

## Co się nawinie

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- 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 |