

Aaa

- Gravity **10 BLG**
- ABV **4 %**
- IBU **21**
- SRM **3.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **22.5 liter(s)**

Steps

- Temp **62 C**, Time **50 min**
- Temp **75 C**, Time **10 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **67.3C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **10 min** at **75C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **28.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 3.8 kg (84.4%) | 80 % | 5 |
| Grain | Płatki owsiane | 0.3 kg (6.7%) | 85 % | 3 |
| Grain | Płatki orkiszowe | 0.4 kg (8.9%) | 80 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|---------|--------|--------|------------|
| Whirlpool | zula | 50 g | 30 min | 7.4 % |
| Whirlpool | izabela | 50 g | 10 min | 5.8 % |