

IRENA

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **19**
- SRM **5.7**
- 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 liter(s) / kg**
- Mash size **13.7 liter(s)**
- Total mash volume **18.2 liter(s)**

Steps

- Temp **52 C**, Time **20 min**
- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

Mash step by step

- Heat up **13.7 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **20 min** at **52C**
- Keep mash **40 min** at **66C**
- Keep mash **20 min** at **72C**
- Sparge using **16.2 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 % | 45 |
| Grain | Caraamber | 0.25 kg (5.5%) | 75 % | 70 |
| Grain | palone ziarna jęczmienia | 0.06 kg (1.3%) | 80 % | --- |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Marynka | 20 g | 25 min | 10 % |
| Boil | Lublin (Lubelski) | 20 g | 10 min | 4 % |

Extras

| Type | Name | Amount | Use for | Time |
|--------|------|--------|---------|--------|
| Fining | mech | 4 g | Boil | 20 min |