

# 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 |