

Co się nawinie

- Gravity **8.5 BLG**
- ABV **3.3 %**
- IBU **59**
- SRM **3.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **14.4 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **5.8 liter(s)**
- Total mash volume **7.7 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **9 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **5.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **9 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **10.5 liter(s)** of **76C** water or to achieve **14.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|------------------|-------|-----|
| Grain | Viking Pale Ale malt | 1.629 kg (84.4%) | 80 % | 5 |
| Grain | Płatki owsiane | 0.3 kg (15.6%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------|--------|----------|------------|
| Boil | Citra | 5 g | 50 min | 13.7 % |
| Boil | Citra | 5 g | 30 min | 13.7 % |
| Boil | Citra | 5 g | 10 min | 13.7 % |
| Aroma (end of boil) | Citra | 10 g | 5 min | 13.7 % |
| Whirlpool | Citra | 20 g | 20 min | 13.7 % |
| Dry Hop | Citra | 30 g | 2 day(s) | 13.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale | Dry | 10 g | Mangrove Jack's |