

Milk Stout

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **26**
- SRM **37.9**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **23.3 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **18.6 liter(s)** of strike water to **68.4C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-----------------------|-----------------------------|----------------|--------|-----|
| Grain | Weyermann - Pale Ale Malt | 3 kg (54.2%) | 85 % | 7 |
| Grain | Weyermann Specjal W | 0.5 kg (9%) | 68 % | 300 |
| Grain | Viking Dextrine malt | 0.25 kg (4.5%) | 80 % | 13 |
| Grain | Weyermann - Chocolate Rye | 0.25 kg (4.5%) | 20 % | 493 |
| Grain | Weyermann - Carafa I | 0.25 kg (4.5%) | 70 % | 690 |
| Grain | Weyermann - Chocolate Wheat | 0.25 kg (4.5%) | 74 % | 788 |
| Grain | Jęczmień palony | 0.15 kg (2.7%) | 55 % | 985 |
| Sugar | Milk Sugar (Lactose) | 0.7 kg (12.7%) | 76.1 % | 0 |
| Adjunct | Pomarańcze | 0.18 kg (3.3%) | 100 % | 1 |
| 2kg, ok. 180 g cukrów | | | | |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil | East Kent Goldings | 50 g | 60 min | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|-------|-------------------|--------|---------|--------|
| Spice | Zest z pomarańczy | 30 g | Boil | 60 min |