

## ira

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **24**
- SRM **12.6**
- Style **Irish Red Ale**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **10 %**
- Size with trub loss **26.4 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **32.2 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **25.2 liter(s)**

### Steps

- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **18.9 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **19.6 liter(s)** of **76C** water or to achieve **32.2 liter(s)** of wort

### Fermentables

| Type  | Name                | Amount        | Yield | EBC |
|-------|---------------------|---------------|-------|-----|
| Grain | Strzegom Pilzneński | 3 kg (47.6%)  | 80 %  | 4   |
| Grain | Viking Pale Ale     | 1 kg (15.9%)  | 80 %  | 6   |
| Grain | Strzegom Karmel 30  | 1 kg (15.9%)  | 75 %  | 30  |
| Grain | red crystal         | 0.3 kg (4.8%) | 75 %  | 400 |
| Grain | Strzegom Karmel 30  | 1 kg (15.9%)  | 75 %  | 30  |

### Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Marynka           | 20 g   | 60 min | 9 %        |
| Boil                | Citra uniwersalny | 20 g   | 10 min | 13.5 %     |
| Aroma (end of boil) | Citra uniwersalny | 20 g   | 1 min  | 13.5 %     |

### Yeasts

| Name | Type  | Form  | Amount | Laboratory |
|------|-------|-------|--------|------------|
| fm   | Lager | Slant | 100 ml | ---        |