

## APA v13 #114

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- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **35**
- SRM **4.5**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **17.3 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.3 liter(s)**
- Boil time **85 min**
- Evaporation rate **21 %/h**
- Boil size **24.1 liter(s)**

### Mash information

- Mash efficiency **82.7 %**
- Liquor-to-grist ratio **3.93 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **18.9 liter(s)**

### Steps

- Temp **67 C**, Time **50 min**
- Temp **72 C**, Time **30 min**
- Temp **77 C**, Time **7 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **73C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

### Fermentables

| Type  | Name                     | Amount         | Yield  | EBC |
|-------|--------------------------|----------------|--------|-----|
| Grain | Mep©Ale                  | 3.1 kg (81%)   | 82.2 % | 4.8 |
| Grain | płatki owsiane           | 0.4 kg (10.5%) | 83 %   | 3   |
| Grain | Bestmalz -<br>pszeniczny | 0.1 kg (2.6%)  | 83 %   | 5   |
| Grain | Viking - karmelowy<br>30 | 0.15 kg (3.9%) | 75 %   | 30  |
| Grain | Abbey - chateau          | 0.075 kg (2%)  | 78 %   | 45  |

### Hops

| Use for             | Name   | Amount | Time     | Alpha acid |
|---------------------|--------|--------|----------|------------|
| Boil                | Magnum | 14 g   | 60 min   | 11.5 %     |
| Aroma (end of boil) | Zula   | 40 g   | 5 min    | 9.7 %      |
| Aroma (end of boil) | Zula   | 60 g   | 1 min    | 9.7 %      |
| Dry Hop             | Zula   | 80 g   | 2 day(s) | 9.7 %      |

### Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

|                                |     |       |        |            |
|--------------------------------|-----|-------|--------|------------|
| WLP090 - San Diego Super Yeast | Ale | Slant | 140 ml | White Labs |
|--------------------------------|-----|-------|--------|------------|

### Extras

| Type        | Name                   | Amount | Use for  | Time   |
|-------------|------------------------|--------|----------|--------|
| Water Agent | gips                   | 2.5 g  | Mash     | ---    |
| Water Agent | kwask mlekowy 80% [ml] | 4.6 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 | ---    |