

# RIS

- Gravity **25.1 BLG**
- ABV **11.7 %**
- IBU **83**
- SRM **48.2**
- Style **Russian Imperial Stout**

## Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **90 min**
- Evaporation rate **10 %/h**
- Boil size **25.2 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **22.7 liter(s)**
- Total mash volume **31.8 liter(s)**

## Steps

- Temp **66 C**, Time **80 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **22.7 liter(s)** of strike water to **75.2C**
- Add grains
- Keep mash **80 min** at **66C**
- Keep mash **10 min** at **76C**
- Sparge using **11.6 liter(s)** of **76C** water or to achieve **25.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	6 kg (65.9%)	80 %	5
Grain	Viking Munich Malt	0.8 kg (8.8%)	78 %	18
Grain	Strzegom Bursztynowy	0.8 kg (8.8%)	70 %	49
Grain	Strzegom Czekoladowy jasny	0.2 kg (2.2%)	68 %	400
Grain	Briess - Dark Chocolate Malt	0.4 kg (4.4%)	60 %	1000
Grain	Strzegom pszenica prażona	0.2 kg (2.2%)	70 %	1000
Grain	Caramel/Crystal Malt - 120L	0.5 kg (5.5%)	72 %	270
Grain	Fawcett - Pszeniczny Czekoladowy	0.2 kg (2.2%)	73 %	1001

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	25 g	90 min	15.8 %
Boil	Columbus/Tomahawk/Zeus	25 g	60 min	15.8 %
Boil	Epic	25 g	30 min	4.1 %

Boil	Epic	25 g	15 min	4.1 %
Aroma (end of boil)	Bramling	50 g	0 min	7.5 %
Boil	Fuggles	15 g	90 min	5.6 %
Boil	Marynka	15 g	60 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM11 Wichrowe Wzgórza	Ale	Slant	100 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	kwas fosforowy	5 g	Mash	80 min
Flavor	płatki dębowe mocno przypalane macerowane w whisky	50 g	Secondary	14 day(s)
Fining	mech irlandzki	5 g	Boil	15 min

## Notes

- Warzenie- 14/07/2018  
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