

Apa

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **35**
- SRM **4.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.6 liter(s)**
- Total mash volume **12.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **9.6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **8.8 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 3 kg (93.8%) | 80 % | 5 |
| Grain | Strzegom Monachijski typ I | 0.2 kg (6.3%) | 79 % | 16 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------------|--------|--------|------------|
| Boil | Zula | 10 g | 60 min | 8.3 % |
| Aroma (end of boil) | Książęcy | 25 g | 10 min | 7 % |
| Whirlpool | rody hodowlane | 30 g | 10 min | 9.3 % |