

APA

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **37**
- SRM **5.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **16.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **22 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **18.4 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **14.3 liter(s)** of strike water to **69.2C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **22 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 4 kg (97.6%) | 80 % | 5 |
| Grain | Strzegom Karmel 100 | 0.1 kg (2.4%) | 75 % | 100 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|--------|------------|
| Boil | Citra | 15 g | 60 min | 12 % |
| Boil | Amarillo | 5 g | 20 min | 8.2 % |
| Boil | Citra | 10 g | 20 min | 12 % |
| Whirlpool | Citra | 10 g | 0 min | 12 % |
| Whirlpool | Amarillo | 10 g | 0 min | 8.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------|------|-------|--------|------------|
| fermentis us-05 | Ale | Slant | 200 ml | --- |