18.6 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **26.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4 kg (86%)	80 %	4
Grain	Bestmalz Carmel Pils	0.25 kg (5.4%)	75 %	5
Grain	Płatki owsiane	0.4 kg (8.6%)	85 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Whirlpool	Cascade	30 g	60 min	6 %
Whirlpool	Mosaic	50 g	60 min	10 %
Dry Hop	Mosaic	50 g	3 day(s)	10 %
Dry Hop	Cascade	20 g	3 day(s)	6 %
Boil	Columbus/Tomahawk/Zeus	10 g	15 min	15.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis