

Czarna Magia

- Gravity **15.4 BLG**
- ABV ---
- IBU **30**
- SRM **46**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.1 liter(s)**
- Total mash volume **21.4 liter(s)**

Steps

- Temp **72 C**, Time **60 min**
- Temp **65 C**, Time **60 min**

Mash step by step

- Heat up **16.1 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **60 min** at **72C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Bohemian Pilsner Malt	4 kg (74.8%)	81 %	4
Grain	Weyermann - Light Munich Malt	0.5 kg (9.3%)	82 %	14
Grain	Weyermann - Chocolate Wheat	0.25 kg (4.7%)	74 %	788
Grain	Caraaroma	0.2 kg (3.7%)	78 %	400
Grain	Weyermann - Smoked Malt	0.2 kg (3.7%)	81 %	6
Grain	Weyermann - Carafa III	0.2 kg (3.7%)	70 %	1400

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Hallertau	60 g	60 min	4.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
British Ale M07	Ale	Slant	50 ml	Mangrove Jack's