

## Polskie Ale (Cascade PL)

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **35**
- SRM **5.7**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **75 min**
- Evaporation rate **12 %/h**
- Boil size **30.2 liter(s)**

### Mash information

- Mash efficiency **77 %**
- Liquor-to-grist ratio **5.5 liter(s) / kg**
- Mash size **32.2 liter(s)**
- Total mash volume **38 liter(s)**

### Steps

- Temp **20 C**, Time **0 min**
- Temp **66 C**, Time **90 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **32.2 liter(s)** of strike water to **20C**
- Add grains
- Keep mash **0 min** at **20C**
- Keep mash **90 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **3.9 liter(s)** of **76C** water or to achieve **30.2 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (85.5%)   | 80 %  | 5   |
| Grain | Strzegom Pszeniczny  | 0.5 kg (8.5%)  | 81 %  | 6   |
| Grain | Viking Dekstrynowy   | 0.15 kg (2.6%) | 79 %  | 13  |
| Grain | Strzegom Karmel 150  | 0.1 kg (1.7%)  | 75 %  | 150 |
| Grain | Aromatic Malt        | 0.1 kg (1.7%)  | 78 %  | 51  |

### Hops

| Use for             | Name       | Amount | Time   | Alpha acid |
|---------------------|------------|--------|--------|------------|
| First Wort          | Cascade PL | 10 g   | 75 min | 8 %        |
| Boil                | Cascade PL | 10 g   | 40 min | 8 %        |
| Boil                | Cascade PL | 10 g   | 30 min | 8 %        |
| Boil                | Cascade PL | 15 g   | 20 min | 8 %        |
| Boil                | Cascade PL | 15 g   | 10 min | 8 %        |
| Boil                | Cascade PL | 20 g   | 5 min  | 8 %        |
| Aroma (end of boil) | Cascade PL | 20 g   | 0 min  | 8 %        |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory |
|----------------------|------|-------|--------|------------|
| Danstar - Nottingham | Ale  | Slant | 150 ml | Danstar    |