

# Xmass Milk Stout

- Gravity **19.8 BLG**
- ABV **8.7 %**
- IBU **30**
- SRM **30.9**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

## Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **14.7 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **0 min** at **78C**
- Sparge using **6.6 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

## Fermentables

| Type  | Name                      | Amount         | Yield  | EBC  |
|-------|---------------------------|----------------|--------|------|
| Grain | Viking Pale Ale malt      | 3.8 kg (70.4%) | 80 %   | 5    |
| Grain | Monachijski               | 0.7 kg (13%)   | 80 %   | 16   |
| Grain | Czekoladowy               | 0.2 kg (3.7%)  | 1 %    | 788  |
| Grain | Strzegom pszenica prażona | 0.2 kg (3.7%)  | 1 %    | 1000 |
| Sugar | Milk Sugar (Lactose)      | 0.5 kg (9.3%)  | 76.1 % | 0    |

## Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Marynka | 30 g   | 60 min | 7.8 %      |

## Yeasts

| Name         | Type | Form  | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale  | Slant | 100 ml | Fermentis  |

## Extras

| Type  | Name               | Amount | Use for   | Time     |
|-------|--------------------|--------|-----------|----------|
| Spice | przyprawy korzenne | 15 g   | Secondary | 7 day(s) |