

# Electric Pale Ale

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **37**
- SRM **4.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **70 min**
- Evaporation rate **12 %/h**
- Boil size **30.6 liter(s)**

## Mash information

- Mash efficiency **78 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **29 liter(s)**
- Total mash volume **34.8 liter(s)**

## Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **29 liter(s)** of strike water to **71.7C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **7.4 liter(s)** of **76C** water or to achieve **30.6 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount         | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Pilzneński          | 4.6 kg (79.3%) | 81 %  | 4   |
| Grain | Malteurop Wiedeński | 1 kg (17.2%)   | 79 %  | 8   |
| Grain | Strzegom Karmel 30  | 0.2 kg (3.4%)  | 75 %  | 30  |

## Hops

| Use for             | Name       | Amount | Time     | Alpha acid |
|---------------------|------------|--------|----------|------------|
| Boil                | Centennial | 15 g   | 20 min   | 10.5 %     |
| Boil                | Amarillo   | 15 g   | 20 min   | 9.5 %      |
| Boil                | Centennial | 30 g   | 10 min   | 10.5 %     |
| Boil                | Amarillo   | 30 g   | 10 min   | 9.5 %      |
| Aroma (end of boil) | Centennial | 30 g   | 0 min    | 10.5 %     |
| Aroma (end of boil) | Amarillo   | 30 g   | 0 min    | 9.5 %      |
| Dry Hop             | Citra      | 50 g   | 5 day(s) | 12 %       |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 11 g   | Fermentis  |

## Extras

| Type   | Name      | Amount | Use for | Time   |
|--------|-----------|--------|---------|--------|
| Fining | Whirlfloc | 3 g    | Boil    | 15 min |

## Notes

- Ca=110, Mg=18, Na=16, Cl=50, S04=275  
*Apr 2, 2018, 4:26 PM*