

# Piwo Czekoladowe\_PP

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **32**
- SRM **51.7**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **4 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **25.6 liter(s)**
- Total mash volume **32.9 liter(s)**

## Steps

- Temp **69 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **25.6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **10 min** at **76C**
- Sparge using **9.1 liter(s)** of **76C** water or to achieve **27.4 liter(s)** of wort

## Fermentables

| Type  | Name                   | Amount         | Yield | EBC  |
|-------|------------------------|----------------|-------|------|
| Grain | Pale Ale               | 4.5 kg (61.6%) | 80 %  | 7    |
| Grain | Weyermann Caramunich 3 | 0.2 kg (2.7%)  | 76 %  | 150  |
| Grain | Słód Checolate         | 1.1 kg (15.1%) | 70 %  | 1200 |
| Grain | Płatki owsiane         | 1.5 kg (20.5%) | 60 %  | 3    |

## Hops

| Use for             | Name   | Amount | Time   | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Aroma (end of boil) | Summit | 22 g   | 60 min | 15.8 %     |

## Yeasts

| Name  | Type | Form  | Amount | Laboratory |
|-------|------|-------|--------|------------|
| Us-04 | Ale  | Slant | 100 ml | ---        |

## Extras

| Type   | Name                         | Amount | Use for   | Time      |
|--------|------------------------------|--------|-----------|-----------|
| Spice  | Cacao                        | 200 g  | Mash      | 60 min    |
| Flavor | Esencja o smaku czekoladowym | 80 g   | Secondary | 10 day(s) |

|        |         |       |           |           |
|--------|---------|-------|-----------|-----------|
| Flavor | sól     | 12 g  | Secondary | 10 day(s) |
| Flavor | laktoza | 500 g | Secondary | 10 day(s) |