

# EPA! EPA!

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **43**
- SRM **5.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **10 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.3 liter(s)**
- Total mash volume **19 liter(s)**

## Steps

- Temp **58 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **14.3 liter(s)** of strike water to **64.3C**
- Add grains
- Keep mash **10 min** at **58C**
- Keep mash **30 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **20.9 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Weyermann - Vienna Malt     | 1 kg (21.1%)   | 81 %  | 8   |
| Grain | Weyermann - Pale Ale Malt   | 2.5 kg (52.6%) | 85 %  | 7   |
| Grain | Weyermann - Pale Wheat Malt | 1 kg (21.1%)   | 85 %  | 5   |
| Grain | Weyermann - Melanoiden Malt | 0.25 kg (5.3%) | 81 %  | 70  |

## Hops

| Use for             | Name         | Amount | Time     | Alpha acid |
|---------------------|--------------|--------|----------|------------|
| Aroma (end of boil) | Enigma (AUS) | 20 g   | 20 min   | 17.2 %     |
| Aroma (end of boil) | Enigma (AUS) | 15 g   | 12 min   | 17.2 %     |
| Aroma (end of boil) | Enigma (AUS) | 15 g   | 7 min    | 17.2 %     |
| Aroma (end of boil) | Enigma (AUS) | 25 g   | 3 min    | 17.2 %     |
| Aroma (end of boil) | Enigma (AUS) | 25 g   | 0 min    | 17.2 %     |
| Dry Hop             | Enigma (AUS) | 50 g   | 7 day(s) | 17.2 %     |

## Yeasts

| Name                                 | Type | Form | Amount | Laboratory      |
|--------------------------------------|------|------|--------|-----------------|
| Mangrove Jack's<br>M44 US West Coast | Ale  | Dry  | 10 g   | Mangrove Jack's |

## Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | Mech irlandzki | 5 g    | Boil    | 10 min |