

Warszawa e.9 - 23.10.2022

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **34**
- SRM **3.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **23.8 liter(s)**

Mash information

- Mash efficiency **96 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.3 liter(s)**
- Total mash volume **13.7 liter(s)**

Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **10.3 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **16.9 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|-----------------|-------|-----|
| Grain | Castle Pale Ale | 1.35 kg (39.4%) | 80 % | 8 |
| Grain | Viking Pale Ale malt | 2 kg (58.3%) | 80 % | 5 |
| Grain | Pszeniczny | 0.08 kg (2.3%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Magnum | 18 g | 60 min | 10.6 % |
| Boil | exp 2/20 | 10 g | 15 min | 7.5 % |
| Boil | Książęcy | 10 g | 15 min | 7 % |
| Aroma (end of boil) | exp 2/20 | 15 g | 1 min | 7.5 % |
| Aroma (end of boil) | Książęcy | 15 g | 1 min | 7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |