

## 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  |