

## American Cascade Pale Ale

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **45**
- SRM **8.8**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **0 %**
- Size with trub loss **20 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **23.7 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.3 liter(s)**

### Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **15 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **23.7 liter(s)** of wort

### Fermentables

| Type  | Name                       | Amount       | Yield | EBC |
|-------|----------------------------|--------------|-------|-----|
| Grain | Strzegom Pale Ale          | 2 kg (46.5%) | 79 %  | 6   |
| Grain | Strzegom Wiedeński         | 1 kg (23.3%) | 79 %  | 10  |
| Grain | Strzegom Monachijski typ I | 1 kg (23.3%) | 79 %  | 16  |
| Grain | Strzegom Karmel 150        | 0.3 kg (7%)  | 75 %  | 150 |

### Hops

| Use for | Name    | Amount | Time     | Alpha acid |
|---------|---------|--------|----------|------------|
| Boil    | Cascade | 40 g   | 60 min   | 6 %        |
| Boil    | Cascade | 10 g   | 30 min   | 6 %        |
| Boil    | Cascade | 10 g   | 15 min   | 6 %        |
| Boil    | Cascade | 25 g   | 10 min   | 6 %        |
| Boil    | Cascade | 10 g   | 5 min    | 6 %        |
| Boil    | Cascade | 10 g   | 1 min    | 6 %        |
| Dry Hop | Cascade | 25 g   | 7 day(s) | 6 %        |

### Yeasts

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

|             |     |     |        |        |
|-------------|-----|-----|--------|--------|
| Safale S-04 | Ale | Dry | 11.5 g | Safale |
|-------------|-----|-----|--------|--------|