

APA papa

- Gravity **10.7 BLG**
- ABV **4.3 %**
- IBU **21**
- SRM **4.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **2 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

Steps

- Temp **68 C**, Time **60 min**

Mash step by step

- Heat up **14.7 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **15.5 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.9 kg (100%)	80 %	5

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	13.3 %
Boil	Ahtanum	20 g	5 min	5 %
Boil	Equinox	10 g	5 min	13.1 %
Aroma (end of boil)	Ahtanum	10 g	0 min	5 %
Aroma (end of boil)	Equinox	20 g	0 min	13.1 %
Dry Hop	Citra	60 g	5 day(s)	12 %

Yeasts

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