Ris żmija

- Gravity **27.7 BLG**
- ABV **13.3 %**
- IBU **98**
- SRM **62.8**
- 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 **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **37.5 liter(s)**
- Total mash volume **50 liter(s)**

Steps

- Temp **67 C**, Time **100 min**
- Temp **10 C**, Time **78 min**

Mash step by step

- Heat up **37.5 liter(s)** of strike water to **8.3C**
- Add grains
- Keep mash **78 min** at **10C**
- Keep mash **100 min** at **67C**
- Sparge using **1.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	10 kg *(80%)*	80 %	5
Grain	Jęczmień palony	0.5 kg *(4%)*	55 %	985
Grain	Fawcett - Pszeniczny Czekoladowy	0.5 kg *(4%)*	73 %	1001
Grain	Carafa III	0.3 kg *(2.4%)*	70 %	1034
Grain	Strzegom Karmel 150	0.4 kg *(3.2%)*	75 %	150
Grain	Strzegom Karmel 300	0.4 kg *(3.2%)*	70 %	299
Grain	Strzegom Karmel 600	0.4 kg *(3.2%)*	68 %	601

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Herkules	100 g	60 min	17 %