

echo 'Hello World'

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **24**
- SRM **4.5**
- Style **Weizen/Weissbier**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **44 C**, Time **20 min**
- Temp **63 C**, Time **45 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **45 min** at **63C**
- Keep mash **20 min** at **72C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|------------|-------|-----|
| Grain | Viking Wheat Malt | 2 kg (40%) | 83 % | 5 |
| Grain | Viking Vienna Malt | 2 kg (40%) | 79 % | 7 |
| Grain | Viking Pale Ale malt | 1 kg (20%) | 80 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------|--------|--------|------------|
| Boil | Cascade | 15 g | 60 min | 6 % |
| Boil | Cascade | 10 g | 40 min | 6 % |
| Boil | Simcoe | 25 g | 5 min | 13.2 % |
| Boil | Owoce Jałowca | 15 g | 10 min | 1 % |
| Boil | Skórka cytrynowa | 20 g | 10 min | 1 % |