

APA

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **43**
- SRM **4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **19.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	6 kg (100%)	80 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Summit	20 g	45 min	13.1 %
Aroma (end of boil)	Summit	30 g	5 min	13.1 %
Aroma (end of boil)	Centennial	10 g	5 min	10.5 %
Aroma (end of boil)	Cascade	10 g	5 min	8.3 %
Aroma (end of boil)	Citra	10 g	5 min	13.1 %
Whirlpool	Centennial	10 g	20 min	10.5 %
Whirlpool	Cascade	10 g	20 min	8.3 %
Whirlpool	Citra	10 g	20 min	13.1 %
Dry Hop	Centennial	30 g	2 day(s)	10.5 %
Dry Hop	Cascade	30 g	2 day(s)	8.3 %
Dry Hop	Citra	30 g	2 day(s)	13.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis