

# LEM | American Pale Ale (by Piwny Kraft)

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **37**
- SRM **8.6**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **0 %**
- Size with trub loss **20 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22 liter(s)**

## Mash information

- Mash efficiency **69.5 %**
- Liquor-to-grist ratio **3.34 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **22.1 liter(s)**

## Steps

- Temp **68 C**, Time **60 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 **75.2C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **10.1 liter(s)** of **76C** water or to achieve **22 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount         | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt       | 4 kg (78.4%)   | 80 %  | 5   |
| Grain | Strzegom Monachijski typ I | 0.8 kg (15.7%) | 79 %  | 16  |
| Grain | Karmelowy Czerwony         | 0.2 kg (3.9%)  | 75 %  | 59  |
| Grain | Strzegom Karmel 300        | 0.1 kg (2%)    | 73 %  | 299 |

## Hops

| Use for             | Name                   | Amount | Time     | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 10 g   | 60 min   | 15.5 %     |
| Boil                | Columbus/Tomahawk/Zeus | 10 g   | 30 min   | 15.5 %     |
| Boil                | Amarillo               | 10 g   | 10 min   | 9.5 %      |
| Aroma (end of boil) | Amarillo               | 15 g   | 0 min    | 9.5 %      |
| Dry Hop             | Amarillo               | 25 g   | 7 day(s) | 9.5 %      |

## Notes

- Zacieranie w 17 litrach w 68C - 1h.  
Podniesienie temperatury do 72C - 10 min.  
Podniesienie temperatury do 76C - maschout.

Filtracja i wysładzanie do 22L.

Fermentacja w temp. 17-18C - 7 dni burzliwa + 7 dni cicha  
*May 16, 2019, 9:24 PM*