

APA

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **49**
- SRM **5.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **21.2 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **10 min** at **78C**
- Sparge using **18.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pale Ale strzegom	5 kg (94.3%)	79 %	6
Grain	Aromatic Malt	0.3 kg (5.7%)	78 %	50

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	30 min	14.5 %
Boil	Columbus/Tomahawk/Zeus	12 g	15 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	15 g	30 min	14.5 %
Boil	Columbus/Tomahawk/Zeus	12 g	15 min	15.5 %
Dry Hop	Mosaic	60 g	7 day(s)	10.4 %
Dry Hop	Ekuanot	30 g	7 day(s)	14.5 %
Dry Hop	Summit	50 g	7 day(s)	14.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Fermentis