

# #1

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **59**
- SRM **7.8**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.1 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **21.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.8 kg (95%)	80 %	6
Grain	Crystal II 200	0.2 kg (5%)	71 %	200

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Apollo	15 g	60 min	18.7 %
Boil	Cascade	20 g	10 min	7.1 %
Boil	Citra	20 g	5 min	13.5 %
Boil	Summit	25 g	3 min	15.8 %
Dry Hop	Citra	25 g	6 day(s)	13.5 %
Dry Hop	Amarillo	25 g	6 day(s)	9.5 %

## Yeasts

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