

#4 Milk Stout Piernik

- Gravity **17.7 BLG**
- ABV **7.6 %**
- IBU **36**
- SRM **39**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **25.2 liter(s)**
- Total mash volume **32.4 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **15 min**

Mash step by step

- Heat up **25.2 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **72C**
- Sparge using **9.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|---------------|--------|------|
| Grain | Strzegom Pale Ale | 3 kg (38.5%) | 79 % | 6 |
| Grain | Strzegom Monachijski typ I | 2 kg (25.6%) | 79 % | 16 |
| Grain | Słód pszeniczny Bestmalz | 1 kg (12.8%) | 82 % | 5 |
| Grain | Fawcett - Pale Chocolate | 0.4 kg (5.1%) | 71 % | 600 |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.3 kg (3.8%) | 73 % | 1001 |
| Grain | Weyermann - Carafa II | 0.3 kg (3.8%) | 70 % | 1100 |
| Grain | Carahell | 0.2 kg (2.6%) | 77 % | 26 |
| Sugar | Milk Sugar (Lactose) | 0.6 kg (7.7%) | 76.1 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | lunga | 40 g | 60 min | 11 % |

Yeasts

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

| | | | | |
|-------------|-----|-------|--------|--------|
| Safale S-04 | Ale | Slant | 200 ml | Safale |
|-------------|-----|-------|--------|--------|

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------------------|--------|---------|--------|
| Spice | Przyprawa do piernika | 20 g | Boil | 15 min |
| Spice | Przyprawa do piernika | 20 g | Boil | 10 min |
| Flavor | Skórka pomarańczy | 20 g | Boil | 7 min |