

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