

# Czarna pantera

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **60**
- SRM **27.4**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.4 liter(s)**
- Total mash volume **23.2 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**

## Mash step by step

- Heat up **17.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **13.7 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilzński Malteurop	4.5 kg (77.6%)	80 %	4
Grain	Słód pszeniczny Bestmalz	0.5 kg (8.6%)	82 %	5
Grain	Słód Wiedeński Strzegom	0.4 kg (6.9%)	--- %	10
Grain	Słód Czekoladowy Strzegom	0.4 kg (6.9%)	--- %	1200

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Bravo	40 g	60 min	14 %
Aroma (end of boil)	Citra	30 g	1 min	12 %
Aroma (end of boil)	Mosaic	30 g	1 min	10 %
Dry Hop	Citra	30 g	4 day(s)	12 %
Dry Hop	Mosaic	30 g	4 day(s)	10 %
Dry Hop	Bravo	30 g	4 day(s)	14 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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Mangrove Jack's M42 New World Strong Ale	Ale	Slant	150 ml	Mangrove Jack's
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### Extras

Type	Name	Amount	Use for	Time
Other	Witamina C	4 g	Bottling	---

### Notes

- Na przyszłość trzeba dać więcej słodu ciemnego lub trochę (100-200 g) palonego jęczmienia, bo piwo wyszło trochę za jasne.  
Chmiel Bravo dodany na zimno przez pomyłkę, miało być 30 Mosaica i 40 g Citry.  
*Jan 30, 2021, 1:15 PM*