

## CDA

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **39**
- SRM **39.5**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.1 liter(s)**
- Total mash volume **16.9 liter(s)**

### Steps

- Temp **68 C**, Time **70 min**

### Mash step by step

- Heat up **13.1 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **70 min** at **68C**
- Sparge using **6.3 liter(s)** of **76C** water or to achieve **15.6 liter(s)** of wort

### Fermentables

| Type  | Name                            | Amount       | Yield | EBC  |
|-------|---------------------------------|--------------|-------|------|
| Grain | Briess - Pale Ale Malt          | 3 kg (80%)   | 80 %  | 7    |
| Grain | Weyermann - Dehusked Carafa III | 0.3 kg (8%)  | 70 %  | 1500 |
| Grain | Special X                       | 0.15 kg (4%) | 72 %  | 400  |
| Grain | Pszeniczny                      | 0.3 kg (8%)  | 85 %  | 4    |

### Hops

| Use for | Name       | Amount  | Time     | Alpha acid |
|---------|------------|---------|----------|------------|
| Boil    | Centennial | 13.1 g  | 60 min   | 10.5 %     |
| Boil    | Cascade    | 13.1 g  | 45 min   | 6 %        |
| Boil    | Willamette | 13.1 g  | 15 min   | 5 %        |
| Boil    | Cascade    | 13.1 g  | 0 min    | 6 %        |
| Dry Hop | Cascade    | 26.19 g | 5 day(s) | 6 %        |

### Yeasts

| Name                 | Type | Form   | Amount | Laboratory       |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Liquid | 72 ml  | Fermentum Mobile |