

Cascade pale ale

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **70**
- SRM **5.6**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **33.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.5 liter(s)**
- Total mash volume **28.6 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **67 C**, Time **70 min**
- Temp **74 C**, Time **12 min**

Mash step by step

- Heat up **21.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **70 min** at **67C**
- Keep mash **12 min** at **74C**
- Sparge using **19.5 liter(s)** of **76C** water or to achieve **33.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (69.9%) | 80 % | 5 |
| Grain | Pilznieński | 2 kg (28%) | 81 % | 4 |
| Grain | Strzegom Karmel 150 | 0.15 kg (2.1%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| First Wort | Cascade PL | 50 g | 60 min | 8 % |
| Boil | Cascade PL | 50 g | 30 min | 8 % |
| Aroma (end of boil) | Citra | 50 g | 5 min | 13 % |
| Dry Hop | Lublin (Lubelski) | 50 g | --- | 14 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 10 g | Fermentis |