

żytni ris

- Gravity **25.1 BLG**
- ABV **11.7 %**
- IBU **56**
- SRM **57**
- Style **Russian Imperial Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **120 min**
- Evaporation rate **20 %/h**
- Boil size **33.6 liter(s)**

Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **31.3 liter(s)**
- Total mash volume **43.8 liter(s)**

Steps

- Temp **47 C**, Time **10 min**
- Temp **72 C**, Time **90 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **31.3 liter(s)** of strike water to **52.4C**
- Add grains
- Keep mash **10 min** at **47C**
- Keep mash **90 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **33.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|--------------|-------|-----|
| Grain | Pilzneński | 4 kg (32%) | 81 % | 4 |
| Grain | Enzymatyczny Viking Malt | 1 kg (8%) | 76 % | 7 |
| Grain | Żytni | 4 kg (32%) | 85 % | 8 |
| Grain | Karmelowy żytni Strzegom | 2 kg (16%) | 75 % | 150 |
| Grain | castel malting - Chocolate Wheat | 1.5 kg (12%) | 74 % | 788 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | lunga | 80 g | 60 min | 11 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|-------|--------|------------|
| Danstar - Nottingham | Ale | Slant | 300 ml | Danstar |