

APA

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **62**
- SRM **3.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **28.6 liter(s)**

Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **16.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **28.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (92.6%) | 80 % | 5 |
| Grain | Platki owsiane | 0.4 kg (7.4%) | 60 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------|--------|----------|------------|
| Boil | lunga | 30 g | 60 min | 11 % |
| Aroma (end of boil) | Citra | 25 g | 5 min | 12 % |
| Whirlpool | Citra | 25 g | 30 min | 12 % |
| Whirlpool | Simcoe | 25 g | 30 min | 13.2 % |
| Dry Hop | Citra | 50 g | 3 day(s) | 12 % |
| Dry Hop | Simcoe | 25 g | 3 day(s) | 13.2 % |

Yeasts

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

Extras

| Type | Name | Amount | Use for | Time |
|-------------|----------------|--------|---------|--------|
| Water Agent | Gips | 9 g | Mash | 60 min |
| Water Agent | Chlorek Wapnia | 3 g | Mash | 60 min |