

bday RIS

- Gravity **21.3 BLG**
- ABV **9.5 %**
- IBU **54**
- SRM **54.9**
- Style **Russian Imperial Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **21.6 liter(s)**

Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **27.6 liter(s)**

Steps

- Temp **67 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **19.8 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **9.7 liter(s)** of **76C** water or to achieve **21.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	golden ale	1 kg (11.9%)	79 %	10
Grain	caramel sweet	1 kg (11.9%)	75 %	59
Grain	Strzegom pszenica prażona	0.5 kg (6%)	70 %	1000
Grain	Strzegom Pale Ale	4 kg (47.6%)	79 %	6
Grain	Strzegom Czekoladowy ciemny	0.3 kg (3.6%)	68 %	1200
Grain	Żytni	1 kg (11.9%)	85 %	8
Sugar	Milk Sugar (Lactose)	0.5 kg (6%)	76.1 %	0
Grain	Strzegom Barwiący	0.1 kg (1.2%)	68 %	1300

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	9 %
Boil	Marynka	35 g	40 min	9 %

Yeasts

Name	Type	Form	Amount	Laboratory
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Wyeast - American Ale	Ale	Slant	200 ml	Wyeast Labs
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Extras

Type	Name	Amount	Use for	Time
Spice	skórki pomarńczy suszone	100 g	Boil	10 min