

RIS na bis

- Gravity **27.9 BLG**
- ABV **13.4 %**
- IBU **90**
- SRM **42.3**
- Style **Russian Imperial Stout**

Batch size

- Expected quantity of finished beer **45 liter(s)**
- Trub loss **5 %**
- Size with trub loss **47.3 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **62.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **65.6 liter(s)**
- Total mash volume **91.9 liter(s)**

Steps

- Temp **67 C**, Time **75 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**
- Temp **62 C**, Time **15 min**

Mash step by step

- Heat up **65.6 liter(s)** of strike water to **70.4C**
- Add grains
- Keep mash **15 min** at **62C**
- Keep mash **75 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **22.9 liter(s)** of **76C** water or to achieve **62.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	15 kg (57.1%)	80 %	5
Grain	Strzegom Karmel 150	1 kg (3.8%)	75 %	150
Grain	Jęczmień palony	1 kg (3.8%)	55 %	985
Grain	Strzegom Barwiący	0.25 kg (1%)	68 %	1300
Grain	Strzegom Czekoladowy ciemny	0.25 kg (1%)	68 %	1200
Grain	Carafa III	0.25 kg (1%)	70 %	1034
Grain	Strzegom Pszeniczny	1 kg (3.8%)	81 %	6
Grain	Casle Malting Whisky Nature	7.5 kg (28.6%)	85 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Izabella	300 g	70 min	5.1 %
Boil	Lomik	100 g	15 min	3.8 %
Boil	Izabella	200 g	15 min	5.1 %

Boil	lunga	100 g	70 min	11 %
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Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Dry	22 g	Danstar
FM13 Irlandzkie Ciemności	Ale	Liquid	80 ml	Fermentum Mobile