

## RIS-morderca

- Gravity **30 BLG**
- ABV **14.8 %**
- IBU **92**
- SRM **93.4**
- Style **Russian Imperial Stout**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.3 liter(s)**
- Total mash volume **21.8 liter(s)**

### Steps

- Temp **62 C**, Time **45 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **16.3 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **45 min** at **62C**
- Keep mash **45 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **1.9 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

### Fermentables

| Type           | Name                            | Amount         | Yield | EBC  |
|----------------|---------------------------------|----------------|-------|------|
| Grain          | Strzegom Pale Ale               | 3 kg (50.4%)   | 79 %  | 6    |
| Grain          | Strzegom Czekoladowy 1200       | 0.3 kg (5%)    | 68 %  | 1202 |
| Grain          | Jęczmień palony                 | 0.25 kg (4.2%) | 55 %  | 985  |
| Grain          | Strzegom Monachijski typ II     | 0.7 kg (11.8%) | 79 %  | 22   |
| Grain          | Black Barley (Roast Barley)     | 0.3 kg (5%)    | 55 %  | 985  |
| Grain          | Fawcett - Dark Crystal          | 0.3 kg (5%)    | 71 %  | 300  |
| Grain          | Caramel/Crystal Malt - 10L      | 0.3 kg (5%)    | 75 %  | 20   |
| Grain          | Fawcett - Pale Chocolate        | 0.3 kg (5%)    | 71 %  | 600  |
| Liquid Extract | ekstrakt słodowy ciemny Bruntal | 0.5 kg (8.4%)  | 90 %  | 621  |

### Hops

| Use for | Name                   | Amount | Time   | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 40 g   | 60 min | 15.5 %     |

|      |         |      |        |       |
|------|---------|------|--------|-------|
| Boil | Fuggles | 50 g | 60 min | 4.5 % |
|------|---------|------|--------|-------|

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 23 g   | Fermentis  |

## Extras

| Type   | Name                    | Amount | Use for   | Time      |
|--------|-------------------------|--------|-----------|-----------|
| Flavor | płatki dębowe<br>whisky | 50 g   | Secondary | 21 day(s) |