

NAJLEPSZY RISEŁ

- Gravity **23.6 BLG**
- ABV ---
- IBU **87**
- SRM **59.9**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.6 liter(s)**
- Total mash volume **27.4 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **20.6 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **7 liter(s)** of **76C** water or to achieve **20.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------|------------------|-------|-----|
| Grain | Viking Pilsner malt | 4.063 kg (59.2%) | 82 % | 4 |
| Grain | Czekoladowy | 0.514 kg (7.5%) | 60 % | 788 |
| Grain | Weyermann - Smoked Malt | 0.429 kg (6.3%) | 81 % | 6 |
| Grain | Aroma CastleMalting | 0.309 kg (4.5%) | 78 % | 100 |
| Grain | Cara Gold Castlemalting | 0.343 kg (5%) | 78 % | 120 |
| Grain | Płatki owsiane | 0.6 kg (8.7%) | 85 % | 3 |
| Grain | Jęczmień palony | 0.6 kg (8.7%) | 55 % | 985 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 38 g | 60 min | 15.5 % |
| Aroma (end of boil) | Columbus/Tomahawk/Zeus | 40 g | 10 min | 15.5 % |
| Aroma (end of boil) | Simcoe | 40 g | 1 min | 13.2 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|---------------------------|-----|-------|--------|------------------|
| FM13 Irlandzkie Ciemności | Ale | Slant | 150 ml | Fermentum Mobile |
|---------------------------|-----|-------|--------|------------------|

Extras

| Type | Name | Amount | Use for | Time |
|--------|------------------|---------|-----------|----------|
| Flavor | Kawa | 45 g | Secondary | 2 day(s) |
| Flavor | dark brown sugar | 466.5 g | Boil | 15 min |