

- 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 |