

# ExcuseMyFrenz

- Gravity **15.4 BLG**
- ABV ---
- IBU **79**
- SRM **6.4**
- Style **Belgian IPA**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **2 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **65 min**
- Evaporation rate **17 %/h**
- Boil size **27.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **23.4 liter(s)**

## Steps

- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **40 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **62C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **27.4 liter(s)** of wort

## Fermentables

| Type  | Name         | Amount         | Yield   | EBC |
|-------|--------------|----------------|---------|-----|
| Grain | Pale Ale     | 3 kg (51.3%)   | 82.61 % | 8   |
| Grain | Pilsner      | 1.5 kg (25.6%) | 82.61 % | 3   |
| Grain | Munich Light | 1 kg (17.1%)   | 80.43 % | 15  |
| Grain | Caramel Pils | 0.35 kg (6%)   | 73.91 % | 20  |

## Hops

| Use for | Name          | Amount | Time     | Alpha acid |
|---------|---------------|--------|----------|------------|
| Boil    | Warrior       | 30 g   | 60 min   | 14.7 %     |
| Boil    | Amarillo      | 30 g   | 30 min   | 8.6 %      |
| Boil    | Amarillo      | 25 g   | 15 min   | 8.6 %      |
| Boil    | Nelson Sauvín | 20 g   | 2 min    | 11.2 %     |
| Dry Hop | Nelson Sauvín | 30 g   | 3 day(s) | 11.2 %     |
| Dry Hop | Amarillo      | 30 g   | 1 day(s) | 8.6 %      |

## Yeasts

| Name                            | Type | Form | Amount | Laboratory      |
|---------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M27 Belgian Ale | Ale  | Dry  | 11 g   | Mangrove Jack's |

## Extras

| Type        | Name   | Amount | Use for | Time  |
|-------------|--------|--------|---------|-------|
| Water Agent | Gypsum | 4 g    | Mash    | 0 min |