

# Czarne złoto

- Gravity **12.6 BLG**
- ABV ---
- IBU **36**
- SRM **40.1**
- Style **Oatmeal Stout**

## Batch size

- Expected quantity of finished beer **28 liter(s)**
- Trub loss **5 %**
- Size with trub loss **29.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **35.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.8 liter(s)**
- Total mash volume **26.4 liter(s)**

## Steps

- Temp **70 C**, Time **80 min**

## Mash step by step

- Heat up **19.8 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **80 min** at **70C**
- Sparge using **22.2 liter(s)** of **76C** water or to achieve **35.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.4 kg (66.7%)	80 %	5
Grain	Fawcett - Pszeniczny Czekoladowy	0.45 kg (6.8%)	73 %	1001
Grain	Jęczmień palony	0.4 kg (6.1%)	55 %	985
Grain	Karmelowy Czerwony	0.3 kg (4.5%)	75 %	600
Grain	Caraaroma	0.2 kg (3%)	78 %	400
Grain	Płatki owsiane	0.25 kg (3.8%)	85 %	3
Grain	Jęczmień niesłodowany	0.6 kg (9.1%)	75 %	2

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Target	35 g	60 min	10.5 %
Boil	Styrian Golding	15 g	15 min	3.6 %
Boil	Fuggles	15 g	10 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M03 UK Dark Ale	Ale	Dry	11.5 g	Mangrove Jack's

## Notes

- Słody palone dodaję na 10 minut przed końcem zacierania  
*Apr 2, 2017, 9:13 AM*