

Apa

- Gravity **8.8 BLG**
- ABV **3.4 %**
- IBU **24**
- SRM **3.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **55 C**, Time **10 min**
- Temp **66 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **16 liter(s)** of strike water to **59.4C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **30 min** at **66C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Apa	4 kg (100%)	--- %	7

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	10 g	60 min	12 %
Boil	Galaxy	10 g	30 min	12.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Slant	100 ml	---