

## APA v19 #125

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **37**
- SRM **5.1**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **18.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.4 liter(s)**
- Boil time **80 min**
- Evaporation rate **27.5 %/h**
- Boil size **27.1 liter(s)**

### Mash information

- Mash efficiency **81.5 %**
- Liquor-to-grist ratio **3.65 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.1 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 **72.3C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **27.1 liter(s)** of wort

### Fermentables

| Type  | Name                  | Amount         | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Viking - pale ale     | 3 kg (73.2%)   | 80 %  | 5.5 |
| Grain | bestmalz - pszeniczny | 0.3 kg (7.3%)  | 85 %  | 5   |
| Grain | Viking - wiedeński    | 0.5 kg (12.2%) | 78 %  | 9   |
| Grain | Viking - karmelowy 30 | 0.3 kg (7.3%)  | 73 %  | 30  |

### Hops

| Use for             | Name        | Amount  | Time   | Alpha acid |
|---------------------|-------------|---------|--------|------------|
| Boil                | Warrior     | 10 g    | 60 min | 14.7 %     |
| Aroma (end of boil) | Columbus    | 49.15 g | 5 min  | 12.6 %     |
| Aroma (end of boil) | Mosaic      | 20.31 g | 1 min  | 12.5 %     |
| Aroma (end of boil) | Książęcy    | 22.6 g  | 1 min  | 7 %        |
| Aroma (end of boil) | Amore Preta | 11.9 g  | 1 min  | 9 %        |

### Yeasts

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

|                                |     |       |        |                  |
|--------------------------------|-----|-------|--------|------------------|
| WLP090 - San Diego Super Yeast | Ale | Slant | 150 ml | Fermentum Mobile |
| gęstwa 4-dniowa                |     |       |        |                  |

## Extras

| Type                        | Name                  | Amount | Use for  | Time   |
|-----------------------------|-----------------------|--------|----------|--------|
| Water Agent                 | Gips                  | 2.5 g  | Mash     | ---    |
| Water Agent                 | kwas mlekowy 80% [ml] | 4.49 g | Mash     | ---    |
| Water Agent                 | chlorek wapnia [ml]   | 0 g    | Mash     | ---    |
| Water Agent                 | węglan wapnia/kreda   | 0 g    | Mash     | ---    |
| Water Agent                 | sól epsom             | 0.5 g  | Mash     | ---    |
| Fining                      | irish moss            | 3 g    | Boil     | 10 min |
| zastanowić się czy dodawać? |                       |        |          |        |
| Water Agent                 | kwas askorbinowy      | 3 g    | Bottling | ---    |