

# RIS- Czarna Magia

- Gravity **29.6 BLG**
- ABV ---
- IBU **64**
- SRM **40**
- Style **Russian Imperial Stout**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **30.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **34 liter(s)**
- Total mash volume **47.6 liter(s)**

## Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **34 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **10 liter(s)** of **76C** water or to achieve **30.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	10 kg (73.5%)	79 %	6
Grain	Caraaroma	0.17 kg (1.3%)	78 %	400
Grain	Jęczmień palony	0.63 kg (4.6%)	55 %	985
Grain	płatki owsiane	0.5 kg (3.7%)	75 %	5
Grain	Strzegom Czekoladowy jasny	0.3 kg (2.2%)	68 %	400
Grain	Strzegom Czekoladowy ciemny	0.5 kg (3.7%)	68 %	1200
Grain	Strzegom Karmel 300	0.5 kg (3.7%)	70 %	299
Grain	Strzegom pszeniczny	1 kg (7.4%)	81 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	50 g	60 min	15.5 %
Boil	Kent Goldings	20 g	60 min	5.5 %
Boil	Columbus/Tomahawk/Zeus	10 g	30 min	15.5 %
Boil	Fuggles	10 g	30 min	4.3 %

Boil	Kent Goldings	10 g	30 min	5.5 %
Boil	Columbus/Tomahawk/Zeus	10 g	10 min	15.5 %
Boil	Fuggles	10 g	10 min	4.5 %
Boil	Kent Goldings	10 g	10 min	5.5 %
Boil	Columbus/Tomahawk/Zeus	10 g	5 min	15.5 %
Boil	Fuggles	10 g	5 min	4.5 %
Boil	Kent Goldings	10 g	5 min	5.5 %
Dry Hop	Fuggles	20 g	7 day(s)	4.5 %
Dry Hop	Kent Goldings	20 g	7 day(s)	5.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	300 ml	Safale