

Ostatki

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **33**
- SRM **22.4**
- Style **American Brown Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.4 liter(s)**
- Total mash volume **23.6 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **18.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|-----------------|--------|------|
| Grain | Viking Pale Ale malt | 3 kg (57.1%) | 80 % | 5 |
| Grain | Strzegom Wiedeński | 1.85 kg (35.2%) | 79 % | 10 |
| Grain | Castle Cafe | 0.2 kg (3.8%) | 75.5 % | 500 |
| Grain | Strzegom Czekoladowy ciemny | 0.2 kg (3.8%) | 68 % | 1200 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------|--------|--------|------------|
| Boil | Magnum | 20 g | 60 min | 13.5 % |
| Aroma (end of boil) | Tradition | 20 g | 10 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |

Notes

- Słody palone i czekoladowe na ostanie 10 min zacierania.
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