

# Czarna Dziura

- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **43**
- SRM **30.3**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **42 liter(s)**
- Trub loss **5 %**
- Size with trub loss **44.1 liter(s)**
- Boil time **40 min**
- Evaporation rate **5 %/h**
- Boil size **47.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **29.8 liter(s)**
- Total mash volume **39.7 liter(s)**

## Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **29.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **1 min** at **78C**
- Sparge using **27.8 liter(s)** of **76C** water or to achieve **47.7 liter(s)** of wort

## Fermentables

| Type  | Name                        | Amount         | Yield | EBC  |
|-------|-----------------------------|----------------|-------|------|
| Grain | Weyermann wiedeński         | 3 kg (30.2%)   | 80 %  | 8    |
| Grain | Weyermann pszeniczny ciemny | 3 kg (30.2%)   | 80 %  | 16   |
| Grain | Płatki jęczmienne           | 1 kg (10.1%)   | 60 %  | 4    |
| Grain | Płatki owsiane              | 1 kg (10.1%)   | 60 %  | 3    |
| Grain | Słód cookie Viking Malt     | 0.5 kg (5%)    | 75 %  | 50   |
| Grain | Strzegom Karmel 150         | 0.5 kg (5%)    | 75 %  | 150  |
| Grain | Viking Czekoladowy ciemny   | 0.5 kg (5%)    | 67 %  | 900  |
| Grain | Strzegom Barwiący           | 0.16 kg (1.6%) | 68 %  | 1300 |
| Grain | Carafa III                  | 0.1 kg (1%)    | 70 %  | 1350 |
| Grain | Strzegom Czekoladowy ciemny | 0.17 kg (1.7%) | 68 %  | 1200 |

## Hops

| Use for | Name            | Amount | Time   | Alpha acid |
|---------|-----------------|--------|--------|------------|
| Boil    | Styrian Golding | 100 g  | 30 min | 4.2 %      |
| Boil    | Magnat          | 50 g   | 40 min | 10 %       |

## Yeasts

| Name         | Type | Form  | Amount  | Laboratory |
|--------------|------|-------|---------|------------|
| Safale US-05 | Ale  | Slant | 1200 ml | Fermentis  |

## Extras

| Type   | Name      | Amount | Use for | Time   |
|--------|-----------|--------|---------|--------|
| Fining | Whirlfloc | 0.5 g  | Boil    | 10 min |