

# Czarna ziemia

- Gravity **15.9 BLG**
- ABV ---
- IBU **43**
- SRM **69.6**
- Style **Foreign Extra Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Fermentables

| Type  | Name                        | Amount         | Yield  | EBC  |
|-------|-----------------------------|----------------|--------|------|
| Grain | Simpsons - Maris Otter      | 3.5 kg (58.3%) | 81 %   | 6    |
| Grain | Briess - Chocolate Malt     | 0.5 kg (8.3%)  | 60 %   | 690  |
| Grain | Carafa III                  | 0.5 kg (8.3%)  | 70 %   | 1034 |
| Grain | Simpsons - Roasted Barley   | 0.2 kg (3.3%)  | 70 %   | 1084 |
| Grain | smoked wheat malt           | 1 kg (16.7%)   | 80.5 % | 6    |
| Grain | Weyermann - Melanoiden Malt | 0.3 kg (5%)    | 81 %   | 53   |

## Hops

| Use for | Name                   | Amount | Time   | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 20 g   | 60 min | 15.5 %     |
| Boil    | Saaz (Czech Republic)  | 40 g   | 15 min | 4.5 %      |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Safale     |

## Extras

| Type  | Name    | Amount | Use for   | Time     |
|-------|---------|--------|-----------|----------|
| Spice | pu-erth | 100 g  | Secondary | 1 day(s) |