

APA centennial

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **22**
- SRM **3.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **13.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **77C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg (77.8%)	80 %	5
Grain	Briess - Wheat Malt, White	0.5 kg (11.1%)	85 %	5
Grain	Cara-Pils/Dextrine	0.2 kg (4.4%)	72 %	4
Grain	Oats, Flaked	0.3 kg (6.7%)	80 %	2

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	5 g	60 min	9.5 %
Boil	Centennial	20 g	15 min	9.5 %
Boil	Centennial	30 g	5 min	9.5 %
Dry Hop	Centennial	30 g	4 day(s)	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	9.2 g	Fermentis