

## Otwarcie sezonu

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- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **74**
- SRM **10.9**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **25.5 liter(s)**
- Trub loss **3 %**
- Size with trub loss **27 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **32.5 liter(s)**

### Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.4 liter(s)**
- Total mash volume **25.9 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **19.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **76C**
- Sparge using **19.6 liter(s)** of **76C** water or to achieve **32.5 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 6 kg (92.6%)   | 80 %  | 5   |
| Grain | Strzegom Karmel 300  | 0.4 kg (6.2%)  | 70 %  | 299 |
| Grain | Karmelowy Czerwony   | 0.08 kg (1.2%) | 75 %  | 59  |

### Hops

| Use for             | Name       | Amount | Time      | Alpha acid |
|---------------------|------------|--------|-----------|------------|
| Boil                | Equinox    | 33 g   | 60 min    | 13.1 %     |
| Boil                | Centennial | 20 g   | 30 min    | 9.4 %      |
| Boil                | Cascade    | 20 g   | 30 min    | 6 %        |
| Aroma (end of boil) | Centennial | 15 g   | 10 min    | 9.4 %      |
| Aroma (end of boil) | Mosaic     | 15 g   | 10 min    | 11.7 %     |
| Aroma (end of boil) | Citra      | 25 g   | 10 min    | 12 %       |
| Dry Hop             | Citra      | 25 g   | 20 day(s) | 12 %       |
| Dry Hop             | Mosaic     | 25 g   | 20 day(s) | 11.7 %     |
| Dry Hop             | Cascade    | 20 g   | 20 day(s) | 6 %        |

### Yeasts

| <b>Name</b> | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|-------------|-------------|-------------|---------------|-------------------|
| Gęstwa      | Ale         | Slant       | 200 ml        | końska derka      |