

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 | Pilzniejszy | 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 % |
|------|-------------------|------|--------|-----|

Yeasts

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