

## RIS

- Gravity **25.1 BLG**
- ABV **11.7 %**
- IBU **88**
- SRM **46.8**
- Style **Russian Imperial Stout**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **23.8 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.9 liter(s)**
- Total mash volume **29.2 liter(s)**

### Steps

- Temp **67 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **21.9 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **9.2 liter(s)** of **76C** water or to achieve **23.8 liter(s)** of wort

### Fermentables

| Type           | Name                             | Amount         | Yield | EBC  |
|----------------|----------------------------------|----------------|-------|------|
| Grain          | Viking Pale Ale malt             | 4 kg (47.1%)   | 80 %  | 5    |
| Grain          | Strzegom Monachijski typ I       | 1.2 kg (14.1%) | 79 %  | 16   |
| Grain          | Fawcett - Dark Crystal           | 0.6 kg (7.1%)  | 71 %  | 300  |
| Grain          | Caramel Aromatic                 | 0.2 kg (2.4%)  | 75 %  | 200  |
| Grain          | Płatki owsiane                   | 0.5 kg (5.9%)  | 85 %  | 3    |
| Grain          | Fawcett - Pszeniczny Czekoladowy | 0.4 kg (4.7%)  | 73 %  | 1001 |
| Grain          | Jęczmień palony                  | 0.2 kg (2.4%)  | 55 %  | 985  |
| Grain          | Weyermann - Carafa I             | 0.2 kg (2.4%)  | 70 %  | 690  |
| Liquid Extract | WES ekstrakt słodowy jasny       | 1.2 kg (14.1%) | 80 %  | ---  |

### Hops

| Use for             | Name                   | Amount | Time   | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil                | Columbus/Tomahawk/Zeus | 60 g   | 60 min | 15.5 %     |
| Boil                | Centennial             | 20 g   | 20 min | 10.5 %     |
| Aroma (end of boil) | First Gold             | 25 g   | 10 min | 7.5 %      |

|                     |                |      |        |     |
|---------------------|----------------|------|--------|-----|
| Aroma (end of boil) | Bramling Cross | 25 g | 10 min | 6 % |
|---------------------|----------------|------|--------|-----|