

## Black IPA 5.0

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- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **20**
- SRM **36.4**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **16.5 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **16 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **4.5 liter(s)** of **76C** water or to achieve **16.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	2.4 kg (60%)	80 %	5
Soufflet				
Grain	Płatki owsiane	1.2 kg (30%)	60 %	3
W tym 200g błyskawicznych				
Grain	Jęczmień palony	0.15 kg (3.8%)	55 %	1150
Grain	Carafa III	0.15 kg (3.8%)	70 %	1400
Grain	Viking Czekoladowy jasny	0.1 kg (2.5%)	68 %	400

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Simcoe	10 g	45 min	11.3 %
Whirlpool	Simcoe	40 g	1 min	11.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM54 Gorączka kalifornijska	Ale	Liquid	120 ml	Fermentum Mobile

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Łuska ryżowa	100 g	Mash	90 min
Water Agent	Kreda	3 g	Mash	90 min
Water Agent	Chlorek wapnia	2.5 g	Mash	90 min
Water Agent	Kwas fosforowy	3 g	Mash	90 min
1 ml zacieranie/2ml wysładzanie				

## Notes

- Słody palone wrzucone przy wysładzaniu  
*Feb 10, 2023, 6:01 PM*