

## APA v17 #122

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- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **37**
- SRM **4.9**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **16.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.7 liter(s)**
- Boil time **85 min**
- Evaporation rate **27 %/h**
- Boil size **24.7 liter(s)**

### Mash information

- Mash efficiency **82.3 %**
- Liquor-to-grist ratio **3.92 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 **71.9C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **24.7 liter(s)** of wort

### Fermentables

| Type  | Name                  | Amount          | Yield | EBC |
|-------|-----------------------|-----------------|-------|-----|
| Grain | pilzneński - viking   | 0.3 kg (7.8%)   | 81 %  | 4   |
| Grain | Pale ale - viking     | 2.9 kg (75.6%)  | 80 %  | 5.5 |
| Grain | pszeniczny - bestmalz | 0.3 kg (7.8%)   | 83 %  | 5   |
| Grain | wiedeński - viking    | 0.086 kg (2.2%) | 79 %  | 8.5 |
| Grain | karmelowy 30 - viking | 0.25 kg (6.5%)  | 75 %  | 30  |

### Hops

| Use for             | Name     | Amount | Time     | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil                | Warrior  | 14 g   | 60 min   | 14.7 %     |
| Aroma (end of boil) | Oktawia  | 30 g   | 5 min    | 7.8 %      |
| Aroma (end of boil) | EXP 2/20 | 30 g   | 1 min    | 7.5 %      |
| Aroma (end of boil) | Książęcy | 40 g   | 1 min    | 7 %        |
| Dry Hop             | EXP 2/20 | 20 g   | 2 day(s) | 7.5 %      |
| Dry Hop             | Książęcy | 40 g   | 2 day(s) | 7 %        |
| Dry Hop             | Izabela  | 30 g   | 2 day(s) | 5.1 %      |

## Yeasts

| Name                           | Type | Form  | Amount | Laboratory |
|--------------------------------|------|-------|--------|------------|
| WLP090 - San Diego Super Yeast | Ale  | Slant | 150 ml | White Labs |

## Extras

| Type        | Name                   | Amount | Use for  | Time   |
|-------------|------------------------|--------|----------|--------|
| Water Agent | gips                   | 2.5 g  | Mash     | ---    |
| Water Agent | kwask mlekowy 80% [ml] | 4.52 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 | ---    |