

IRA

- Gravity **12.1 BLG**
- ABV ---
- IBU **44**
- SRM **12.6**
- 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 **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.9 liter(s)**
- Total mash volume **20.5 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **15.9 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------|----------------|-------|-----|
| Grain | Strzegom Pale Ale | 4 kg (87.9%) | 79 % | 6 |
| Grain | Carared | 0.5 kg (11%) | 75 % | 39 |
| Grain | Jęczmień palony | 0.05 kg (1.1%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|----------|------------|
| Boil | Marynka | 25 g | 50 min | 10 % |
| Dry Hop | Rakau (NZ) | 25 g | 7 day(s) | 9.5 % |
| Aroma (end of boil) | Rakau (NZ) | 25 g | 15 min | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-05 | Ale | Dry | 11.5 g | Safale |