

IPA

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **55**
- SRM **5.8**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **13 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **16.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.8 liter(s)**
- Total mash volume **14.4 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **10.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **9.2 liter(s)** of **76C** water or to achieve **16.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------|---------------|-------|-----|
| Grain | Castle Pale Ale | 3.6 kg (100%) | 80 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | lunga | 20 g | 60 min | 10 % |
| Boil | Chinook | 15 g | 15 min | 13 % |
| Aroma (end of boil) | Citra | 15 g | 0 min | 12 % |
| Aroma (end of boil) | Sabro | 15 g | 0 min | 12 % |
| Whirlpool | Sabro | 10 g | 10 min | 13 % |
| Whirlpool | Citra | 10 g | 10 min | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------|------|------|--------|------------|
| Safeale US-05 | Ale | Dry | 11 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|---------------|--------|---------|--------|
| Water Agent | gips piwowski | 5 g | Mash | 60 min |