

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 |