

## APA v13 #114

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **35**
- SRM **4.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **17.3 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.3 liter(s)**
- Boil time **85 min**
- Evaporation rate **21 %/h**
- Boil size **24.1 liter(s)**

### Mash information

- Mash efficiency **82.7 %**
- Liquor-to-grist ratio **3.93 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **18.9 liter(s)**

### Steps

- Temp **67 C**, Time **50 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **7 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **73C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Mep©Ale	3.1 kg (81%)	82.2 %	4.8
Grain	płatki owsiane	0.4 kg (10.5%)	83 %	3
Grain	Bestmalz - pszeniczny	0.1 kg (2.6%)	83 %	5
Grain	Viking - karmelowy 30	0.15 kg (3.9%)	75 %	30
Grain	Abbey - chateau	0.075 kg (2%)	78 %	45

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	14 g	60 min	11.5 %
Aroma (end of boil)	Zula	40 g	5 min	9.7 %
Aroma (end of boil)	Zula	60 g	1 min	9.7 %
Dry Hop	Zula	80 g	2 day(s)	9.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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WLP090 - San Diego Super Yeast	Ale	Slant	140 ml	White Labs
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### Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	2.5 g	Mash	---
Water Agent	kwask mlekowy 80% [ml]	4.6 g	Mash	---
Water Agent	chlerek wapnia [ml]	0 g	Mash	---
Water Agent	epsom	0.5 g	Mash	---
Water Agent	mech irlandzki	3 g	Boil	10 min
Water Agent	kwask askorbinowy	3 g	Bottling	---