

# CZARNY JÓZEF

- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **24**
- SRM **25.8**
- Style **American Brown Ale**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **24.8 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **18.6 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **76C**
- Sparge using **15.1 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (80.6%)	80 %	5
Grain	Strzegom Karmel 300	0.35 kg (5.6%)	70 %	299
Grain	Karmelowy żytni Strzegom	0.3 kg (4.8%)	75 %	150
Grain	Pszeniczny	0.3 kg (4.8%)	85 %	4
Grain	Strzegom Barwiący	0.25 kg (4%)	68 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	20 g	60 min	12.5 %
Whirlpool	Tradition	50 g	0 min	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Slant	1500 ml	2
Drożdże po Black IPA				

## Extras

Type	Name	Amount	Use for	Time
Other	Glukoza	500 g	Boil	10 min