

## prawie jak RIS z resztek

- Gravity **18.2 BLG**
- ABV **7.8 %**
- IBU **56**
- SRM **44.6**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **79 %**
- Liquor-to-grist ratio **3.1 liter(s) / kg**
- Mash size **22 liter(s)**
- Total mash volume **29.1 liter(s)**

### Steps

- Temp **44 C**, Time **20 min**
- Temp **52 C**, Time **10 min**
- Temp **64 C**, Time **60 min**
- Temp **79 C**, Time **1 min**

### Mash step by step

- Heat up **22 liter(s)** of strike water to **47.9C**
- Add grains
- Keep mash **20 min** at **44C**
- Keep mash **10 min** at **52C**
- Keep mash **60 min** at **64C**
- Keep mash **1 min** at **79C**
- Sparge using **10.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount         | Yield  | EBC  |
|-------|-----------------------------|----------------|--------|------|
| Grain | Viking Pale Ale malt        | 3.5 kg (49.3%) | 80 %   | 5    |
| Grain | Strzegom Monachijski typ II | 1 kg (14.1%)   | 79 %   | 22   |
| Grain | Żytni                       | 1 kg (14.1%)   | 85 %   | 8    |
| Grain | Karmelowy żytni Strzegom    | 0.3 kg (4.2%)  | 75 %   | 150  |
| Grain | Castle Cafe                 | 0.5 kg (7%)    | 75.5 % | 480  |
| Grain | czekoladowy żytni Strzegom  | 0.285 kg (4%)  | 75 %   | 450  |
| Grain | Strzegom Czekoladowy 1200   | 0.23 kg (3.2%) | 68 %   | 1202 |
| Grain | Carafa III special          | 0.285 kg (4%)  | 70 %   | 1034 |

### Hops

| Use for | Name       | Amount | Time   | Alpha acid |
|---------|------------|--------|--------|------------|
| Boil    | Challenger | 90 g   | 60 min | 7 %        |

### Yeasts

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

### Extras

| Type   | Name                     | Amount | Use for   | Time     |
|--------|--------------------------|--------|-----------|----------|
| Flavor | Płatki dębowe<br>VANILLA | 20 g   | Secondary | 7 day(s) |
| Flavor | Płatki dębowe<br>TOFFIE  | 20 g   | Secondary | 7 day(s) |