

# czarna panika

- Gravity **26.6 BLG**
- ABV **12.6 %**
- IBU **93**
- SRM **39**
- Style **Russian Imperial Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **27.2 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **2.6 liter(s) / kg**
- Mash size **27.4 liter(s)**
- Total mash volume **38 liter(s)**

## Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **27.4 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **0 min** at **78C**
- Sparge using **10.4 liter(s)** of **76C** water or to achieve **27.2 liter(s)** of wort

## Fermentables

| Type  | Name                             | Amount         | Yield | EBC |
|-------|----------------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt             | 7 kg (66.4%)   | 80 %  | 5   |
| Grain | Jęczmień palony                  | 0.5 kg (4.7%)  | 55 %  | 985 |
| Grain | Simpsons - Crystal Dark          | 0.35 kg (3.3%) | 74 %  | 158 |
| Grain | Słód Caramunich Typ II Weyermann | 0.4 kg (3.8%)  | 73 %  | 120 |
| Grain | Słód owsiany Fawcett             | 0.5 kg (4.7%)  | 61 %  | 5   |
| Grain | Płatki owsiane                   | 0.4 kg (3.8%)  | 85 %  | 3   |
| Grain | Pszeniczny                       | 1 kg (9.5%)    | 85 %  | 4   |
| Grain | Fawcett - Pale Chocolate         | 0.4 kg (3.8%)  | 71 %  | 600 |

## Hops

| Use for | Name                   | Amount | Time   | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 100 g  | 60 min | 15.5 %     |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory  |
|----------------------|------|-------|--------|-------------|
| Wyeast - British Ale | Ale  | Slant | 400 ml | Wyeast Labs |