

## ryzyko

- Gravity **21.1 BLG**
- ABV **9.4 %**
- IBU **63**
- SRM **68.7**
- Style **Russian Imperial Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27.6 liter(s)**
- Total mash volume **36.8 liter(s)**

### Steps

- Temp **64 C**, Time **120 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **27.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **120 min** at **64C**
- Keep mash **20 min** at **72C**
- Sparge using **6.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (54.3%)	79 %	6
Grain	Strzegom Karmel 600	0.2 kg (2.2%)	68 %	300
Grain	słód gryczany	0.5 kg (5.4%)	65 %	15
Grain	Caramel Aromatic	1 kg (10.9%)	75 %	200
Grain	Jęczmień palony	0.5 kg (5.4%)	55 %	985
Grain	Fawcett - Pszeniczny Czekoladowy	1 kg (10.9%)	73 %	1001
Grain	Cookie	1 kg (10.9%)	80 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Eureka!	50 g	60 min	13 %
Aroma (end of boil)	pilgrim	50 g	10 min	8.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	23 g	fermentis

## Extras

Type	Name	Amount	Use for	Time
Other	laktoza	1000 g	Boil	10 min
Flavor	orzeszki	1000 g	Mash	150 min