

# czarna kooperacja z somsiadem

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **35**
- SRM **36.2**
- Style **Sweet Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 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 **78 C**, Time **5 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 **5 min** at **78C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	4 kg (61.5%)	82 %	4
Grain	Monachijski Ciemny Steinbach	1.3 kg (20%)	100 %	30
Grain	Carafa II	0.3 kg (4.6%)	70 %	812
Grain	Briess - Dark Chocolate Malt	0.3 kg (4.6%)	60 %	827
Grain	Briess - Chocolate wheat	0.3 kg (4.6%)	60 %	820
Adjunct	Briess - Oat Flakes	0.3 kg (4.6%)	80 %	2.8

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	30 g	60 min	13 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis