

# Pierwszy Milk Stout

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **30**
- SRM **38.8**
- Style **Sweet 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 **12.1 liter(s)**
- Total mash volume **16.2 liter(s)**

## Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **77 C**, Time **5 min**

## Mash step by step

- Heat up **12.1 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **5 min** at **77C**
- Sparge using **11 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

## Fermentables

| Type  | Name                           | Amount         | Yield  | EBC  |
|-------|--------------------------------|----------------|--------|------|
| Grain | Weyermann - Pale Ale Malt      | 1.5 kg (33%)   | 85 %   | 7    |
| Grain | Briess - Bonlander Munich Malt | 1.5 kg (33%)   | 78 %   | 20   |
| Sugar | Milk Sugar (Lactose)           | 0.5 kg (11%)   | 76.1 % | 0    |
| Grain | Caraaroma                      | 0.4 kg (8.8%)  | 78 %   | 400  |
| Grain | Simpsons - Roasted Barley      | 0.4 kg (8.8%)  | 70 %   | 1084 |
| Grain | Oats, Flaked                   | 0.25 kg (5.5%) | 80 %   | 2    |

## Hops

| Use for             | Name                   | Amount | Time   | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 10 g   | 60 min | 15.5 %     |
| Boil                | Lublin (Lubelski)      | 15 g   | 20 min | 4 %        |
| Aroma (end of boil) | Lublin (Lubelski)      | 15 g   | 10 min | 4 %        |
| Aroma (end of boil) | Columbus/Tomahawk/Zeus | 5 g    | 5 min  | 15.5 %     |

## Yeasts

| <b>Name</b> | <b>Type</b> | <b>Form</b> | <b>Amount</b> | <b>Laboratory</b> |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-04 | Ale         | Dry         | 11.5 g        | Safale            |