

## PPA

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **33**
- SRM **6.4**

### Batch size

- Expected quantity of finished beer **38 liter(s)**
- Trub loss **5 %**
- Size with trub loss **41.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **47.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27.3 liter(s)**
- Total mash volume **36.4 liter(s)**

### Steps

- Temp **68 C**, Time **90 min**

### Mash step by step

- Heat up **27.3 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **68C**
- Sparge using **29.4 liter(s)** of **76C** water or to achieve **47.6 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	6.7 kg (73.6%)	80 %	5
Grain	Płatki owsiane	0.6 kg (6.6%)	85 %	3
Grain	Cookie viking	0.6 kg (6.6%)	75 %	60
Grain	Płatki jęczmienne	1 kg (11%)	85 %	3
Grain	Weyermann Caramunich 3	0.2 kg (2.2%)	76 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	200 g	2 min	4 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Us05	Ale	Slant	300 ml	---