

## #21 RIS Zdzich

- Gravity **24.4 BLG**
- ABV ---
- IBU **120**
- SRM **114.2**
- Style **Russian Imperial Stout**

### Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **7 %**
- Size with trub loss **20.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.4 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

### Steps

- Temp **44 C**, Time **25 min**
- Temp **66 C**, Time **70 min**
- Temp **72 C**, Time **70 min**

### Mash step by step

- Heat up **20.4 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **25 min** at **44C**
- Keep mash **70 min** at **66C**
- Keep mash **70 min** at **72C**
- Sparge using **10.8 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Żytni	2 kg (25.6%)	85 %	8
Grain	Jęczmienny wędzony Torf Strzegom	1 kg (12.8%)	85 %	4
Grain	Jęczmienny wędzony Grusza Strzegom	1 kg (12.8%)	85 %	4
Grain	Strzegom Czekoladowy jasny	1 kg (12.8%)	70 %	400
Grain	Strzegom Czekoladowy ciemny	1 kg (12.8%)	70 %	1200
Grain	Strzegom Karmel 600	0.6 kg (7.7%)	68 %	601
Grain	Jęczmień palony	0.2 kg (2.6%)	55 %	985
Liquid Extract	Cukier kandyzowany 120C	1 kg (12.8%)	100 %	50

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	100 g	60 min	13.5 %

Boil	Sybilla	50 g	30 min	5.5 %
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