

# 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