

## Otwarcie 3.0

---

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **44**
- SRM **3.8**
- 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 **17.3 liter(s)**
- Total mash volume **23 liter(s)**

### Steps

- Temp **55 C**, Time **5 min**
- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **17.3 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **25 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **23 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 | 5.5 kg (95.7%) | 80 %  | 5   |
| Grain | Viking Wheat Malt    | 0.25 kg (4.3%) | 83 %  | 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  |