

Otwarcie 4.0

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **43**
- SRM **3.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **34.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Steps

- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **25 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **22.5 liter(s)** of **76C** water or to achieve **34.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|-------------|-------|-----|
| Grain | Viking Pale Ale malt | 6 kg (100%) | 80 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------|--------|-----------|------------|
| Boil | Mosaic | 15 g | 60 min | 12 % |
| Boil | Mosaic | 20 g | 30 min | 12 % |
| Aroma (end of boil) | Mosaic | 25 g | 15 min | 12 % |
| Whirlpool | Mosaic | 70 g | 0 min | 12 % |
| Dry Hop | Mosaic | 70 g | 14 day(s) | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |