

## 29. "Mleczny start" - Milk Stout

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **22**
- SRM **37.8**
- Style **American 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 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

### Steps

- Temp **68 C**, Time **50 min**
- Temp **68 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **16.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **10 min** at **68C**
- Keep mash **50 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **17 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 (55.6%)  | 79 %  | 6    |
| Grain | Strzegom Pilzneński         | 1 kg (18.5%)  | 80 %  | 4    |
| Grain | strzegom jęczmień prażony   | 0.3 kg (5.6%) | --- % | ---  |
| Grain | Strzegom Czekoladowy ciemny | 0.4 kg (7.4%) | 68 %  | 1200 |
| Grain | Strzegom Barwiący           | 0.3 kg (5.6%) | 68 %  | 1300 |
| Grain | Płatki owsiane błyskawiczne | 0.4 kg (7.4%) | 85 %  | 3    |

### Hops

| Use for | Name      | Amount | Time   | Alpha acid |
|---------|-----------|--------|--------|------------|
| Boil    | Tradition | 40 g   | 60 min | 5.5 %      |

### Yeasts

| Name           | Type | Form | Amount | Laboratory |
|----------------|------|------|--------|------------|
| Danstar BRY-97 | Ale  | Dry  | 11 g   | danstar    |

### Extras

| Type  | Name    | Amount | Use for | Time   |
|-------|---------|--------|---------|--------|
| Other | laktoza | 0.5 g  | Boil    | 10 min |

## Notes

- uwarzone 17-03-2018r.

Słody ciemne wsypać w 50 min po zrobieniu próby jodowej.  
*May 19, 2018, 12:00 AM*