

## APA v16 #120

---

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **33**
- SRM **4.9**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **17.2 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.4 liter(s)**
- Boil time **85 min**
- Evaporation rate **23 %/h**
- Boil size **24.8 liter(s)**

### Mash information

- Mash efficiency **84.6 %**
- Liquor-to-grist ratio **3.85 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **18.9 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **7 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **72C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **24.8 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount         | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Pale ale - viking   | 3 kg (76.9%)   | 80 %  | 5.5 |
| Grain | płatki owsiane      | 0.4 kg (10.3%) | 83 %  | 3   |
| Grain | pszeniczny - viking | 0.3 kg (7.7%)  | 83 %  | 5   |
| Grain | abbey - chateau     | 0.2 kg (5.1%)  | 78 %  | 45  |

### Hops

| Use for             | Name        | Amount | Time     | Alpha acid |
|---------------------|-------------|--------|----------|------------|
| Boil                | Warrior     | 10 g   | 60 min   | 14.7 %     |
| Aroma (end of boil) | Amore Preta | 50 g   | 5 min    | 9 %        |
| Aroma (end of boil) | EXP 2/20    | 50 g   | 1 min    | 7.5 %      |
| Dry Hop             | EXP 2/20    | 40 g   | 2 day(s) | 7.5 %      |
| Dry Hop             | Amore Preta | 40 g   | 2 day(s) | 9 %        |

### Yeasts

| Name                           | Type | Form  | Amount | Laboratory |
|--------------------------------|------|-------|--------|------------|
| WLP090 - San Diego Super Yeast | Ale  | Slant | 130 ml | White Labs |

## Extras

| Type        | Name                   | Amount | Use for  | Time   |
|-------------|------------------------|--------|----------|--------|
| Water Agent | gips                   | 2.5 g  | Mash     | ---    |
| Water Agent | kwask mlekowy 80% [ml] | 4.47 g | Mash     | ---    |
| Water Agent | chlerek wapnia [ml]    | 0 g    | Mash     | ---    |
| Water Agent | epsom                  | 0.5 g  | Mash     | ---    |
| Water Agent | mech irlandzki         | 3 g    | Boil     | 10 min |
| Water Agent | kwask askorbinowy      | 3 g    | Bottling | ---    |