

## (JM) UNDEAD PALE ALE

- Gravity **14.3 BLG**
- ABV **5.9 %**
- IBU **42**
- SRM **8.6**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.6 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.8 liter(s)**
- Total mash volume **28 liter(s)**

### Steps

- Temp **65 C**, Time **90 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **21.8 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **90 min** at **65C**
- Keep mash **10 min** at **75C**
- Sparge using **12 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

### Fermentables

| Type  | Name                      | Amount         | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Simpsons - Golden Promise | 5 kg (80.4%)   | 85 %  | 5   |
| Grain | Simpsons - Munich Malt    | 0.5 kg (8%)    | 80 %  | 23  |
| Grain | Simpsons - Amber Malt     | 0.32 kg (5.1%) | 70 %  | 60  |
| Grain | Simpsons - Caramalt       | 0.2 kg (3.2%)  | 70 %  | 36  |
| Grain | Simpsons - Crystal T50    | 0.2 kg (3.2%)  | 70 %  | 130 |

### Hops

| Use for                                                       | Name  | Amount | Time     | Alpha acid |
|---------------------------------------------------------------|-------|--------|----------|------------|
| First Wort                                                    | Citra | 20 g   | 45 min   | 12.9 %     |
| Wrzucone zaraz po zakończeniu filtracji i rozpoczęciu grzania |       |        |          |            |
| Boil                                                          | Citra | 20 g   | 10 min   | 12.9 %     |
| Aroma (end of boil)                                           | Citra | 30 g   | 5 min    | 12.9 %     |
| Whirlpool                                                     | Citra | 80 g   | 0 min    | 12.9 %     |
| Hopstand w 75-78C przez 30min                                 |       |        |          |            |
| Dry Hop                                                       | Citra | 50 g   | 3 day(s) | 12.9 %     |

## Yeasts

| Name       | Type | Form  | Amount | Laboratory    |
|------------|------|-------|--------|---------------|
| Voss kveik | Ale  | Slant | 5 ml   | House culture |

## Extras

| Type   | Name      | Amount | Use for | Time   |
|--------|-----------|--------|---------|--------|
| Fining | Whirlfloc | 1 g    | Boil    | 10 min |

## Notes

- next time zamiast Caramalt dać dekstrynowy (jest z Simpsona)
    - dałem 320 Ambera bo mi akurat tak zostało, w recepturze jest 200g (3.3%)
- Feb 7, 2020, 3:03 PM*