

## APA v14 #118

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **38**
- SRM **4.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **8 %**
- Size with trub loss **18.7 liter(s)**
- Boil time **80 min**
- Evaporation rate **22 %/h**
- Boil size **24.3 liter(s)**

### Mash information

- Mash efficiency **85.1 %**
- Liquor-to-grist ratio **3.94 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **18.8 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 **71.8C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **24.3 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount         | Yield  | EBC |
|-------|---------------------|----------------|--------|-----|
| Grain | Mep©Ale             | 3.1 kg (81.6%) | 82.2 % | 4.8 |
| Grain | płatki owsiane      | 0.4 kg (10.5%) | 83 %   | 3   |
| Grain | Viking - pszeniczny | 0.1 kg (2.6%)  | 83 %   | 5   |
| Grain | Weyermann - abbey   | 0.2 kg (5.3%)  | 78 %   | 45  |

### Hops

| Use for             | Name    | Amount | Time     | Alpha acid |
|---------------------|---------|--------|----------|------------|
| Boil                | Magnum  | 13 g   | 60 min   | 11.5 %     |
| Aroma (end of boil) | Zula    | 40 g   | 5 min    | 9.7 %      |
| Aroma (end of boil) | Oktawia | 40 g   | 5 min    | 7.8 %      |
| Aroma (end of boil) | Izabela | 40 g   | 1 min    | 5.1 %      |
| Dry Hop             | Oktawia | 30 g   | 2 day(s) | 7.8 %      |
| Dry Hop             | Zula    | 30 g   | 2 day(s) | 9.7 %      |
| Dry Hop             | Izabela | 30 g   | 2 day(s) | 5.1 %      |

### Yeasts

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

|                                |     |       |        |            |
|--------------------------------|-----|-------|--------|------------|
| WLP090 - San Diego Super Yeast | Ale | Slant | 160 ml | White Labs |
|--------------------------------|-----|-------|--------|------------|

### Extras

| Type        | Name                  | Amount | Use for  | Time   |
|-------------|-----------------------|--------|----------|--------|
| Water Agent | gips                  | 2.5 g  | Mash     | ---    |
| Water Agent | kwas mlekowy 80% [ml] | 4.57 g | Mash     | ---    |
| Water Agent | chlorek wapnia [ml]   | 0 g    | Mash     | ---    |
| Water Agent | epsom                 | 0.5 g  | Mash     | ---    |
| Water Agent | mech irlandzki        | 3 g    | Boil     | 10 min |
| Water Agent | kwas askorbinowy      | 3.5 g  | Bottling | ---    |