

## #16 RIS

- Gravity **31.2 BLG**
- ABV **15.7 %**
- IBU **70**
- SRM **84.9**
- Style **Russian Imperial Stout**

### 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 **15 %/h**
- Boil size **22.5 liter(s)**

### Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **39 liter(s)**
- Total mash volume **52 liter(s)**

### Steps

- Temp **68 C**, Time **90 min**

### Mash step by step

- Heat up **39 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **68C**
- Sparge using **-3.5 liter(s)** of **76C** water or to achieve **22.5 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield | EBC  |
|-------|-----------------------------|----------------|-------|------|
| Grain | Strzegom Monachijski typ II | 5 kg (38.5%)   | 79 %  | 22   |
| Grain | Strzegom Monachijski typ I  | 3 kg (23.1%)   | 79 %  | 16   |
| Grain | Strzegom Karmel 600         | 0.5 kg (3.8%)  | 68 %  | 601  |
| Grain | Żytni                       | 0.3 kg (2.3%)  | 85 %  | 8    |
| Grain | Karmelowy żytni Strzegom    | 0.25 kg (1.9%) | 75 %  | 150  |
| Grain | Cookie                      | 1 kg (7.7%)    | 72 %  | 40   |
| Grain | Pszeniczny                  | 0.5 kg (3.8%)  | 85 %  | 4    |
| Grain | Strzegom Czekoladowy jasny  | 0.5 kg (3.8%)  | 68 %  | 400  |
| Grain | Strzegom Czekoladowy ciemny | 0.5 kg (3.8%)  | 68 %  | 1200 |
| Grain | Jęczmień palony             | 0.65 kg (5%)   | 55 %  | 985  |
| Grain | Płatki owsiane              | 0.8 kg (6.2%)  | 85 %  | 3    |

### Hops

| Use for | Name               | Amount | Time   | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil    | Magnum             | 50 g   | 60 min | 11.7 %     |
| Boil    | East Kent Goldings | 50 g   | 60 min | 5.4 %      |

|      |                   |      |        |       |
|------|-------------------|------|--------|-------|
| Boil | Marynka           | 23 g | 40 min | 6.8 % |
| Boil | Lublin (Lubelski) | 15 g | 20 min | 2.8 % |

## Yeasts

| Name                      | Type | Form  | Amount | Laboratory       |
|---------------------------|------|-------|--------|------------------|
| FM13 Irlandzkie Ciemności | Ale  | Slant | 180 ml | Fermentum Mobile |