

# LEM | Australian Pale Ale (by Piwny Kraft)

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **34**
- SRM **4.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **2.5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.6 liter(s)**

## Mash information

- Mash efficiency **75.3 %**
- Liquor-to-grist ratio **3.37 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **22.1 liter(s)**

## Steps

- Temp **68 C**, Time **1 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **17 liter(s)** of strike water to **75.1C**
- Add grains
- Keep mash **1 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **11.7 liter(s)** of **76C** water or to achieve **23.6 liter(s)** of wort

## Fermentables

| Type  | Name                  | Amount         | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt  | 4.5 kg (89.1%) | 80 %  | 5   |
| Grain | Karmelowy Jasny 30EBC | 0.25 kg (5%)   | 75 %  | 30  |
| Grain | Weyermann - Carapils  | 0.3 kg (5.9%)  | 78 %  | 4   |

## Hops

| Use for             | Name         | Amount | Time     | Alpha acid |
|---------------------|--------------|--------|----------|------------|
| Boil                | Enigma (AUS) | 10 g   | 60 min   | 17.2 %     |
| Boil                | Enigma (AUS) | 20 g   | 10 min   | 17.2 %     |
| Aroma (end of boil) | Vic Secret   | 20 g   | 0 min    | 16.3 %     |
| Dry Hop             | Enigma (AUS) | 20 g   | 7 day(s) | 17.2 %     |
| Dry Hop             | Vic Secret   | 30 g   | 7 day(s) | 16.3 %     |

## Yeasts

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

## Notes

- Zacieranie w 75 litrach w 68C - 1h.  
Podniesienie temperatury do 72C - 10 min.  
Podniesienie temperatury do 76C - mashout.  
Filtracja i wysładzanie do 22L.

Fermentacja w temp. 18-20C - 7 dni burzliwa + 7 dni cicha  
*May 16, 2019, 9:06 PM*