

## APAcz #2

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- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **29**
- SRM **5.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

### Steps

- Temp **62 C**, Time **10 min**
- Temp **68 C**, Time **20 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **10 min** at **62C**
- Keep mash **20 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale	4 kg (88.9%)	79 %	7
Grain	Viking Karmelowy 50 Czerwony	0.3 kg (6.7%)	75 %	50
Grain	Viking Przeniczny	0.2 kg (4.4%)	81 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tomahawk	10 g	30 min	15.8 %
Boil	Tomahawk	5 g	20 min	15.8 %
Aroma (end of boil)	Amarillo	15 g	5 min	9.3 %
Aroma (end of boil)	Cascade	15 g	5 min	7.1 %
Aroma (end of boil)	Citra	15 g	5 min	14.2 %
Aroma (end of boil)	Amarillo	15 g	0 min	9.3 %
Aroma (end of boil)	Cascade	15 g	0 min	7.1 %
Aroma (end of boil)	Citra	15 g	0 min	14.2 %
Dry Hop	Amarillo	15 g	3 day(s)	9.3 %

Dry Hop	Cascade	15 g	3 day(s)	7.1 %
Dry Hop	Citra	15 g	3 day(s)	14.2 %

## Yeasts

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