

## APA v16 #120

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **33**
- SRM **4.9**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **17.2 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.4 liter(s)**
- Boil time **85 min**
- Evaporation rate **23 %/h**
- Boil size **24.8 liter(s)**

### Mash information

- Mash efficiency **84.6 %**
- Liquor-to-grist ratio **3.85 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **18.9 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **7 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **72C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **24.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale ale - viking	3 kg (76.9%)	80 %	5.5
Grain	płatki owsiane	0.4 kg (10.3%)	83 %	3
Grain	pszeniczny - viking	0.3 kg (7.7%)	83 %	5
Grain	abbey - chateau	0.2 kg (5.1%)	78 %	45

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	10 g	60 min	14.7 %
Aroma (end of boil)	Amore Preta	50 g	5 min	9 %
Aroma (end of boil)	EXP 2/20	50 g	1 min	7.5 %
Dry Hop	EXP 2/20	40 g	2 day(s)	7.5 %
Dry Hop	Amore Preta	40 g	2 day(s)	9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
WLP090 - San Diego Super Yeast	Ale	Slant	130 ml	White Labs

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	2.5 g	Mash	---
Water Agent	kwask mlekowy 80% [ml]	4.47 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	---