

# Czarna Materia

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- Gravity **18.4 BLG**
- ABV ---
- IBU **66**
- SRM **34.4**
- 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 **20.9 liter(s)**
- Total mash volume **27.8 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **20.9 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5.3 kg (76.3%)	79 %	6
Grain	Strzegom Monachijski typ II	0.5 kg (7.2%)	79 %	22
Grain	Strzegom Pszeniczny	0.4 kg (5.8%)	81 %	6
Grain	Weyermann - Carafa I	0.5 kg (7.2%)	70 %	690
Grain	Weyermann - Carared	0.25 kg (3.6%)	75 %	45

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Pekko	15 g	60 min	13.6 %
Boil	Columbus/Tomahawk/Zeus	20 g	60 min	15.5 %
Boil	Mosaic	20 g	30 min	10 %
Boil	Cascade	10 g	5 min	6 %
Boil	Cascade	10 g	0 min	6 %
Whirlpool	Cascade	10 g	15 min	6 %
Whirlpool	Pekko	10 g	15 min	13.6 %

Dry Hop	Cascade	20 g	10 day(s)	6 %
Dry Hop	Pekko	20 g	10 day(s)	13.6 %
Boil	Pekko	5 g	0 min	13.6 %

## Yeasts

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