

# 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