

Magiczny Astronom

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **35**
- SRM **32**
- Style **Oatmeal Stout**

Batch size

- Expected quantity of finished beer **19.9 liter(s)**
- Trub loss **5 %**
- Size with trub loss **20.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.2 liter(s)**
- Total mash volume **17.6 liter(s)**

Steps

- Temp **68 C**, Time **90 min**
- Temp **69 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **13.2 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **10 min** at **69C**
- Keep mash **1 min** at **76C**
- Sparge using **14.2 liter(s)** of **76C** water or to achieve **23 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1.9 kg (43.2%)	81 %	4
Grain	Monachijski	1.1 kg (25%)	80 %	16
Grain	Słód Owsiany	0.7 kg (15.9%)	80 %	2
Grain	Strzegom Karmel 300	0.3 kg (6.8%)	70 %	299
Grain	Strzegom Barwiący	0.2 kg (4.5%)	68 %	1300
Grain	Jęczmień palony	0.2 kg (4.5%)	--- %	1000

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	9.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	30 ml	Fermentum Mobile

Extras

Type	Name	Amount	Use for	Time
Fining	Mech Irlandzki	4 g	Boil	15 min