

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 |