

Warmhole

- Gravity **20 BLG**
- ABV **8.8 %**
- IBU **69**
- SRM **4.5**
- Style **Imperial IPA**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **90 min**
- Evaporation rate **12.5 %/h**
- Boil size **28.7 liter(s)**

Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **20.4 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **28.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Viking Pilsner malt | 6 kg (78.9%) | 82 % | 4 |
| Grain | Viking Wheat Malt | 0.8 kg (10.5%) | 83 % | 5 |
| Sugar | Corn Sugar (Dextrose) | 0.8 kg (10.5%) | 100 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|----------|------------|
| Boil | Centennial | 60 g | 60 min | 10.5 % |
| Boil | Amarillo | 30 g | 30 min | 9.5 % |
| Boil | Apollo | 25 g | 1 min | 17 % |
| Boil | Citra | 25 g | 1 min | 12 % |
| Dry Hop | El Dorado | 30 g | 5 day(s) | 15 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|-------|--------|------------|
| US-05 | Ale | Slant | 150 ml | Fermentis |