

Małą czarną, proszę!

- Gravity **11.6 BLG**
- ABV ---
- IBU **31**
- SRM **33.4**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **16.4 liter(s)**
- Total mash volume **20.5 liter(s)**

Steps

- Temp **67 C**, Time **45 min**
- Temp **72 C**, Time **10 min**

Mash step by step

- Heat up **16.4 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **45 min** at **67C**
- Keep mash **10 min** at **72C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Weyermann - Pale Ale Malt | 3.2 kg (78%) | 85 % | 7 |
| Grain | Jęczmień palony | 0.3 kg (7.3%) | 55 % | 985 |
| Grain | Płatki jęczmienne | 0.5 kg (12.2%) | 70 % | 3 |
| Grain | Weyermann - Carafa II | 0.1 kg (2.4%) | 70 % | 837 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------------|--------|--------|------------|
| Boil | Challenger | 30 g | 55 min | 7 % |
| Boil | English Golding | 15 g | 15 min | 4.8 % |
| Aroma (end of boil) | Sovereign | 10 g | 5 min | 5 % |
| Aroma (end of boil) | Tettnang | 10 g | 5 min | 4 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-04 | Ale | Slant | 300 ml | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|--------|---------------|--------|---------|--------|
| Flavor | Laska wanilli | 3 g | Boil | 60 min |
| Flavor | Ziarna kawy | 30 g | Boil | 15 min |