

## #167 NE APA

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **20**
- SRM **4.2**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **12.5 liter(s)**
- Trub loss **4 %**
- Size with trub loss **13 liter(s)**
- Boil time **67 min**
- Evaporation rate **10 %/h**
- Boil size **15.9 liter(s)**

### Mash information

- Mash efficiency **72 %**
- Liquor-to-grist ratio **4.8 liter(s) / kg**
- Mash size **16.1 liter(s)**
- Total mash volume **19.4 liter(s)**

### Steps

- Temp **64 C**, Time **37 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **5 min**

### Mash step by step

- Heat up **16.1 liter(s)** of strike water to **68.6C**
- Add grains
- Keep mash **37 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **3.2 liter(s)** of **76C** water or to achieve **15.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1.95 kg (55.7%)	80 %	5
Grain	Strzegom Pszeniczny	0.65 kg (18.6%)	73 %	6
Grain	Płatki owsiane	0.5 kg (14.3%)	85 %	3
Grain	Rice, Flaked	0.25 kg (7.1%)	70 %	2
Sugar	Milk Sugar (Lactose)	0.15 kg (4.3%)	76.1 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga PL	10 g	55 min	9.6 %
Whirlpool	Zappa	28.5 g	1 min	10 %
Whirlpool	Ahhhroma	28.5 g	1 min	10 %
Whirlpool	Trident	20 g	1 min	13.9 %
Whirlpool	Idaho 7	18 g	1 min	13.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand - LalBrew Verdant IPA	Ale	Dry	11 g	Lallemand

## Extras

Type	Name	Amount	Use for	Time
Other	Witamina C	1.02 g	Secondary	7 day(s)