

## #121 ctrl+E

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **36**
- SRM **4.1**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20.4 liter(s)**
- Trub loss **6 %**
- Size with trub loss **22.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **24.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **16.6 liter(s)**
- Total mash volume **21.9 liter(s)**

### Steps

- Temp **69 C**, Time **90 min**

### Mash step by step

- Heat up **16.6 liter(s)** of strike water to **76.9C**
- Add grains
- Keep mash **90 min** at **69C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **24.7 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount         | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Viking Pilsner malt | 2.1 kg (39.3%) | 82 %  | 4   |
| Grain | Viking Wheat Malt   | 2.1 kg (39.3%) | 83 %  | 5   |
| Grain | Vienna Malt         | 0.4 kg (7.5%)  | 78 %  | 8   |
| Grain | Płatki owsiane      | 0.4 kg (7.5%)  | 60 %  | 3   |
| Grain | Słód enzymatyczny   | 0.2 kg (3.7%)  | 80 %  | 5   |
| Grain | Płatki pszeniczne   | 0.15 kg (2.8%) | 60 %  | 3   |

### Hops

| Use for             | Name             | Amount | Time   | Alpha acid |
|---------------------|------------------|--------|--------|------------|
| Boil                | Perle PL 2018    | 50 g   | 60 min | 5 %        |
| Boil                | Amarillo US 2020 | 10 g   | 20 min | 8.7 %      |
| Aroma (end of boil) | Mosaic US 2019   | 10 g   | 10 min | 12.6 %     |

### Yeasts

| Name                 | Type | Form   | Amount | Laboratory       |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Liquid | 30 ml  | Fermentum Mobile |