

# 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 |