

## APA v10 #100

---

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **36**
- SRM **4.7**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20.6 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **85 min**
- Evaporation rate **14 %/h**
- Boil size **27 liter(s)**

### Mash information

- Mash efficiency **77.5 %**
- Liquor-to-grist ratio **3.85 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25.2 liter(s)**

### Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **7 min**

### Mash step by step

- Heat up **20 liter(s)** of strike water to **73.1C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **7 min** at **76C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **27 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Mep©Ale	4.3 kg (82.7%)	82.2 %	4.8
Grain	Bestmalz - pszeniczny	0.4 kg (7.7%)	83 %	5
Grain	Viking - rye malt	0.3 kg (5.8%)	81 %	8
Grain	Viking - karmelowy 30	0.2 kg (3.8%)	74 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	10 g	60 min	14.7 %
Boil	Columbus	15 g	15 min	12.4 %
Aroma (end of boil)	Centennial	15 g	10 min	9.6 %
Aroma (end of boil)	Simcoe	15 g	5 min	13.2 %
Aroma (end of boil)	Citra	15 g	1 min	13.5 %
Dry Hop	Centennial	30 g	3 day(s)	9.6 %
Dry Hop	Mosaic	30 g	3 day(s)	12.1 %
Dry Hop	Citra	15 g	3 day(s)	13.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Slant	155 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	2 g	Mash	---
Water Agent	kwas mlekowy 80% [ml]	3.83 g	Mash	---
Water Agent	chlorek wapnia [ml]	5.14 g	Mash	---
Water Agent	epsom	1.5 g	Mash	---
Water Agent	mech irlandzki	3 g	Boil	5 min