

## APA v5 KAFFIR #89

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- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **37**
- SRM **4.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **19.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.9 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **24 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4.05 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **75 C**, Time **7 min**

### Mash step by step

- Heat up **20 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **7 min** at **75C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **24 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Mep©Ale	3.5 kg (70.7%)	82.1 %	6
Grain	Płatki pszenne	0.5 kg (10.1%)	85 %	3
Grain	Bruntal - pszeniczny	0.7 kg (14.1%)	83 %	5
Grain	Płatki owsiane	0.25 kg (5.1%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	14 g	60 min	14.7 %
Aroma (end of boil)	Citra	25 g	5 min	13.5 %
Aroma (end of boil)	Centennial	25 g	5 min	9.5 %
Aroma (end of boil)	Cascade US	30 g	1 min	7.1 %
Dry Hop	Centennial	30 g	3 day(s)	9.5 %
Dry Hop	Cascade US	25 g	3 day(s)	7.1 %
Dry Hop	Citra	10 g	3 day(s)	13.5 %
Dry Hop	Mosaic	10 g	3 day(s)	10.4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Slant	215 ml	Fermentum Mobile

### Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	2 g	Mash	---
Water Agent	kwask mlekowy 80% [ml]	4.11 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
Flavor	kaffir	10 g	Boil	5 min
Flavor	skórka pomarańczy	20 g	Boil	5 min