

## milk stout pomarańcza

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **30**
- SRM **34.7**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

### Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **18.9 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **50 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

### Fermentables

| Type  | Name                     | Amount         | Yield  | EBC  |
|-------|--------------------------|----------------|--------|------|
| Grain | Viking Pale Ale malt     | 4.1 kg (67.2%) | 80 %   | 5    |
| Grain | Strzegom Karmel 600      | 0.2 kg (3.3%)  | 68 %   | 601  |
| Grain | Płatki pszeniczne        | 0.5 kg (8.2%)  | 60 %   | 3    |
| Sugar | Milk Sugar (Lactose)     | 0.7 kg (11.5%) | 76.1 % | 0    |
| Grain | Fawcett - Pale Chocolate | 0.3 kg (4.9%)  | 71 %   | 1150 |
| Grain | Pszeniczny Czekoladowy   | 0.3 kg (4.9%)  | 73 %   | 1001 |

### Hops

| Use for | Name     | Amount | Time   | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil    | lunga    | 30 g   | 60 min | 10.3 %     |
| Boil    | Izabella | 10 g   | 5 min  | 6.8 %      |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
| s04  | Ale  | Dry  | 11.5 g | ---        |

## Extras

| Type  | Name                       | Amount | Use for | Time   |
|-------|----------------------------|--------|---------|--------|
| Spice | skórka słodkiej pomarańczy | 40 g   | Boil    | 15 min |