

## APA v24 #137

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **31**
- SRM **4.4**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **18.6 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **80 min**
- Evaporation rate **19.2 %/h**
- Boil size **25.2 liter(s)**

### Mash information

- Mash efficiency **85.8 %**
- Liquor-to-grist ratio **3.85 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **18.9 liter(s)**

### Steps

- Temp **65 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 **70.9C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **25.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	pilzneński - viking	2 kg (51.3%)	80 %	3.6
Grain	pale ale - viking	1 kg (25.6%)	80 %	5.5
Grain	płatki owsiane	0.4 kg (10.3%)	83 %	3
Grain	pszeniczny - bestmalz	0.3 kg (7.7%)	82 %	5
Grain	biscuit - chateau	0.2 kg (5.1%)	77 %	50

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	9 g	60 min	14.7 %
Aroma (end of boil)	CTZ	25 g	10 min	10.7 %
Aroma (end of boil)	Vermelho	20 g	1 min	8.1 %
Aroma (end of boil)	Talus	50 g	1 min	7.9 %
Dry Hop	Talus	30 g	2 day(s)	7.9 %
Dry Hop	Oktawia	30 g	2 day(s)	7.8 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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FM52 Amerykański Sen	Ale	Liquid	175 ml	Fermentum Mobile
5 tygodniowa gęstwa				

### Extras

Type	Name	Amount	Use for	Time
Water Agent	gips	3 g	Mash	---
Water Agent	kwas mlekowy 80% [ml]	4.63 g	Mash	---
Water Agent	chlorek 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	---