

Uj

- Gravity **23.1 BLG**
- ABV **10.5 %**
- IBU **33**
- SRM **48.2**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **21.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **8.7 liter(s)** of **76C** water or to achieve **21.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------------|-----------------------------|---------------|--------|------|
| Grain | Viking Pale Ale malt | 3 kg (37.5%) | 80 % | 5 |
| Grain | Pszeniczny | 1 kg (12.5%) | 85 % | 4 |
| Grain | Strzegom Monachijski typ II | 1 kg (12.5%) | 79 % | 22 |
| Grain | Strzegom Czekoladowy jasny | 0.2 kg (2.5%) | 68 % | 400 |
| Grain | Strzegom Czekoladowy ciemny | 0.2 kg (2.5%) | 68 % | 1200 |
| Grain | Strzegom Karmel 300 | 0.7 kg (8.8%) | 70 % | 299 |
| Sugar | Candi Sugar, Dark | 0.3 kg (3.8%) | 78.3 % | 542 |
| Dry Extract | WES ekstrakt srodowy jasny | 0.3 kg (3.8%) | 80 % | --- |
| Sugar | Milk Sugar (Lactose) | 1 kg (12.5%) | 76.1 % | 0 |
| Grain | Jęczmień palony | 0.3 kg (3.8%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil | Motueka | 20 g | 30 min | 7 % |
| Aroma (end of boil) | Vic Secret | 50 g | 10 min | 16.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-04 | Ale | Slant | 0.5 ml | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|----------|
| Flavor | Platki | 25 g | Boil | 2000 min |
| Fining | Whirlfloc | 2 g | Mash | 10 min |
| Water Agent | Gips piwowarski | 6 g | Mash | 60 min |