

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 % |

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|---------|------------------------|------|----------|--------|
| 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 |