

# Czekoladowy Tobiasza

- Gravity **18.7 BLG**
- ABV ---
- IBU **32**
- SRM **41.9**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **28.3 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.3 liter(s)**
- Total mash volume **27 liter(s)**

## Steps

- Temp **52 C**, Time **1 min**
- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **20.3 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **1 min** at **52C**
- Keep mash **20 min** at **62C**
- Keep mash **50 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **28.3 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount         | Yield  | EBC  |
|-------|----------------------------|----------------|--------|------|
| Grain | Castle Pale Ale            | 3.2 kg (41.3%) | 80 %   | 8    |
| Grain | Strzegom Monachijski typ I | 2 kg (25.8%)   | 79 %   | 14   |
| Grain | Oats, Flaked               | 1 kg (12.9%)   | 80 %   | 2    |
| Grain | Carafa                     | 0.4 kg (5.2%)  | 70 %   | 900  |
| Grain | Carafa II                  | 0.15 kg (1.9%) | 70 %   | 1150 |
| Sugar | Milk Sugar (Lactose)       | 1 kg (12.9%)   | 76.1 % | 0    |

## Hops

| Use for | Name               | Amount | Time   | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil    | Flyer              | 30 g   | 60 min | 10 %       |
| Boil    | East Kent Goldings | 40 g   | 10 min | 5.1 %      |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Safale     |

## Extras

| Type  | Name            | Amount | Use for | Time   |
|-------|-----------------|--------|---------|--------|
| Spice | Zlarna kakaowca | 100 g  | Boil    | 60 min |