

Gniewny Brodacz

- Gravity **19.8 BLG**
- ABV **8.7 %**
- IBU **82**
- SRM **27.4**
- Style **Russian Imperial Stout**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **28.2 liter(s)**
- Total mash volume **37.6 liter(s)**

Steps

- Temp **67 C**, Time **90 min**
- Temp **69 C**, Time **10 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **28.2 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **10 min** at **69C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Optima	2.5 kg (26.6%)	79 %	6
Grain	Pilzneński	3 kg (31.9%)	81 %	4
Grain	Monachijski	1.5 kg (16%)	80 %	16
Grain	Pszenica niesłodowana	0.5 kg (5.3%)	75 %	3
Grain	Oats, Flaked	0.6 kg (6.4%)	80 %	2
Powyższe składniki wysypuję przy temperaturze 67 st. C, na 90 minut				
Grain	Karmelowy Jasny 100-150EBC	0.5 kg (5.3%)	75 %	100
Grain	Barwiący Optima	0.5 kg (5.3%)	78 %	350
Grain	Jęczmień palony	0.3 kg (3.2%)	55 %	985
Ciemne słody dodać po 90 minutach w temp 67-69 st. C, zostawić na 10 minut				

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	TNT	70 g	70 min	12.9 %
Boil	Tettnang	25 g	70 min	4 %

Boil	Lublin (Lubelski)	35 g	25 min	4 %
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Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	20 g	Fermentis