

# BLACK RYE IPA "ŻYTORILLO"

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **58**
- SRM **35.3**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **15.5 liter(s)**
- Trub loss **15 %**
- Size with trub loss **17.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22.1 liter(s)**

## Mash information

- Mash efficiency **65 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **15.6 liter(s)**
- Total mash volume **21.9 liter(s)**

## Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **15.6 liter(s)** of strike water to **77.6C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **22.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	3 kg (48%)	82 %	4
Grain	Strzegom Monachijski typ II	1 kg (16%)	79 %	22
Grain	Żytni	1 kg (16%)	85 %	8
Grain	cararye	0.5 kg (8%)	75 %	175
Grain	Weyermann - Chocolate Rye	0.35 kg (5.6%)	20 %	500
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Grain	Weyermann - Carafa II special	0.4 kg (6.4%)	70 %	837
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## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	35 g	60 min	11 %
Boil	Amarillo	25 g	15 min	9.5 %
Whirlpool	Amarillo	25 g	0 min	9.5 %
80-70C- 15min.				
Dry Hop	Amarillo	50 g	2 day(s)	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	11.5 g	---

## Extras

Type	Name	Amount	Use for	Time
Water Agent	chlorek wapnia	5 g	Boil	60 min
Water Agent	kreda	4 g	Boil	60 min
Water Agent	gips	2 g	Boil	60 min