

APA

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **29**
- SRM **4.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.5 liter(s)**

Mash information

- Mash efficiency **68 %**
- Liquor-to-grist ratio **3.8 liter(s) / kg**
- Mash size **23.4 liter(s)**
- Total mash volume **29.5 liter(s)**

Steps

- Temp **55 C**, Time **15 min**
- Temp **68 C**, Time **100 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **23.4 liter(s)** of strike water to **59.6C**
- Add grains
- Keep mash **15 min** at **55C**
- Keep mash **100 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **8.3 liter(s)** of **76C** water or to achieve **25.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|-----------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (81.3%) | 80 % | 5 |
| Grain | Pszeniczny | 0.85 kg (13.8%) | 85 % | 4 |
| Grain | Oats, Flaked | 0.15 kg (2.4%) | 80 % | 2 |
| Grain | Wheat, Flaked | 0.15 kg (2.4%) | 77 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Sabro | 16 g | 50 min | 14.8 % |
| Boil | Sabro | 10 g | 5 min | 14.8 % |
| Boil | Cascade | 20 g | 5 min | 5.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------------------------|------|-------|--------|------------|
| WLP001 - California Ale Yeast | Ale | Slant | 110 ml | White Labs |