

Biter

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **20**
- SRM **20.4**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **120 min**
- Evaporation rate **15 %/h**
- Boil size **31.2 liter(s)**

Mash information

- Mash efficiency **25 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **42.5 liter(s)**
- Total mash volume **59.5 liter(s)**

Steps

- Temp **72 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **42.5 liter(s)** of strike water to **82.4C**
- Add grains
- Keep mash **90 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **5.7 liter(s)** of **76C** water or to achieve **31.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|-----|
| Grain | Strzegom Monachijski typ II | 7 kg (41.2%) | 79 % | 22 |
| Grain | Strzegom Wiedeński | 8 kg (47.1%) | 79 % | 10 |
| Grain | Melanoiden Malt | 0.5 kg (2.9%) | 80 % | 39 |
| Grain | Abbey Castle | 0.5 kg (2.9%) | 80 % | 45 |
| Grain | Biscuit Malt | 1 kg (5.9%) | 79 % | 45 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | Flyer | 20 g | 60 min | 9.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11 g | Safale |