

## CITRUS polish BLACK IPA #3

- Gravity **18.2 BLG**
- ABV **7.8 %**
- IBU **57**
- SRM **33.6**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **22 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **2.2 liter(s) / kg**
- Mash size **15.2 liter(s)**
- Total mash volume **22.2 liter(s)**

### Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **15.2 liter(s)** of strike water to **75.3C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **5 min** at **78C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **22 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	BESTMALZ - Bestt Pale Ale	3.2 kg (46.2%)	80.5 %	6
Grain	Viking Pilsner malt	1.85 kg (26.7%)	82 %	4
Grain	Karmelowy Jasny 30EBC	0.4 kg (5.8%)	75 %	30
Grain	Strzegom Czekoladowy jasny	0.4 kg (5.8%)	68 %	400
Grain	Weyermann - Carafa III	0.38 kg (5.5%)	70 %	1024
Grain	Oats, Flaked	0.7 kg (10.1%)	80 %	2

Płatki owsiane pogłębiają smak i treściwość piwa, dają gładki, jedwabny, głęboki smak w piwie i pomagają pianie.

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	35 g	70 min	10 %
Boil	Oktawia	20 g	70 min	8.4 %
Boil	Izabella	20 g	5 min	5.8 %
Aroma (end of boil)	Oktawia	25 g	0 min	8.4 %
75C-20				

Aroma (end of boil)	ZULA	25 g	0 min	7.3 %
Aroma (end of boil)	Izabella	25 g	0 min	5.8 %
Dry Hop	Izabella	40 g	2 day(s)	5.8 %
Dry Hop	Oktawia	40 g	2 day(s)	7.1 %
Dry Hop	ZULA	40 g	2 day(s)	7.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-33	Ale	Dry	23 g	---

## Extras

Type	Name	Amount	Use for	Time
Water Agent	chlerek wapnia	2 g	Mash	60 min
Water Agent	gips	3 g	Mash	60 min
Flavor	suszony grapefruit	15 g	Boil	5 min
Flavor	suszona cytryna	10 g	Boil	5 min
Flavor	suszona limonka	15 g	Boil	5 min
Flavor	suszona słodka pomarańcza	10 g	Boil	5 min
Flavor	trawa cytrynowa	15 g	Boil	5 min
Flavor	liść kaffiru	5.5 g	Boil	5 min

## Notes

- #ciemne na wygrzew  
start od 15C - 17 do 20  
2,5 g glukozy na butelke  
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