

- 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