

## Milk Stout

- Gravity **12.9 BLG**
- ABV ---
- IBU **33**
- SRM **38.1**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **80 liter(s)**
- Trub loss **5 %**
- Size with trub loss **84 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **101.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **55.4 liter(s)**
- Total mash volume **73.8 liter(s)**

### Steps

- Temp **50 C**, Time **10 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **55.4 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **30 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **64.3 liter(s)** of **76C** water or to achieve **101.2 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount          | Yield  | EBC  |
|-------|-----------------------------|-----------------|--------|------|
| Grain | Strzegom Pilzneński         | 7.38 kg (36.3%) | 80 %   | 4    |
| Grain | Strzegom Monachijski typ I  | 7.38 kg (36.3%) | 79 %   | 16   |
| Grain | Strzegom Czekoladowy jasny  | 0.92 kg (4.5%)  | 68 %   | 400  |
| Grain | Strzegom Karmel 600         | 0.92 kg (4.5%)  | 68 %   | 601  |
| Grain | Strzegom Czekoladowy ciemny | 1.85 kg (9.1%)  | 68 %   | 1200 |
| Sugar | Milk Sugar (Lactose)        | 1.91 kg (9.4%)  | 76.1 % | 0    |

### Hops

| Use for | Name    | Amount  | Time   | Alpha acid |
|---------|---------|---------|--------|------------|
| Boil    | Marynka | 58.46 g | 60 min | 6.5 %      |
| Boil    | Magnum  | 61.54 g | 60 min | 13.5 %     |

### Yeasts

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

|             |     |       |           |        |
|-------------|-----|-------|-----------|--------|
| Safale S-04 | Ale | Slant | 761.91 ml | Safale |
|-------------|-----|-------|-----------|--------|

### Extras

| Type  | Name    | Amount | Use for | Time   |
|-------|---------|--------|---------|--------|
| Other | laktoza | 1.91 g | Boil    | 10 min |