

bday RIS

- Gravity **21.3 BLG**
- ABV **9.5 %**
- IBU **54**
- SRM **54.9**
- Style **Russian Imperial Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **21.6 liter(s)**

Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **27.6 liter(s)**

Steps

- Temp **67 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **19.8 liter(s)** of strike water to **76.4C**
- Add grains
- Keep mash **50 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **15 min** at **78C**
- Sparge using **9.7 liter(s)** of **76C** water or to achieve **21.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|--------|------|
| Grain | golden ale | 1 kg (11.9%) | 79 % | 10 |
| Grain | caramel sweet | 1 kg (11.9%) | 75 % | 59 |
| Grain | Strzegom pszenica prażona | 0.5 kg (6%) | 70 % | 1000 |
| Grain | Strzegom Pale Ale | 4 kg (47.6%) | 79 % | 6 |
| Grain | Strzegom Czekoladowy ciemny | 0.3 kg (3.6%) | 68 % | 1200 |
| Grain | Żytni | 1 kg (11.9%) | 85 % | 8 |
| Sugar | Milk Sugar (Lactose) | 0.5 kg (6%) | 76.1 % | 0 |
| Grain | Strzegom Barwiący | 0.1 kg (1.2%) | 68 % | 1300 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Marynka | 30 g | 60 min | 9 % |
| Boil | Marynka | 35 g | 40 min | 9 % |

Yeasts

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

| | | | | |
|-----------------------|-----|-------|--------|-------------|
| Wyeast - American Ale | Ale | Slant | 200 ml | Wyeast Labs |
|-----------------------|-----|-------|--------|-------------|

Extras

| Type | Name | Amount | Use for | Time |
|-------|--------------------------|--------|---------|--------|
| Spice | skórki pomarńczy suszone | 100 g | Boil | 10 min |