

Baca

- Gravity **14.3 BLG**
- ABV ---
- IBU **48**
- SRM **22.9**
- Style **Standard/Ordinary Bitter**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.4 liter(s) / kg**
- Mash size **18.7 liter(s)**
- Total mash volume **24.2 liter(s)**

Steps

- Temp **63 C**, Time **50 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **18.7 liter(s)** of strike water to **69.3C**
- Add grains
- Keep mash **50 min** at **63C**
- Keep mash **10 min** at **72C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------|---------------|-------|-----|
| Grain | Pilzneński | 3 kg (54.5%) | 81 % | 4 |
| Grain | Pale Ale | 1 kg (18.2%) | 80 % | 4 |
| Grain | Strzegom Wiedeński | 1 kg (18.2%) | 79 % | 10 |
| Grain | Słód Caraaroma (R) | 0.3 kg (5.5%) | --- % | 690 |
| Grain | zakwaszający | 0.2 kg (3.6%) | 80 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Warrior | 20 g | 60 min | 15.5 % |
| Boil | Amarillo | 5 g | 60 min | 8.8 % |
| Aroma (end of boil) | Sybilla | 20 g | 10 min | 5.9 % |
| Aroma (end of boil) | Amarillo | 25 g | 5 min | 8.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------|------|-------|--------|------------------|
| FM13 Irlandzkie Ciemności | Ale | Slant | 200 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|--------|---------|--------|---------|-------|
| Flavor | Curacao | 15 g | Boil | 5 min |