

APA 1

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **81**
- SRM **5.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **60 liter(s)**
- Trub loss **5 %**
- Size with trub loss **63 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **75.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **45 liter(s)**
- Total mash volume **60 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **45 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **0 min** at **76C**
- Sparge using **45.9 liter(s)** of **76C** water or to achieve **75.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 14 kg (93.3%) | 80 % | 5 |
| Grain | Karmelowy Czerwony | 1 kg (6.7%) | 75 % | 59 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|--------|------------|
| Boil | Magnum | 120 g | 60 min | 13.5 % |
| Boil | Amarillo | 80 g | 5 min | 9.5 % |
| Whirlpool | Citra | 80 g | 15 min | 12 % |
| Whirlpool | Mosaic | 80 g | 15 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US 05 | Ale | Dry | 30 g | --- |