

Apa

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **40**
- SRM **8.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.9 liter(s)**
- Total mash volume **28.1 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **21.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Castle Pale Ale	5.5 kg (88%)	80 %	8
Grain	Cara Blonde - Castle Malting	0.5 kg (8%)	78 %	20
Grain	Crystal 150	0.25 kg (4%)	72 %	150

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	25 g	60 min	9.5 %
Boil	Cascade	25 g	20 min	6 %
Boil	Citra	25 g	10 min	12 %
Dry Hop	Citra	50 g	3 day(s)	12 %
Dry Hop	Centennial	50 g	3 day(s)	10.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis