

APA

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **71**
- SRM **5.1**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **79 C**, Time **10 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **79C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **27.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (90.9%) | 80 % | 5 |
| Grain | Strzegom Karmel 30 | 0.5 kg (9.1%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------------------|--------|----------|------------|
| Boil | Magnum | 25 g | 60 min | 13.5 % |
| Boil | Citra | 25 g | 30 min | 12 % |
| Boil | Cascade PL | 25 g | 30 min | 5.2 % |
| Aroma (end of boil) | Citra | 25 g | 1 min | 12 % |
| Boil | hallertauer taurus | 50 g | 1 min | 14 % |
| Dry Hop | Magnum | 25 g | 4 day(s) | 13.5 % |
| Dry Hop | Citra | 50 g | 4 day(s) | 12 % |
| Dry Hop | Cascade PL | 25 g | 4 day(s) | 5.2 % |
| Dry Hop | Centennial | 50 g | 4 day(s) | 10.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale | Dry | 12.5 g | --- |