

V.3

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **32**
- SRM **39.2**
- Style **Foreign Extra Stout**

Batch size

- Expected quantity of finished beer **21.2 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **67 C**, Time **10 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **10 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|------------------|-------|------|
| Grain | Viking Pale Ale malt | 2.919 kg (41.7%) | 80 % | 5 |
| Grain | Strzegom Monachijski typ I | 1.456 kg (20.8%) | 79 % | 16 |
| Grain | Żytni | 1.169 kg (16.7%) | 85 % | 8 |
| Grain | Strzegom Karmel 600 | 0.574 kg (8.2%) | 68 % | 601 |
| Grain | Karmelowy żytni Strzegom | 0.294 kg (4.2%) | 75 % | 150 |
| Grain | Strzegom Czekoladowy jasny | 0.294 kg (4.2%) | 68 % | 400 |
| Grain | Strzegom Czekoladowy ciemny | 0.294 kg (4.2%) | 68 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | lunga | 20 g | 60 min | 11 % |
| Boil | lunga | 20 g | 20 min | 11 % |

Yeasts

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

| Name | Type | Form | Amount | Laboratory |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-04 | Ale | Dry | 11.5 g | Safale |