

- Gravity **28.3 BLG**
- ABV **13.7 %**
- IBU **163**
- SRM **56.3**
- Style **Russian Imperial Stout**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **15 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.6 liter(s)**
- Total mash volume **30.2 liter(s)**

### Steps

- Temp **72 C**, Time **0 min**
- Temp **64 C**, Time **45 min**
- Temp **64 C**, Time **15 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **22.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **-0.1 liter(s)** of **76C** water or to achieve **15 liter(s)** of wort

### Fermentables

| Type  | Name                           | Amount         | Yield | EBC  |
|-------|--------------------------------|----------------|-------|------|
| Grain | Viking Malt Pale Ale           | 4 kg (53%)     | 80 %  | 5    |
| Grain | Viking Malt Monachijski Typ II | 1 kg (13.2%)   | 79 %  | 22   |
| Grain | Viking Malt Czekoladowy 1200   | 0.25 kg (3.3%) | 68 %  | 1202 |
| Grain | Viking Malt Czekoladowy jasny  | 0.25 kg (3.3%) | 68 %  | 400  |
| Grain | Viking Malt Jęczmień palony    | 0.25 kg (3.3%) | 55 %  | 985  |
| Grain | Viking Malt Żytni              | 0.5 kg (6.6%)  | 85 %  | 8    |
| Grain | Castle Malting Caffè Light     | 0.25 kg (3.3%) | 77 %  | 250  |
| Grain | Płatki owsiane                 | 0.25 kg (3.3%) | 85 %  | 3    |
| Grain | Viking Malt Wiedeński          | 0.25 kg (3.3%) | 79 %  | 10   |
| Grain | Weyermann - Carapils           | 0.25 kg (3.3%) | 78 %  | 4    |

|       |                               |                |      |      |
|-------|-------------------------------|----------------|------|------|
| Grain | Weyermann - Caramunich Typ II | 0.1 kg (1.3%)  | 73 % | 120  |
| Grain | Weyermann - Carahell          | 0.15 kg (2%)   | 77 % | 26   |
| Grain | Viking Malt Barwiący 1300     | 0.05 kg (0.7%) | 68 % | 1300 |

## Hops

| Use for | Name                   | Amount | Time   | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 50 g   | 70 min | 14 %       |
| Boil    | Chinook                | 60 g   | 70 min | 12 %       |
| Boil    | East Kent Goldings     | 25 g   | 40 min | 4.1 %      |
| Boil    | East Kent Goldings     | 45 g   | 10 min | 4.1 %      |

## Yeasts

| Name                                     | Type | Form | Amount | Laboratory      |
|--|------|------|--------|-----------------|
| Mangrove Jack's M42 New World Strong Ale | Ale  | Dry  | 10 g   | Mangrove Jack's |