

APA

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **41**
- SRM **4.3**

Batch size

- Expected quantity of finished beer **500 liter(s)**
- Trub loss **5 %**
- Size with trub loss **525 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **632.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **397.5 liter(s)**
- Total mash volume **530 liter(s)**

Steps

- Temp **68 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **397.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **30 min** at **68C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **367.5 liter(s)** of **76C** water or to achieve **632.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 100 kg (75.5%) | 80 % | 5 |
| Grain | Pszeniczny v | 25 kg (18.9%) | 85 % | 4 |
| Grain | CaraBody | 7.5 kg (5.7%) | 10 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Amarillo | 250 g | 60 min | 9.5 % |
| Boil | Citra | 250 g | 60 min | 12 % |
| Boil | Cascade | 250 g | 60 min | 6 % |
| Aroma (end of boil) | Amarillo | 250 g | 10 min | 9.5 % |
| Aroma (end of boil) | Citra | 250 g | 10 min | 12 % |
| Aroma (end of boil) | Cascade | 250 g | 10 min | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 250 g | Fermentis |