

Apa

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **48**
- SRM **3.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **33 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **24.9 liter(s)**
- Total mash volume **32 liter(s)**

Steps

- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **24.9 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **33 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|---------------|-------|-----|
| Grain | Viking Pilsner malt | 5 kg (70.4%) | 82 % | 4 |
| Grain | Pszeniczny | 1 kg (14.1%) | 85 % | 4 |
| Grain | Płatki pszeniczne | 0.7 kg (9.9%) | 85 % | 3 |
| Grain | Rice, Flaked | 0.4 kg (5.6%) | 70 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|------------|------------|--------|----------|------------|
| First Wort | Centennial | 20 g | 90 min | 9.7 % |
| First Wort | Cascade | 20 g | 90 min | 7.1 % |
| Whirlpool | Centennial | 40 g | 20 min | 9.7 % |
| Whirlpool | Cascade | 40 g | 20 min | 7.1 % |
| Dry Hop | Centennial | 40 g | 5 day(s) | 9.7 % |
| Dry Hop | Cascade | 40 g | 5 day(s) | 7.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safbrew S-33 | Ale | Dry | 11 g | Safbrew |