

## Cocoa milk stout

- Gravity **25.1 BLG**
- ABV **11.7 %**
- IBU **45**
- SRM **37.5**
- Style **Russian Imperial Stout**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

### Steps

- Temp **50 C**, Time **20 min**
- Temp **63 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **19.2 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **20 min** at **50C**
- Keep mash **60 min** at **63C**
- Keep mash **15 min** at **78C**
- Sparge using **6.2 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

### Fermentables

| Type  | Name                         | Amount        | Yield  | EBC  |
|-------|------------------------------|---------------|--------|------|
| Grain | Viking Pale Ale malt         | 3 kg (40.5%)  | 80 %   | 5    |
| Grain | Monachijski Ciemny Steinbach | 1 kg (13.5%)  | 100 %  | 30   |
| Grain | Strzegom Wiedeński           | 1 kg (13.5%)  | 79 %   | 10   |
| Grain | Strzegom Karmel 600          | 0.5 kg (6.8%) | 68 %   | 601  |
| Grain | Viking Barwiący Obłuszczony  | 0.1 kg (1.4%) | 65 %   | 1000 |
| Grain | Płatki owsiane               | 0.5 kg (6.8%) | 60 %   | 3    |
| Grain | Fawcett - Dark Crystal       | 0.2 kg (2.7%) | 71 %   | 300  |
| Grain | Briess - Dark Chocolate Malt | 0.1 kg (1.4%) | 60 %   | 827  |
| Sugar | Milk Sugar (Lactose)         | 1 kg (13.5%)  | 76.1 % | 0    |

### Hops

| Use for | Name     | Amount | Time   | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil    | Książęcy | 30 g   | 60 min | 7 %        |
| Boil    | Izabella | 30 g   | 60 min | 5.1 %      |

|                     |          |      |        |       |
|---------------------|----------|------|--------|-------|
| Boil                | Książęcy | 20 g | 20 min | 7 %   |
| Boil                | Izabella | 20 g | 20 min | 5.1 % |
| Aroma (end of boil) | Izabella | 50 g | 0 min  | 5.1 % |
| Aroma (end of boil) | Książęcy | 50 g | 0 min  | 7 %   |

## Yeasts

| Name                                     | Type | Form | Amount | Laboratory      |
|------------------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M42 New World Strong Ale | Ale  | Dry  | 10 g   | Mangrove Jack's |

## Extras

| Type   | Name             | Amount | Use for | Time  |
|--------|------------------|--------|---------|-------|
| Spice  | kakao            | 40 g   | Boil    | 5 min |
| Flavor | esencja kokosowa | 40 g   | Boil    | 5 min |