

RISIEK

- Gravity **27 BLG**
- ABV **12.9 %**
- IBU **76**
- SRM **49.8**
- Style **Russian Imperial Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **120 min**
- Evaporation rate **11 %/h**
- Boil size **28.1 liter(s)**

Mash information

- Mash efficiency **69 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **37.2 liter(s)**
- Total mash volume **49.6 liter(s)**

Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **37.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **3.3 liter(s)** of **76C** water or to achieve **28.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|------|
| Grain | Mep@ale (Malteurop) | 8 kg (64.5%) | 81 % | 8 |
| Grain | MEP@Lager | 3 kg (24.2%) | 82 % | 6 |
| Grain | Fawcett - Pale Chocolate | 0.3 kg (2.4%) | 71 % | 600 |
| Grain | Strzegom Czekoladowy ciemny | 0.3 kg (2.4%) | 68 % | 1200 |
| Grain | Strzegom Karmel 300 | 0.3 kg (2.4%) | 70 % | 299 |
| Grain | Jęczmień palony | 0.5 kg (4%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 50 g | 60 min | 14.5 % |
| Boil | Citra | 30 g | 30 min | 12 % |
| Boil | Amarillo | 30 g | 15 min | 8.2 % |
| Boil | Cascade | 30 g | 15 min | 6.9 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------|-------------|-------------|---------------|-------------------|
| FM13 Irlandzkie Ciemności | Ale | Liquid | 250 ml | Fermentum Mobile |