

#21 RIS

- Gravity **29.6 BLG**
- ABV **14.5 %**
- IBU **77**
- SRM **72.4**
- Style **Russian Imperial Stout**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **14.4 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21.6 liter(s)**
- Total mash volume **28.8 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **21.6 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **liter(s)** of **76C** water or to achieve **14.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (41.7%)	80 %	5
Grain	Strzegom Wiedeński	1 kg (13.9%)	79 %	10
Grain	Strzegom Monachijski typ I	1 kg (13.9%)	79 %	16
Grain	Biscuit Malt	0.7 kg (9.7%)	79 %	45
Grain	Strzegom pszenica prażona	0.25 kg (3.5%)	70 %	1000
Grain	Weyermann - Dehusked Carafa III	0.25 kg (3.5%)	70 %	1024
Grain	Strzegom Karmel 150	0.25 kg (3.5%)	75 %	150
Grain	Strzegom Karmel 300	0.25 kg (3.5%)	70 %	299
Grain	Strzegom Czekoladowy jasny	0.25 kg (3.5%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.25 kg (3.5%)	68 %	1200

Hops

Use for	Name	Amount	Time	Alpha acid
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Boil	Marynka	50 g	60 min	10 %
Boil	Cascade	28 g	60 min	8.1 %

Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Slant	200 ml	Mangrove Jack's