

# Trotyl

- Gravity **13.9 BLG**
- ABV ---
- IBU **94**
- SRM **38.4**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **24.6 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **19.3 liter(s)**
- Total mash volume **24.8 liter(s)**

## Steps

- Temp **52 C**, Time **15 min**
- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**

## Mash step by step

- Heat up **19.3 liter(s)** of strike water to **56.6C**
- Add grains
- Keep mash **15 min** at **52C**
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Sparge using **10.8 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

## Fermentables

| Type  | Name                         | Amount        | Yield | EBC |
|-------|------------------------------|---------------|-------|-----|
| Grain | Strzegom Monachijski typ II  | 3 kg (54.5%)  | 79 %  | 22  |
| Grain | Briess - Dark Chocolate Malt | 0.5 kg (9.1%) | 60 %  | 827 |
| Grain | Briess - Midnight Wheat Malt | 2 kg (36.4%)  | 80 %  | 7   |

## Hops

| Use for | Name                   | Amount | Time     | Alpha acid |
|---------|------------------------|--------|----------|------------|
| Boil    | Magnum                 | 10 g   | 60 min   | 13.5 %     |
| Boil    | Challenger             | 20 g   | 30 min   | 7 %        |
| Boil    | Cascade                | 20 g   | 20 min   | 6 %        |
| Boil    | Amarillo               | 20 g   | 50 min   | 9.5 %      |
| Boil    | Sybilla                | 20 g   | 10 min   | 3.5 %      |
| Boil    | Marynka                | 20 g   | 40 min   | 10 %       |
| Dry Hop | Citra                  | 40 g   | 7 day(s) | 12 %       |
| Boil    | Columbus/Tomahawk/Zeus | 10 g   | 70 min   | 15.5 %     |

## Yeasts

| <b>Name</b>  | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|--------------|-------------|-------------|---------------|-------------------|
| Safale US-05 | Ale         | Dry         | 11.5 g        | Fermentis         |