

## Milk Stout

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **29**
- SRM **41**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

### Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **11 liter(s)**
- Total mash volume **14.7 liter(s)**

### Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **11 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Sparge using **7.9 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount          | Yield  | EBC  |
|-------|----------------------------------|-----------------|--------|------|
| Grain | Simpsons - Maris Otter           | 2.5 kg (63.9%)  | 81 %   | 6    |
| Grain | Weyermann Specjal W              | 0.5 kg (12.8%)  | 68 %   | 300  |
| Grain | Płatki owsiane                   | 0.2 kg (5.1%)   | 85 %   | 3    |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.2 kg (5.1%)   | 73 %   | 1001 |
| Grain | Fawcett - Pale Chocolate         | 0.2 kg (5.1%)   | 71 %   | 600  |
| Sugar | Milk Sugar (Lactose)             | 0.25 kg (6.4%)  | 76.1 % | 0    |
| Grain | Jęczmień palony                  | 0.063 kg (1.6%) | 55 %   | 985  |

### Hops

| Use for | Name          | Amount | Time   | Alpha acid |
|---------|---------------|--------|--------|------------|
| Boil    | Iunga PH 2019 | 20 g   | 30 min | 10.5 %     |

### Yeasts

| Name        | Type | Form  | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-04 | Ale  | Slant | 200 ml | Safale     |

## Extras

| Type        | Name           | Amount | Use for | Time   |
|-------------|----------------|--------|---------|--------|
| Water Agent | kreda          | 8 g    | Mash    | 60 min |
| Water Agent | chlorek wapnia | 2 g    | Mash    | 60 min |
| Water Agent | gips           | 1 g    | Mash    | 60 min |