

## Milk Stout - duże

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **36**
- SRM **32.3**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **150 liter(s)**
- Trub loss **5 %**
- Size with trub loss **157.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **189.8 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **140.1 liter(s)**
- Total mash volume **180.1 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **140.1 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **76C**
- Sparge using **89.7 liter(s)** of **76C** water or to achieve **189.8 liter(s)** of wort

### Fermentables

| Type  | Name                            | Amount          | Yield  | EBC  |
|-------|---------------------------------|-----------------|--------|------|
| Grain | Pilzneński                      | 12.5 kg (28.6%) | 81 %   | 4    |
| Grain | Viking Pale Ale malt            | 10 kg (22.9%)   | 80 %   | 5    |
| Grain | Weyermann - Dehusked Carafa III | 3.13 kg (7.1%)  | 70 %   | 1024 |
| Grain | Płatki owsiane                  | 4.38 kg (10%)   | 85 %   | 3    |
| Grain | Monachijski                     | 6.25 kg (14.3%) | 80 %   | 16   |
| Grain | Strzegom Karmel 150             | 1.88 kg (4.3%)  | 75 %   | 150  |
| Grain | Strzegom Karmel 600             | 1.88 kg (4.3%)  | 68 %   | 601  |
| Sugar | Milk Sugar (Lactose)            | 3.75 kg (8.6%)  | 76.1 % | 0    |

### Hops

| Use for | Name  | Amount | Time   | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil    | lunga | 250 g  | 60 min | 11 %       |

### Yeasts

| Name                      | Type | Form   | Amount   | Laboratory       |
|---------------------------|------|--------|----------|------------------|
| FM13 Irlandzkie Ciemności | Ale  | Liquid | 280.5 ml | Fermentum Mobile |