

- Gravity **15 BLG**
- ABV ---
- IBU **120**
- SRM **47.4**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **33.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.8 liter(s)**
- Total mash volume **29 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **21.8 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **19.3 liter(s)** of **76C** water or to achieve **33.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--|----------------|-------|------|
| Grain | Strzegom Pilzneński | 5 kg (69%) | 80 % | 4 |
| Grain | Strzegom Wiedeński | 1 kg (13.8%) | 79 % | 10 |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.5 kg (6.9%) | 73 % | 1001 |
| Grain | Strzegom Czekoladowy ciemny | 0.25 kg (3.4%) | 68 % | 1200 |
| Grain | Strzegom Monachijski typ I | 0.5 kg (6.9%) | 79 % | 16 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|----------|------------|
| Boil | Citra | 40 g | 60 min | 12 % |
| Boil | Cascade | 40 g | 60 min | 6 % |
| Aroma (end of boil) | Citra | 40 g | 30 min | 12 % |
| Aroma (end of boil) | Cascade | 40 g | 30 min | 6 % |
| Whirlpool | Equinox | 20 g | 0 min | 13.1 % |
| Dry Hop | Citra | 50 g | 5 day(s) | 12 % |
| First Wort | Magnum | 20 g | 70 min | 13.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 200 ml | Fermentis |