

## Light APA

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **33**
- SRM **4.9**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **8 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31 liter(s)**

### Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **5.5 liter(s) / kg**
- Mash size **28.6 liter(s)**
- Total mash volume **33.8 liter(s)**

### Steps

- Temp **67 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **28.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **67C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **7.6 liter(s)** of **76C** water or to achieve **31 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount        | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 4 kg (76.9%)  | 80 %  | 5   |
| Grain | Pszeniczny           | 1 kg (19.2%)  | 85 %  | 4   |
| Grain | Strzegom Karmel 150  | 0.2 kg (3.8%) | 75 %  | 100 |

### Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Cascade PL        | 10 g   | 40 min | 5.2 %      |
| Boil                | Mandarina Bavaria | 15 g   | 30 min | 10 %       |
| Aroma (end of boil) | Cascade PL        | 10 g   | 5 min  | 5.2 %      |
| Aroma (end of boil) | Mandarina Bavaria | 40 g   | 5 min  | 10 %       |
| Whirlpool           | Mandarina Bavaria | 45 g   | 10 min | 10 %       |
| Whirlpool           | Cascade PL        | 20 g   | 10 min | 5.2 %      |

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 23 g   | ---        |