

## black mamma

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- Gravity **16.5 BLG**
- ABV ---
- IBU **78**
- SRM **40**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **12.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9.3 liter(s)**
- Total mash volume **12.4 liter(s)**

### Steps

- Temp **66 C**, Time **60 min**

### Mash step by step

- Heat up **9.3 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **6.5 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	1.5 kg (48.4%)	79 %	6
Grain	Caramunich Malt	0.2 kg (6.5%)	71.7 %	110
Grain	Strzegom Monachijski typ II	1 kg (32.3%)	79 %	22
Grain	Strzegom Czekoladowy ciemny	0.2 kg (6.5%)	68 %	1200
Grain	Strzegom Barwiący	0.2 kg (6.5%)	68 %	1300

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Mosaic	30 g	50 min	10 %
Aroma (end of boil)	Sorachi Ace	30 g	10 min	10 %
Dry Hop	citra	30 g	14 day(s)	13.5 %

### Yeasts

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