

Milk Stout

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **16**
- SRM **38.9**
- Style **Dry 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 **11.4 liter(s)**
- Total mash volume **15.2 liter(s)**

Steps

- Temp **50 C**, Time **10 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **11.4 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **10 min** at **50C**
- Keep mash **30 min** at **65C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|---------------|--------|------|
| Grain | Strzegom Pilzneński | 1 kg (23.8%) | 80 % | 4 |
| Grain | Strzegom Monachijski typ I | 2 kg (47.6%) | 79 % | 16 |
| Grain | Strzegom Czekoladowy jasny | 0.2 kg (4.8%) | 68 % | 400 |
| Grain | Strzegom Karmel 600 | 0.2 kg (4.8%) | 68 % | 601 |
| Grain | Chocolate Malt (UK) | 0.2 kg (4.8%) | 73 % | 1200 |
| Grain | Carafa | 0.2 kg (4.8%) | 70 % | 800 |
| Sugar | Milk Sugar (Lactose) | 0.4 kg (9.5%) | 76.1 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------------------|--------|--------|------------|
| Boil | Hallertau Tradition | 20 g | 60 min | 5 % |
| Boil | Hallertau Tradition | 10 g | 10 min | 5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-04 | Ale | Dry | 10 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------|---------------|----------------|-------------|
| Other | laktoza | 400 g | Boil | 10 min |