

Sunny - single hop Amarillo APA

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **39**
- SRM **8.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.7 liter(s)**
- Total mash volume **17.6 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **13.7 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **77C**
- Sparge using **9.2 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (76.9%)	80 %	5
Grain	Cararye	0.35 kg (9%)	73 %	120
Grain	Wheat, Flaked	0.3 kg (7.7%)	77 %	4
Grain	Barley, Flaked	0.25 kg (6.4%)	70 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	5 g	60 min	9.5 %
Boil	Amarillo	15 g	20 min	9.5 %
Aroma (end of boil)	Amarillo	40 g	10 min	9.5 %
Dry Hop	Amarillo	30 g	4 day(s)	9.5 %

Yeasts

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