

## Brak nazwy

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **72**
- SRM **36.2**

### Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11.2 liter(s)**
- Total mash volume **14.9 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**

### Mash step by step

- Heat up **11.2 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **7 liter(s)** of **76C** water or to achieve **14.5 liter(s)** of wort

### Fermentables

| Type  | Name                      | Amount         | Yield  | EBC  |
|-------|---------------------------|----------------|--------|------|
| Grain | Weyermann - Pilsner Malt  | 1.5 kg (40.3%) | 81 %   | 5    |
| Grain | Weyermann - Carafa II     | 0.11 kg (3%)   | 70 %   | 837  |
| Grain | Weyermann - Pale Ale Malt | 1.5 kg (40.3%) | 85 %   | 7    |
| Grain | Weyermann - Carafa III    | 0.11 kg (3%)   | 70 %   | 1024 |
| Grain | black bezmaltz            | 0.1 kg (2.7%)  | 55 %   | 1200 |
| Grain | Słód Kawowy 500 EBC       | 0.2 kg (5.4%)  | 75.5 % | 420  |
| Grain | Amber Malt                | 0.2 kg (5.4%)  | 75 %   | 43   |

### Hops

| Use for | Name   | Amount | Time     | Alpha acid |
|---------|--------|--------|----------|------------|
| Boil    | Apollo | 20 g   | 60 min   | 17 %       |
| Boil    | Mosaic | 5 g    | 60 min   | 11.8 %     |
| Boil    | Mosaic | 5 g    | 10 min   | 11.8 %     |
| Boil    | Mosaic | 5 g    | 5 min    | 11.8 %     |
| Dry Hop | Mosaic | 35 g   | 7 day(s) | 11.8 %     |

### Yeasts

| <b>Name</b>                         | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|-------------------------------------|-------------|-------------|---------------|-------------------|
| Mangrove Jack's<br>libery balle ale | Ale         | Slant       | 200 ml        | Dom               |