

# IRA z Homebrewing

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **24**
- SRM **9.3**
- 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 **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **20.5 liter(s)**

## Steps

- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **20 min**
- Temp **75 C**, Time **5 min**

## Mash step by step

- Heat up **16 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **30 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **75C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type  | Name            | Amount         | Yield | EBC |
|-------|-----------------|----------------|-------|-----|
| Grain | Pilzneński      | 4 kg (87.7%)   | 81 %  | 4   |
| Grain | Carared         | 0.25 kg (5.5%) | 75 %  | 39  |
| Grain | Caraamber       | 0.25 kg (5.5%) | 75 %  | 59  |
| Grain | Jęczmień palony | 0.06 kg (1.3%) | 55 %  | 985 |

## Hops

| Use for             | Name     | Amount | Time   | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil                | Marynka  | 20 g   | 60 min | 8.8 %      |
| Aroma (end of boil) | Lubelski | 20 g   | 10 min | 4.4 %      |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Safale     |