

Single Hop APA - Centenial

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **31**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **15.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **12 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **79 C**, Time **10 min**

Mash step by step

- Heat up **9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **79C**
- Sparge using **9.6 liter(s)** of **76C** water or to achieve **15.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (83.3%)	80 %	5
Grain	Weyermann - Rye Malt	0.2 kg (6.7%)	85 %	7
Grain	Weyermann - Dark Wheat Malt	0.1 kg (3.3%)	85 %	14
Grain	Weyermann - Diastatic Barley	0.2 kg (6.7%)	78 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	5 g	60 min	10.5 %
Boil	Centennial	10 g	20 min	10.5 %
Aroma (end of boil)	Centennial	10 g	10 min	10.5 %
Aroma (end of boil)	Centennial	5 g	5 min	10.5 %
Dry Hop	Centennial	20 g	7 day(s)	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

Safale US-05	Ale	Slant	200 ml	Safale
--------------	-----	-------	--------	--------