

APA

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **29**
- SRM **4.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.5 liter(s)**

Mash information

- Mash efficiency **68 %**
- Liquor-to-grist ratio **3.8 liter(s) / kg**
- Mash size **23.4 liter(s)**
- Total mash volume **29.5 liter(s)**

Steps

- Temp **55 C**, Time **15 min**
- Temp **68 C**, Time **100 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **23.4 liter(s)** of strike water to **59.6C**
- Add grains
- Keep mash **15 min** at **55C**
- Keep mash **100 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **8.3 liter(s)** of **76C** water or to achieve **25.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (81.3%)	80 %	5
Grain	Pszeniczny	0.85 kg (13.8%)	85 %	4
Grain	Oats, Flaked	0.15 kg (2.4%)	80 %	2
Grain	Wheat, Flaked	0.15 kg (2.4%)	77 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Sabro	16 g	50 min	14.8 %
Boil	Sabro	10 g	5 min	14.8 %
Boil	Cascade	20 g	5 min	5.8 %

Yeasts

Name	Type	Form	Amount	Laboratory
WLP001 - California Ale Yeast	Ale	Slant	110 ml	White Labs