

Apa

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **52**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **36 liter(s)**
- Trub loss **5 %**
- Size with trub loss **37.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **43.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27 liter(s)**
- Total mash volume **36 liter(s)**

Steps

- Temp **67 C**, Time **70 min**

Mash step by step

- Heat up **27 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **70 min** at **67C**
- Sparge using **25.6 liter(s)** of **76C** water or to achieve **43.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 4.5 kg (50%) | 80 % | 5 |
| Grain | Oats, Flaked | 1 kg (11.1%) | 20 % | 2 |
| Grain | Viking Wheat Malt | 1 kg (11.1%) | 83 % | 5 |
| Grain | Strzegom Monachijski typ I | 2.5 kg (27.8%) | 79 % | 16 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Magnum | 19 g | 60 min | 13.5 % |
| Aroma (end of boil) | Cascade PL | 100 g | 5 min | 5.4 % |
| Aroma (end of boil) | Mosaic | 100 g | 5 min | 12.8 % |
| Aroma (end of boil) | Mandarina Bavaria | 100 g | 5 min | 10.3 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|-------|--------|------------|
| US-05 | Ale | Slant | 300 ml | --- |