

single hop

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **22**
- SRM **4**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **55 C**, Time **5 min**
- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **40 min** at **64C**
- Keep mash **25 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------|-----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (97.1%) | 80 % | 5 |
| Adjunct | Pszenica niesłodowana | 0.15 kg (2.9%) | 75 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|----------|------------|
| Boil | Ahtanum | 25 g | 60 min | 5 % |
| Boil | Ahtanum | 10 g | 30 min | 5 % |
| Boil | Ahtanum | 20 g | 15 min | 5 % |
| Aroma (end of boil) | Ahtanum | 35 g | 0 min | 5 % |
| Dry Hop | Ahtanum | 50 g | 5 day(s) | 5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|--------|---------|------------|
| fm 52 | Ale | Liquid | 1000 ml | --- |