

# IRA czerwony karzeł

- Gravity **12.5 BLG**
- ABV ---
- IBU **22**
- SRM **14.2**
- Style **Irish Red Ale**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **10 %**
- Size with trub loss **27.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **31.6 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.4 liter(s) / kg**
- Mash size **17.8 liter(s)**
- Total mash volume **23.1 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**

## Mash step by step

- Heat up **17.8 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **19 liter(s)** of **76C** water or to achieve **31.6 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount         | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Pilzneński          | 4 kg (76.3%)   | 81 %  | 4   |
| Grain | Strzegom Karmel 300 | 0.2 kg (3.8%)  | 70 %  | 299 |
| Grain | Bestmalz Red X      | 1 kg (19.1%)   | 79 %  | 30  |
| Grain | Jęczmień palony     | 0.04 kg (0.8%) | 55 %  | 985 |

## Hops

| Use for | Name     | Amount | Time   | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil    | herkules | 12 g   | 60 min | 17 %       |
| Boil    | herkules | 10 g   | 5 min  | 17 %       |

## Yeasts

| Name                      | Type | Form   | Amount  | Laboratory       |
|---------------------------|------|--------|---------|------------------|
| FM13 Irlandzkie Ciemności | Ale  | Liquid | 1100 ml | Fermentum Mobile |