

# czerwony karzeł

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **34**
- SRM **11.5**
- Style **Irish Red Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **67 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **22.7 liter(s)**

## Steps

- Temp **62 C**, Time **50 min**
- Temp **72 C**, Time **20 min**

## Mash step by step

- Heat up **17.7 liter(s)** of strike water to **68C**
- Add grains
- Keep mash **50 min** at **62C**
- Keep mash **20 min** at **72C**
- Sparge using **12.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name                       | Amount         | Yield | EBC  |
|-------|----------------------------|----------------|-------|------|
| Grain | Pale Ale Flagon            | 3.5 kg (69.3%) | 80 %  | 5    |
| Grain | Karmelowy Czerwony         | 0.5 kg (9.9%)  | 75 %  | 59   |
| Grain | Pszeniczny                 | 0.3 kg (5.9%)  | 85 %  | 4    |
| Grain | Jęczmień palony            | 0.05 kg (1%)   | 55 %  | 1200 |
| Grain | Caramel/Crystal Malt - 10L | 0.5 kg (9.9%)  | 75 %  | 20   |
| Grain | Karmelowy Jasny 30EBC      | 0.2 kg (4%)    | 75 %  | 90   |

## Hops

| Use for             | Name     | Amount | Time   | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil                | Magnum   | 20 g   | 60 min | 13.5 %     |
| Aroma (end of boil) | puławski | 20 g   | 5 min  | 6 %        |

## Yeasts

| Name                    | Type | Form   | Amount | Laboratory  |
|-------------------------|------|--------|--------|-------------|
| Wyeast - London Ale III | Ale  | Liquid | 60 ml  | Wyeast Labs |