

## #4 Milk Stout

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- Gravity **15 BLG**
- ABV ---
- IBU **22**
- SRM **40**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **31.6 liter(s)**

### Mash information

- Mash efficiency **88 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **14.6 liter(s)**
- Total mash volume **20.5 liter(s)**

### Steps

- Temp **68 C**, Time **80 min**
- Temp **73 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **14.6 liter(s)** of strike water to **77.6C**
- Add grains
- Keep mash **80 min** at **68C**
- Keep mash **20 min** at **73C**
- Keep mash **10 min** at **78C**
- Sparge using **22.9 liter(s)** of **76C** water or to achieve **31.6 liter(s)** of wort

### Fermentables

| Type    | Name                      | Amount         | Yield | EBC  |
|---------|---------------------------|----------------|-------|------|
| Grain   | Strzegom Pale Ale         | 4 kg (63%)     | 85 %  | 6    |
| Grain   | Strzegom Karmel 150       | 0.5 kg (7.9%)  | 80 %  | 150  |
| Grain   | Strzegom Czekoladowy 1200 | 0.5 kg (7.9%)  | 80 %  | 1202 |
| Grain   | Pszeniczny                | 0.5 kg (7.9%)  | 85 %  | 4    |
| Grain   | Jęczmień palony           | 0.35 kg (5.5%) | 65 %  | 985  |
| Adjunct | Płatki jęczmienne         | 0.5 kg (7.9%)  | 10 %  | 0    |

### Hops

| Use for | Name          | Amount | Time   | Alpha acid |
|---------|---------------|--------|--------|------------|
| Boil    | Kent Goldings | 30 g   | 60 min | 7 %        |
| Boil    | Kent Goldings | 20 g   | 10 min | 7 %        |

### Yeasts

| Name                            | Type | Form | Amount | Laboratory      |
|---------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M07 British Ale | Ale  | Dry  | 11.5 g | Mangrove Jack's |

## Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Other  | Laktoza        | 500 g  | Boil    | 10 min |
| Fining | Mech Irlandzki | 5 g    | Boil    | 10 min |