

# Rye Black IPA

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- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **55**
- SRM **20.5**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **17.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **15.2 liter(s)**
- Total mash volume **19 liter(s)**

## Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15.2 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **5.9 liter(s)** of **76C** water or to achieve **17.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	1.2 kg (31.6%)	80 %	4
Grain	Żytni	1.9 kg (50%)	85 %	8
Grain	Weyermann - Carafa II	0.2 kg (5.3%)	70 %	837
Grain	Strzegom Monachijski typ I	0.5 kg (13.2%)	79 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga'19	39 g	40 min	10 %

## Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Łuska ryżowa	100 g	Mash	90 min