

# Black Hole Sun - Rye

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **62**
- SRM **49.7**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **15.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **76C**
- Sparge using **8.6 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.5 kg (48.1%)	80 %	5
Grain	Viking Munich Malt	1 kg (19.2%)	78 %	18
Grain	Weyermann - Rye Malt	0.7 kg (13.5%)	85 %	7
Grain	Weyermann - Dehusked Carafa III	0.45 kg (8.7%)	70 %	1360
Grain	Barley, Flaked	0.35 kg (6.7%)	70 %	4
Grain	Strzegom Barwiący	0.2 kg (3.8%)	68 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	5 g	60 min	13.2 %
Boil	Simcoe	10 g	20 min	13.2 %
Aroma (end of boil)	Simcoe	35 g	10 min	13.2 %
Aroma (end of boil)	Citra	15 g	10 min	12 %
Aroma (end of boil)	Kohatu	15 g	10 min	7.8 %
Whirlpool	Kohatu	15 g	20 min	7.8 %
Whirlpool	Citra	15 g	15 min	12 %
Dry Hop	Simcoe	40 g	3 day(s)	13.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

## Notes

- Citra i Kohatu przy 75 stopniach  
*May 20, 2019, 6:12 PM*