

# 1 warka czerwona

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **85**
- SRM **5.5**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **7 %**
- Size with trub loss **22.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **11 %/h**
- Boil size **28.9 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**

## Mash step by step

- Heat up **19.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **28.9 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount         | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | colorado pale base         | 3.1 kg (48.4%) | 80 %  | 6   |
| Grain | Caramel/Crystal Malt - 10L | 0.2 kg (3.1%)  | 75 %  | 20  |
| Grain | colorado honing            | 0.1 kg (1.6%)  | 75 %  | 10  |
| Grain | pale ale wayermann         | 2.6 kg (40.6%) | 80 %  | 5   |
| Grain | carapils                   | 0.2 kg (3.1%)  | 75 %  | 5   |
| Grain | carared                    | 0.2 kg (3.1%)  | 75 %  | 40  |

## Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Marynka           | 30 g   | 70 min | 10 %       |
| Boil                | harizon           | 35 g   | 70 min | 10 %       |
| Boil                | harizon           | 10 g   | 10 min | 10 %       |
| Boil                | Cascade           | 10 g   | 10 min | 6 %        |
| Boil                | harizon           | 15 g   | 25 min | 10 %       |
| Boil                | equinox           | 10 g   | 25 min | 13 %       |
| Aroma (end of boil) | Equinox           | 30 g   | 0 min  | 13.1 %     |
| Aroma (end of boil) | Falconer's Flight | 10 g   | 0 min  | 10 %       |
| Aroma (end of boil) | Citra             | 10 g   | 0 min  | 12 %       |
| Aroma (end of boil) | Cascade           | 30 g   | 0 min  | 6 %        |

|         |                   |      |          |        |
|---------|-------------------|------|----------|--------|
| Dry Hop | Cascade           | 20 g | 4 day(s) | 6 %    |
| Dry Hop | Citra             | 20 g | 4 day(s) | 12 %   |
| Dry Hop | Falconer's Flight | 20 g | 4 day(s) | 10 %   |
| Dry Hop | Equinox           | 30 g | 4 day(s) | 13.1 % |

## Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-05 | Ale  | Dry  | 23 g   | ---        |