

Red Ale

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **100**
- SRM **9.4**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.6 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **23 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **65 C**, Time **50 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **56.4C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **50 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **7.2 liter(s)** of **76C** water or to achieve **20.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|------------|-------|-----|
| Grain | Viking Pale Ale malt | 4 kg (80%) | 80 % | 5 |
| Grain | Karmelowy Czerwony | 1 kg (20%) | 75 % | 59 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil | Chinook | 50 g | 50 min | 13 % |
| Boil | Cascade PL | 50 g | 30 min | 5.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11 g | Fermentis |