

Czarny owies

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **38**
- SRM **30.6**
- Style **Oatmeal Stout**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30.4 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.2 liter(s)**
- Total mash volume **21.6 liter(s)**

Steps

- Temp **64 C**, Time **60 min**

Mash step by step

- Heat up **16.2 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Sparge using **19.6 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|------|
| Grain | Viking Pale Ale malt | 3.8 kg (70.4%) | 80 % | 5 |
| Grain | Płatki owsiane | 1 kg (18.5%) | 85 % | 3 |
| Grain | Jęczmień palony | 0.3 kg (5.6%) | 55 % | 1000 |
| Grain | Carafa III | 0.3 kg (5.6%) | 70 % | 1300 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------|--------|--------|------------|
| Boil | Magnum | 30 g | 60 min | 13.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------|------|-------|--------|-------------|
| Wyeast - Irish Ale | Ale | Slant | 300 ml | Wyeast Labs |