

APA

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **39**
- SRM **6.8**

Batch size

- Expected quantity of finished beer **190 liter(s)**
- Trub loss **2 %**
- Size with trub loss **197.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **3 %/h**
- Boil size **209.4 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **114 liter(s)**
- Total mash volume **152 liter(s)**

Steps

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

Mash step by step

- Heat up **114 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **133.4 liter(s)** of **76C** water or to achieve **209.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|---------------|--------|-----|
| Grain | Strzegom Pale Ale | 25 kg (65.8%) | 79 % | 6 |
| Grain | Strzegom Monachijski typ I | 2 kg (5.3%) | 79 % | 16 |
| Grain | Acid Malt | 1 kg (2.6%) | 58.7 % | 6 |
| Grain | Caramel/Crystal Malt - 10L | 2 kg (5.3%) | 75 % | 160 |
| Grain | Pszeniczny | 8 kg (21.1%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------------------|--------|----------|------------|
| Boil | Magnum | 100 g | 60 min | 13.5 % |
| Boil | Columbus/Tomahawk/Zeus | 50 g | 30 min | 15.5 % |
| Boil | Simcoe | 50 g | 5 min | 13.2 % |
| Boil | Amarillo | 50 g | 5 min | 9.5 % |
| Boil | Waimea | 50 g | 5 min | 17 % |
| Boil | Citra | 50 g | 5 min | 12 % |
| Whirlpool | Centennial | 200 g | 20 min | 10.5 % |
| Dry Hop | Waimea | 350 g | 3 day(s) | 17 % |
| Dry Hop | Citra | 150 g | 3 day(s) | 12 % |

Yeasts

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