

## Magicae Nigrae 4.0

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **24**
- SRM **35.3**
- Style **Sweet Stout**

### Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **18 %**
- Size with trub loss **13 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **16 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.4 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **15.5 liter(s)**

### Steps

- Temp **65 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **80 C**, Time **1 min**

### Mash step by step

- Heat up **12 liter(s)** of strike water to **71.6C**
- Add grains
- Keep mash **45 min** at **65C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **80C**
- Sparge using **7.5 liter(s)** of **76C** water or to achieve **16 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount          | Yield | EBC  |
|-------|-----------------------------|-----------------|-------|------|
| Grain | Weyermann - Monachijski II  | 3 kg (85.1%)    | 80 %  | 23   |
| Grain | Weyermann - Carafa I        | 0.3 kg (8.5%)   | 80 %  | 900  |
| Grain | Weyermann - Zakwaszający    | 0.125 kg (3.5%) | 80 %  | 5    |
| Grain | Weyermann - Palony Jęczmień | 0.1 kg (2.8%)   | 80 %  | 1150 |

Słody palone wrzucone na drugą przerwę.

### Hops

| Use for | Name                       | Amount | Time   | Alpha acid |
|---------|----------------------------|--------|--------|------------|
| Boil    | Columbus-Zeus (USA - 2018) | 10 g   | 60 min | 15.1 %     |

### Yeasts

| Name         | Type | Form  | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale  | Slant | 100 ml | Fermentis  |

### Extras

| Type        | Name                                          | Amount  | Use for   | Time     |
|-------------|-----------------------------------------------|---------|-----------|----------|
| Other       | Woda zaciernaie<br>(olsztyńska -<br>Nagórki)  | 12000 g | Mash      | 61 min   |
| Other       | Woda wysładzanie<br>(olsztyńska -<br>Nagórki) | 8000 g  | Mash      | 61 min   |
| Water Agent | Kwasfosforowy<br>(woda do<br>wysładzania)     | 3 g     | Mash      | 61 min   |
| Flavor      | Laktoza                                       | 250 g   | Boil      | 15 min   |
| Flavor      | Ksylitol                                      | 150 g   | Boil      | 15 min   |
| Fining      | Whirlfolc                                     | 1 g     | Boil      | 5 min    |
| Water Agent | Witamina C                                    | 2 g     | Secondary | 7 day(s) |