

## Czarny

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **31**
- SRM **27.1**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **8.1 liter(s)**
- Total mash volume **10.8 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **8.1 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **78C**
- Sparge using **8.6 liter(s)** of **76C** water or to achieve **14 liter(s)** of wort

### Fermentables

| Type  | Name                  | Amount         | Yield  | EBC |
|-------|-----------------------|----------------|--------|-----|
| Grain | Strzegom Pale Ale     | 1 kg (37%)     | 79 %   | 6   |
| Grain | Aroma CastleMalting   | 0.5 kg (18.5%) | 78 %   | 100 |
| Grain | strzegom enzymatyczny | 0.5 kg (18.5%) | --- %  | 7   |
| Grain | Castle Cafe           | 0.2 kg (7.4%)  | 75.5 % | 480 |
| Grain | Strzegom Karmel 200   | 0.1 kg (3.7%)  | 75 %   | 200 |
| Grain | Płatki owsiane        | 0.3 kg (11.1%) | 85 %   | 3   |
| Grain | Jęczmień palony       | 0.1 kg (3.7%)  | 55 %   | 985 |

### Hops

| Use for | Name               | Amount | Time   | Alpha acid |
|---------|--------------------|--------|--------|------------|
| Boil    | East Kent Goldings | 30 g   | 60 min | 5.1 %      |

### Yeasts

| Name                     | Type | Form | Amount | Laboratory |
|--------------------------|------|------|--------|------------|
| Gozdawa Pure Ale Yeast 7 | Ale  | Dry  | 10 g   | gozdawa    |

### Extras

| Type   | Name    | Amount | Use for | Time  |
|--------|---------|--------|---------|-------|
| Flavor | laktoza | 250 g  | Boil    | 5 min |