

#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 |