

Kraków 17 - 16.10.2022

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **36**
- SRM **4.5**
- 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 **90 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.5 liter(s)**
- Total mash volume **14 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 **10.5 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 **16.8 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------|---------------|-------|-----|
| Grain | Castle Pale Ale | 3.5 kg (100%) | 80 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Azacca | 15 g | 60 min | 10.6 % |
| Boil | Azacca | 10 g | 15 min | 10.6 % |
| Boil | Cascade | 15 g | 15 min | 8.1 % |
| Aroma (end of boil) | Azacca | 10 g | 1 min | 10.6 % |
| Aroma (end of boil) | Cascade | 13 g | 1 min | 8.1 % |
| Aroma (end of boil) | Amarillo | 10 g | 1 min | 9.9 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------------|------|------|--------|------------|
| Lallemand - LalBrew Voss Kveik | Ale | Dry | 11 g | Lallemand |