

## apa

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **43**
- SRM **3.9**
- 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 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **46 C**, Time **15 min**
- Temp **62 C**, Time **10 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **50.3C**
- Add grains
- Keep mash **15 min** at **46C**
- Keep mash **10 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3 kg (60%)	80 %	4
Grain	Viking Pale Ale malt	2 kg (40%)	80 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Azacca	20 g	60 min	14 %
Aroma (end of boil)	Azacca	30 g	0 min	14 %
Whirlpool	Eureka!	20 g	20 min	18 %
Dry Hop	Eureka!	80 g	4 day(s)	18 %

### Yeasts

Name	Type	Form	Amount	Laboratory
fermentis us-05	Ale	Dry	10 g	---