

Apa 30l

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **48**
- SRM **8.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **38 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.7 liter(s) / kg**
- Mash size **30 liter(s)**
- Total mash volume **38.1 liter(s)**

Steps

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

Mash step by step

- Heat up **30 liter(s)** of strike water to **74.5C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **38 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------|---------------|-------|-----|
| Grain | Castle Pale Ale | 7 kg (86.4%) | 80 % | 8 |
| Grain | Cara Blonde - Castle Malting | 0.7 kg (8.6%) | 78 % | 20 |
| Grain | Crystal 150 | 0.4 kg (4.9%) | 72 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|----------|------------|
| Boil | Amarillo | 50 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 |