

## Swarożyc - Milk Stout

- Gravity **15.9 BLG**
- ABV ---
- IBU **29**
- SRM **29.6**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **22.6 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **17 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **75C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

| Type  | Name                      | Amount         | Yield  | EBC  |
|-------|---------------------------|----------------|--------|------|
| Grain | Castle Malting Pilzneński | 4.1 kg (64.5%) | 80 %   | 3    |
| Grain | Strzegom Karmel 30        | 0.22 kg (3.5%) | 75 %   | 30   |
| Grain | Weyermann Caramunich 3    | 0.23 kg (3.6%) | 76 %   | 150  |
| Grain | Briess - Chocolate Malt   | 0.23 kg (3.6%) | 60 %   | 690  |
| Grain | Bestmalz - Special X      | 0.28 kg (4.4%) | 75 %   | 600  |
| Grain | Extra black               | 0.13 kg (2%)   | 65 %   | 1400 |
| Grain | Płatki pszeniczne         | 0.47 kg (7.4%) | 60 %   | 3    |
| Sugar | Milk Sugar (Lactose)      | 0.7 kg (11%)   | 76.1 % | 0    |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 30 g   | 60 min | 10 %       |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|                                |     |        |        |            |
|--------------------------------|-----|--------|--------|------------|
| WLP090 - San Diego Super Yeast | Ale | Liquid | 400 ml | White Labs |
|--------------------------------|-----|--------|--------|------------|

### Extras

| Type   | Name          | Amount | Use for   | Time      |
|--------|---------------|--------|-----------|-----------|
| Spice  | Wanilia       | 3 g    | Secondary | 14 day(s) |
| Flavor | Łuska kakaowa | 150 g  | Secondary | 14 day(s) |