

# Black Hole RIS

- Gravity **20.9 BLG**
- ABV ---
- IBU **105**
- SRM **40**
- Style **Russian Imperial Stout**

## Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **35 %**
- Size with trub loss **16.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **18.6 liter(s)**

## Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.2 liter(s)**
- Total mash volume **29.6 liter(s)**

## Steps

- Temp **40 C**, Time **15 min**
- Temp **65 C**, Time **70 min**
- Temp **75 C**, Time **15 min**

## Mash step by step

- Heat up **22.2 liter(s)** of strike water to **43.3C**
- Add grains
- Keep mash **15 min** at **40C**
- Keep mash **70 min** at **65C**
- Keep mash **15 min** at **75C**
- Sparge using **3.8 liter(s)** of **76C** water or to achieve **18.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	4 kg (50.6%)	79 %	6
Grain	Caraaroma	0.5 kg (6.3%)	78 %	400
Grain	Jęczmień palony	0.5 kg (6.3%)	55 %	985
Grain	Strzegom Karmel 30	0.5 kg (6.3%)	75 %	30
Grain	Strzegom Czekoladowy ciemny	0.5 kg (6.3%)	68 %	1200
Grain	Żytni wędzony	0.5 kg (6.3%)	85 %	6
Grain	Barley, Flaked	0.4 kg (5.1%)	70 %	4
Grain	Oats, Flaked	0.5 kg (6.3%)	80 %	2
Sugar	Candi Sugar, Amber	0.5 kg (6.3%)	78.3 %	148

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	25 g	60 min	12 %
Boil	lunga	25 g	60 min	11 %
Boil	Magnum	30 g	60 min	12 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-05	Ale	Slant	100 ml	Safale

### Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips	10 g	Mash	---
Flavor	Płatki dębowe whiskey	30 g	Secondary	30 day(s)