

# Milka

- Gravity **18.4 BLG**
- ABV **8 %**
- IBU **24**
- SRM **33.1**
- 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 **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

## Mash information

- Mash efficiency **75.5 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **22.9 liter(s)**
- Total mash volume **29.5 liter(s)**

## Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **22.9 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **9.4 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount          | Yield  | EBC  |
|-------|---------------------------|-----------------|--------|------|
| Grain | Briess - Pale Ale Malt    | 2.8 kg (38.6%)  | 80 %   | 7    |
| Grain | IREKS Pilzneński          | 0.7 kg (9.6%)   | 80.5 % | 4    |
| Grain | Monachijski               | 0.5 kg (6.9%)   | 80 %   | 16   |
| Grain | Biscuit Malt              | 0.15 kg (2.1%)  | 79 %   | 45   |
| Grain | Płatki owsiane            | 1.5 kg (20.7%)  | 85 %   | 3    |
| Grain | Jęczmień palony           | 0.35 kg (4.8%)  | 55 %   | 985  |
| Grain | Chocolate Thomas Fawcett  | 0.175 kg (2.4%) | 70 %   | 1200 |
| Grain | Brown Malt Thomas Fawcett | 0.38 kg (5.2%)  | 70 %   | 180  |
| Sugar | Milk Sugar (Lactose)      | 0.7 kg (9.6%)   | 76.1 % | 0    |

## Hops

| Use for             | Name  | Amount | Time   | Alpha acid |
|---------------------|-------|--------|--------|------------|
| Boil                | lunga | 15 g   | 45 min | 12.9 %     |
| Aroma (end of boil) | lunga | 20 g   | 10 min | 12.9 %     |

## Yeasts

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

|                           |     |       |        |                  |
|---------------------------|-----|-------|--------|------------------|
| FM13 Irlandzkie Ciemności | Ale | Slant | 200 ml | Fermentum Mobile |
|---------------------------|-----|-------|--------|------------------|

### Extras

| Type   | Name    | Amount | Use for | Time   |
|--------|---------|--------|---------|--------|
| Flavor | laktoza | 0.7 g  | Boil    | 15 min |