

Porter a'la RIS

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **40**
- SRM **22.8**

Batch size

- Expected quantity of finished beer **35 liter(s)**
- Trub loss **5 %**
- Size with trub loss **36.8 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **45.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **31.8 liter(s)**
- Total mash volume **42.4 liter(s)**

Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **31.8 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **24.5 liter(s)** of **76C** water or to achieve **45.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|---------|-----------------------------------|----------------|-------|-----|
| Grain | Maris Otter Crisp | 5.5 kg (48.2%) | 83 % | 6 |
| Grain | Strzegom Monachijski typ II | 3.5 kg (30.7%) | 79 % | 22 |
| Grain | Czekoladowy | 0.5 kg (4.4%) | 60 % | 788 |
| Grain | Weyermann - Caraamber | 0.4 kg (3.5%) | 75 % | 65 |
| Grain | Specjal B 350 | 0.3 kg (2.6%) | 68 % | 350 |
| Grain | Jęczmienny Wędzony 10 viking malt | 0.2 kg (1.8%) | 80 % | 5 |
| Adjunct | Płatki owsiane | 0.4 kg (3.5%) | 85 % | 3 |
| Adjunct | Płatki pszeniczne | 0.4 kg (3.5%) | 85 % | 3 |
| Grain | Fawcett - Crystal | 0.2 kg (1.8%) | 70 % | 160 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------------|--------|----------|------------|
| Boil | Marynka | 70 g | 60 min | 10 % |
| Aroma (end of boil) | Lublin (Lubelski) | 50 g | 5 min | 4 % |
| Dry Hop | Lublin (Lubelski) | 15 g | 2 day(s) | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|-------------|-------------|---------------|-------------------|
| Safale S-04 | Ale | Dry | 23 g | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------|---------------|----------------|-------------|
| Water Agent | gips | 12 g | Mash | 180 min |