

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **22**
- SRM **4.7**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

## Steps

- Temp **67 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **19.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **40 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                 | Amount        | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 4 kg (61.5%)  | 80 %  | 5   |
| Grain | Pszeniczny           | 1 kg (15.4%)  | 85 %  | 4   |
| Grain | Płatki pszeniczne    | 0.5 kg (7.7%) | 60 %  | 3   |
| Grain | Viking Pilsner malt  | 1 kg (15.4%)  | 82 %  | 4   |

## Hops

| Use for | Name   | Amount | Time   | Alpha acid |
|---------|--------|--------|--------|------------|
| Boil    | Azacca | 25 g   | 10 min | 12.9 %     |
| Boil    | Citra  | 25 g   | 10 min | 12.9 %     |
| Boil    | Azacca | 25 g   | 0 min  | 12.9 %     |
| Boil    | Citra  | 25 g   | 0 min  | 12.9 %     |

## Yeasts

| Name                | Type | Form | Amount | Laboratory |
|---------------------|------|------|--------|------------|
| mangrove jack's M66 | Ale  | Dry  | 11 g   | ---        |