

# #1 APA

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **59**
- SRM **4.8**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.08 liter(s) / kg**
- Mash size **14.5 liter(s)**
- Total mash volume **19.2 liter(s)**

## Steps

- Temp **66 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **14.5 liter(s)** of strike water to **73.5C**
- Add grains
- Keep mash **70 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (74.5%)	80 %	5
Grain	Strzegom Wiedeński	1 kg (21.3%)	79 %	10
Grain	Karmelowy Jasny 30EBC	0.2 kg (4.3%)	75 %	30

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	30 g	60 min	12 %
Boil	Citra	15 g	30 min	12 %
Boil	Citra	10 g	5 min	12 %
Aroma (end of boil)	Amarillo	10 g	0 min	9.5 %

## Yeasts

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