

Ris-oto Jest!

- Gravity **28.9 BLG**
- ABV **14.1 %**
- IBU **96**
- SRM **64**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **20.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27.9 liter(s)**
- Total mash volume **37.2 liter(s)**

Steps

- Temp **65 C**, Time **120 min**
- Temp **76 C**, Time **2 min**

Mash step by step

- Heat up **27.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **120 min** at **65C**
- Keep mash **2 min** at **76C**
- Sparge using **2.2 liter(s)** of **76C** water or to achieve **20.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------------------|---------------|-------|------|
| Grain | Castle Malting - Pilsneński 6-rzędowy | 5 kg (53.8%) | 80 % | 5 |
| Grain | Płatki owsiane | 2 kg (21.5%) | 85 % | 3 |
| Grain | Strzegom Karmel 300 | 0.3 kg (3.2%) | 70 % | 299 |
| Grain | Weyermann - Caraamber | 0.3 kg (3.2%) | 75 % | 65 |
| Grain | Weyermann - Carawheat | 0.3 kg (3.2%) | 77 % | 97 |
| Grain | Fawcett - Pale Chocolate | 0.7 kg (7.5%) | 71 % | 600 |
| Grain | Carafa III | 0.7 kg (7.5%) | 70 % | 1034 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|---------|------------|
| Boil | Columbus/Tomahawk/Zeus | 75 g | 120 min | 15.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale | Slant | 200 ml | Fermentum Mobile |