

Bitter

- Gravity **13.6 BLG**
- ABV ---
- IBU **39**
- SRM **11.1**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **51.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2 liter(s) / kg**
- Mash size **20.2 liter(s)**
- Total mash volume **30.3 liter(s)**

Steps

- Temp **65 C**, Time **75 min**

Mash step by step

- Heat up **20.2 liter(s)** of strike water to **76.3C**
- Add grains
- Keep mash **75 min** at **65C**
- Sparge using **41.7 liter(s)** of **76C** water or to achieve **51.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|---------------|-------|-----|
| Grain | Strzegom Pale Ale | 9 kg (89.1%) | 79 % | 6 |
| Grain | Cara Gold Castlemalting | 0.8 kg (7.9%) | 78 % | 120 |
| Grain | Strzegom Monachijski typ I | 0.3 kg (3%) | 79 % | 16 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Challenger (2015) | 50 g | 45 min | 5.8 % |
| Boil | Willamette (2014) | 50 g | 45 min | 4.5 % |
| Boil | Simcoe (2015) | 15 g | 15 min | 13.2 % |
| Boil | Challenger (2015) | 50 g | 5 min | 5.8 % |
| Boil | Willamette (2014) | 50 g | 5 min | 4.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-04 | Ale | Slant | 400 ml | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-----------------|--------|---------|--------|
| Water Agent | gips piwowarski | 5 g | Mash | 60 min |