

belgian PA

- Gravity **10.2 BLG**
- ABV **4.1 %**
- IBU **77**
- SRM **3.5**
- Style **Belgian Pale Ale**

Batch size

- Expected quantity of finished beer **14.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **18.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.7 liter(s)**
- Total mash volume **11.6 liter(s)**

Steps

- Temp **65 C**, Time **65 min**

Mash step by step

- Heat up **8.7 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **65 min** at **65C**
- Sparge using **12.6 liter(s)** of **76C** water or to achieve **18.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|--------|-----|
| Grain | Briess - Pilsen Malt | 1 kg (34.5%) | 80.5 % | 2 |
| Grain | Briess - Pale Ale Malt | 1.5 kg (51.7%) | 80 % | 7 |
| Grain | Briess - Wheat Malt, White | 0.4 kg (13.8%) | 85 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil | Citra | 10 g | 60 min | 12 % |
| Boil | Mandarina Bavaria | 15 g | 60 min | 10 % |
| Boil | Simcoe | 15 g | 20 min | 13.2 % |
| Aroma (end of boil) | Mandarina Bavaria | 15 g | 15 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------|------|------|--------|------------|
| mangrove jack's M31 | Ale | Dry | 7 g | --- |