

# Black Rye IPA (Żytorillo klon)

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **45**
- SRM **28.7**
- Style **Rye IPA**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.6 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

## Steps

- Temp **68 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **80 C**, Time **0 min**

## Mash step by step

- Heat up **24 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **80C**
- Sparge using **13.6 liter(s)** of **76C** water or to achieve **29.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4.5 kg (56.3%)	80 %	4
Grain	Żytni	1 kg (12.5%)	85 %	8
Grain	Strzegom Monachijski typ II	1 kg (12.5%)	79 %	22
Grain	WeWyer mann - Carafa Specjal II	0.5 kg (6.3%)	5 %	1150
Grain	Rye, Flaked	0.5 kg (6.3%)	78.3 %	4
Grain	Słód owsiany Fawcett	0.5 kg (6.3%)	61 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	25 g	15 min	15 %
Whirlpool	Amarillo	50 g	0 min	9.5 %
30min w 80°C				
Dry Hop	Amarillo	25 g	14 day(s)	9.5 %
Dry Hop	Amarillo	50 g	3 day(s)	9.5 %
Boil	lunga	30 g	60 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Fining	Whirlfloc	2.5 g	Boil	10 min
Water Agent	chlerek wapnia	3 g	Mash	0 min
Water Agent	Witamina C	3 g	Secondary	3 day(s)
Water Agent	Sol Epsom	5 g	Mash	0 min