

CASCADE

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **47**
- SRM **8.5**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **32.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **70 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **20.4 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **70C**
- Keep mash **5 min** at **76C**
- Sparge using **18.9 liter(s)** of **76C** water or to achieve **32.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Pilzneński | 2.3 kg (33.8%) | 81 % | 4 |
| Grain | Pszeniczny | 1 kg (14.7%) | 85 % | 4 |
| Grain | Viking Pale Ale malt | 3 kg (44.1%) | 80 % | 5 |
| Grain | Crystal 160 | 0.5 kg (7.4%) | 75 % | 160 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 30 g | 60 min | 15.5 % |
| Boil | Cascade PL | 25 g | 10 min | 5.2 % |
| Boil | Cascade PL | 50 g | 5 min | 5.2 % |
| Aroma (end of boil) | Cascade PL | 25 g | 0 min | 5.2 % |
| Dry Hop | Cascade PL | 75 g | 6 day(s) | 5.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|-------|--------|------------|
| us 05 | Ale | Slant | 200 ml | --- |