

## #16 RIS

- Gravity **31.2 BLG**
- ABV **15.7 %**
- IBU **70**
- SRM **84.9**
- Style **Russian Imperial Stout**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **120 min**
- Evaporation rate **15 %/h**
- Boil size **22.5 liter(s)**

### Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **39 liter(s)**
- Total mash volume **52 liter(s)**

### Steps

- Temp **68 C**, Time **90 min**

### Mash step by step

- Heat up **39 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **68C**
- Sparge using **-3.5 liter(s)** of **76C** water or to achieve **22.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	5 kg (38.5%)	79 %	22
Grain	Strzegom Monachijski typ I	3 kg (23.1%)	79 %	16
Grain	Strzegom Karmel 600	0.5 kg (3.8%)	68 %	601
Grain	Żytni	0.3 kg (2.3%)	85 %	8
Grain	Karmelowy żytni Strzegom	0.25 kg (1.9%)	75 %	150
Grain	Cookie	1 kg (7.7%)	72 %	40
Grain	Pszeniczny	0.5 kg (3.8%)	85 %	4
Grain	Strzegom Czekoladowy jasny	0.5 kg (3.8%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.5 kg (3.8%)	68 %	1200
Grain	Jęczmień palony	0.65 kg (5%)	55 %	985
Grain	Płatki owsiane	0.8 kg (6.2%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	50 g	60 min	11.7 %
Boil	East Kent Goldings	50 g	60 min	5.4 %

Boil	Marynka	23 g	40 min	6.8 %
Boil	Lublin (Lubelski)	15 g	20 min	2.8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	180 ml	Fermentum Mobile