

Czarna Mamba

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **51**
- SRM **38.2**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **20.1 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **20.4 liter(s)**

Steps

- Temp **65 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15.3 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **50 min** at **65C**
- Keep mash **10 min** at **78C**
- Sparge using **9.9 liter(s)** of **76C** water or to achieve **20.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	2 kg (39.2%)	85 %	7
Grain	Słód pszeniczny jasny Viking	0.5 kg (9.8%)	82 %	4
Grain	Pilzneński	2 kg (39.2%)	81 %	4
Grain	Carafa III	0.2 kg (3.9%)	70 %	1034
Grain	Jęczmień palony	0.4 kg (7.8%)	55 %	985

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Amarillo	20 g	15 min	7.7 %
Boil	Citra	25 g	15 min	12.5 %
Boil	Simcoe	25 g	15 min	13.2 %
Whirlpool	Amarillo	30 g	---	7.7 %
Whirlpool	Citra	25 g	---	12.5 %
Whirlpool	Simcoe	25 g	---	13.2 %