

## APA v19 #125

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **37**
- SRM **5.1**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **18.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.4 liter(s)**
- Boil time **80 min**
- Evaporation rate **27.5 %/h**
- Boil size **27.1 liter(s)**

### Mash information

- Mash efficiency **81.5 %**
- Liquor-to-grist ratio **3.65 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.1 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 **72.3C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **27.1 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking - pale ale	3 kg (73.2%)	80 %	5.5
Grain	bestmalz - pszeniczny	0.3 kg (7.3%)	85 %	5
Grain	Viking - wiedeński	0.5 kg (12.2%)	78 %	9
Grain	Viking - karmelowy 30	0.3 kg (7.3%)	73 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	10 g	60 min	14.7 %
Aroma (end of boil)	Columbus	49.15 g	5 min	12.6 %
Aroma (end of boil)	Mosaic	20.31 g	1 min	12.5 %
Aroma (end of boil)	Książęcy	22.6 g	1 min	7 %
Aroma (end of boil)	Amore Preta	11.9 g	1 min	9 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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WLP090 - San Diego Super Yeast	Ale	Slant	150 ml	Fermentum Mobile
gęstwa 4-dniowa				

### Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips	2.5 g	Mash	---
Water Agent	kwas mlekowy 80% [ml]	4.49 g	Mash	---
Water Agent	chlorek wapnia [ml]	0 g	Mash	---
Water Agent	węglan wapnia/kreda	0 g	Mash	---
Water Agent	sól epsom	0.5 g	Mash	---
Fining	irish moss	3 g	Boil	10 min
zastanowić się czy dodawać?				
Water Agent	kwas askorbinowy	3 g	Bottling	---