

## Już nie FES, jeszcze nie RIS

- Gravity **19.7 BLG**
- ABV ---
- IBU **66**
- SRM **37.4**
- Style **Russian Imperial Stout**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **65 min**
- Evaporation rate **15 %/h**
- Boil size **26.9 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.8 liter(s)**
- Total mash volume **27.7 liter(s)**

### Steps

- Temp **62 C**, Time **15 min**
- Temp **70 C**, Time **45 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **20.8 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **15 min** at **62C**
- Keep mash **45 min** at **70C**
- Keep mash **10 min** at **75C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **26.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (56.8%)	81 %	4
Grain	Jęczmień palony	0.2 kg (2.5%)	55 %	985
Grain	Weyermann - Carafa I	0.3 kg (3.8%)	70 %	690
Adjunct	płatki jęczmienne	0.5 kg (6.3%)	45 %	4
Grain	Caramunich Malt	0.52 kg (6.6%)	71.7 %	110
Grain	Smoked Malt	0.8 kg (10.1%)	80 %	18
Grain	Briess - Carapils Malt	0.6 kg (7.6%)	74 %	3
Liquid Extract	Ekstrakt słodowy jasny	0.5 kg (6.3%)	80 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	70 g	60 min	10 %
Boil	Fuggles	20 g	30 min	4.5 %
Boil	Fuggles	10 g	10 min	4.5 %
Boil	Fuggles	10 g	5 min	4.5 %
Boil	Fuggles	10 g	1 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	10 g	Safale

## Notes

- Trochę sprzątnia magazynu, pod postacią słodów karmelowych i wędzonego  
*Nov 16, 2015, 11:53 AM*