

## letni czas

- Gravity **12.3 BLG**
- ABV ---
- IBU **30**
- SRM **5.4**
- Style **Scottish Export 80/-**

### Batch size

- Expected quantity of finished beer **57 liter(s)**
- Trub loss **5 %**
- Size with trub loss **59.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **72 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **36 liter(s)**
- Total mash volume **48 liter(s)**

### Steps

- Temp **66 C**, Time **75 min**

### Mash step by step

- Heat up **36 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **75 min** at **66C**
- Sparge using **48 liter(s)** of **76C** water or to achieve **72 liter(s)** of wort

### Fermentables

| Type  | Name                 | Amount        | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Karmelowy Czerwony   | 0.5 kg (4.2%) | 75 %  | 59  |
| Grain | Weyermann - Carapils | 1 kg (8.3%)   | 78 %  | 4   |
| Grain | Strzegom Pilzneński  | 10 kg (83.3%) | 80 %  | 4   |
| Grain | Strzegom pszeniczny  | 0.5 kg (4.2%) | 81 %  | 6   |

### Hops

| Use for             | Name              | Amount | Time     | Alpha acid |
|---------------------|-------------------|--------|----------|------------|
| Boil                | Iunga             | 50 g   | 60 min   | 11 %       |
| Aroma (end of boil) | Lublin (Lubelski) | 50 g   | 20 min   | 4 %        |
| Aroma (end of boil) | Lublin (Lubelski) | 30 g   | 10 min   | 4 %        |
| Whirlpool           | Mosaic            | 25 g   | 10 min   | 10 %       |
| Whirlpool           | Citra             | 25 g   | 10 min   | 12 %       |
| Whirlpool           | Cascade           | 25 g   | 10 min   | 6 %        |
| Dry Hop             | Citra             | 60 g   | 5 day(s) | 12 %       |
| Dry Hop             | Mosaic            | 25 g   | 5 day(s) | 10 %       |
| Dry Hop             | Cascade           | 30 g   | 5 day(s) | 6 %        |

### Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-05 | Ale  | Dry  | 22 g   | Safale     |