

# Czarna Dziura

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- 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