

APA

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **72**
- SRM **4.5**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **24.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **11.3 liter(s)**
- Total mash volume **15.8 liter(s)**

Steps

- Temp **67 C**, Time **60 min**

Mash step by step

- Heat up **11.3 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **18 liter(s)** of **76C** water or to achieve **24.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 3 kg (66.7%) | 80 % | 5 |
| Grain | Strzegom Wiedeński | 1.5 kg (33.3%) | 79 % | 10 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil | Zeus | 20 g | 60 min | 15.7 % |
| Boil | Centennial | 20 g | 10 min | 9.5 % |
| Aroma (end of boil) | Zythos | 10 g | 0 min | 15.7 % |
| Boil | Columbus | 20 g | 30 min | 12.4 % |
| Boil | Cascade | 15 g | 20 min | 7.1 % |
| Aroma (end of boil) | Centennial | 20 g | 0 min | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------|------|-------|--------|------------|
| FM53 Voss kveik | Ale | Slant | 500 ml | FM |