

Cascade Pale Ale

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **45**
- SRM **4.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **0 %**
- Size with trub loss **15 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **19.8 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **66 C**, Time **70 min**

Mash step by step

- Heat up **16 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **70 min** at **66C**
- Sparge using **7.8 liter(s)** of **76C** water or to achieve **19.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 3.5 kg (87.5%) | 80 % | 5 |
| Grain | Viking Vienna Malt | 0.5 kg (12.5%) | 79 % | 7 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Cascade | 20 g | 60 min | 6.4 % |
| Boil | Cascade | 20 g | 20 min | 6.4 % |
| Boil | Cascade | 40 g | 10 min | 6.4 % |
| Boil | Cascade | 20 g | 1 min | 6 % |