

# Little ZŁY v.2black

- Gravity **9.3 BLG**
- ABV ---
- IBU **20**
- SRM **25.3**
- Style **Rye IPA**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **75 min**
- Evaporation rate **10 %/h**
- Boil size **12.9 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **4.8 liter(s)**
- Total mash volume **6.4 liter(s)**

## Steps

- Temp **72 C**, Time **65 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **4.8 liter(s)** of strike water to **80.7C**
- Add grains
- Keep mash **65 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **9.7 liter(s)** of **76C** water or to achieve **12.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	0.7 kg (43.7%)	81 %	4
Grain	Żytni	0.4 kg (25%)	85 %	8
Grain	Karmelowy żytni Strzegom	0.1 kg (6.2%)	75 %	150
Grain	Strzegom Czekoladowy jasny	0.1 kg (6.2%)	68 %	400
Grain	Brown	0.2 kg (12.5%)	68 %	185
Grain	Strzegom Karmel 300	0.1 kg (6.2%)	70 %	299

## Hops

Use for	Name	Amount	Time	Alpha acid
Mash	Citra	15 g	60 min	13.5 %
Boil	lunga	5 g	60 min	11.6 %
Boil	Willamate	10 g	10 min	4.5 %

## Yeasts

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

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Chlorek Wapnia	2 g	Boil	60 min