Pale ale columbus

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **23**
- SRM **5.2**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **18.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	6 kg *(96.8%)*	80 %	5
Grain	Melanoiden Malt	0.2 kg *(3.2%)*	80 %	39

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	15 g	60 min	15.5 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	30 g	0 min	15.5 %

Yeasts

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

Extras

Type	Name	Amount	Use for	Time
Fining	Irish moss	4 g	Boil	15 min

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.