

## Porter czekoladowy

---

- Gravity **19.3 BLG**
- ABV **8.4 %**
- IBU **32**
- SRM **30.4**
- Style **Baltic Porter**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **24.4 liter(s)**

### Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **17.6 liter(s)**
- Total mash volume **26.4 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **17.6 liter(s)** of strike water to **80C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **15.6 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount         | Yield | EBC |
|-------|----------------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt             | 4.5 kg (48.9%) | 80 %  | 5   |
| Grain | Strzegom Monachijski typ I       | 0.9 kg (9.8%)  | 79 %  | 16  |
| Grain | Strzegom Monachijski typ II      | 0.9 kg (9.8%)  | 79 %  | 22  |
| Grain | Słód Caramunich Typ II Weyermann | 0.9 kg (9.8%)  | 73 %  | 120 |
| Grain | Caraaroma                        | 0.7 kg (7.6%)  | 78 %  | 400 |
| Grain | Brown Malt (British Chocolate)   | 0.3 kg (3.3%)  | 70 %  | 128 |
| Grain | Płatki owsiane                   | 0.5 kg (5.4%)  | 60 %  | 3   |
| Grain | Carafa                           | 0.1 kg (1.1%)  | 70 %  | 664 |
| Sugar | Brown Sugar, Light               | 0.4 kg (4.3%)  | 100 % | 16  |

### Hops

| Use for | Name              | Amount | Time   | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil    | Marynka           | 30 g   | 60 min | 10 %       |
| Boil    | Lublin (Lubelski) | 30 g   | 15 min | 4 %        |

## Yeasts

| Name         | Type  | Form | Amount | Laboratory |
|--------------|-------|------|--------|------------|
| BrewGO Lager | Lager | Dry  | 20 g   | Browin     |

## Extras

| Type   | Name           | Amount | Use for   | Time     |
|--------|----------------|--------|-----------|----------|
| Flavor | Kakao kruszone | 200 g  | Secondary | 3 day(s) |