

porter

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **16**
- SRM **35**

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 **70 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **20.8 liter(s)**
- Total mash volume **29.1 liter(s)**

Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **20.8 liter(s)** of strike water to **72.8C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 2.5 kg (30.1%) | 80 % | 4 |
| Grain | Strzegom Monachijski typ II | 2 kg (24.1%) | 79 % | 22 |
| Grain | Strzegom Wiedeński | 2 kg (24.1%) | 79 % | 10 |
| Grain | Caramunich® typ I | 0.5 kg (6%) | 73 % | 80 |
| Grain | Caraaroma | 0.5 kg (6%) | 78 % | 400 |
| Grain | Carafa III | 0.2 kg (2.4%) | 70 % | 1034 |
| Grain | pszeniczny czekoladowy | 0.2 kg (2.4%) | 70 % | 900 |
| Grain | Jęczmień palony | 0.1 kg (1.2%) | 55 % | 900 |
| Grain | Płatki owsiane | 0.3 kg (3.6%) | 60 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | lunga | 15 g | 60 min | 12.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 23 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------------|--------|---------|--------|
| Flavor | suszona sliwka | 400 g | Boil | 15 min |