

# Piwo ciemne bez spiny

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- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **32**
- SRM **23.4**
- Style **Dry Stout**

## 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 **25.3 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)**

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Maris Otter Crisp	3 kg (68.2%)	83 %	6
Grain	Monachijski	0.5 kg (11.4%)	80 %	16
Grain	Caramel/Crystal Malt - 20L	0.5 kg (11.4%)	75 %	39
Grain	Chocolate Malt (UK)	0.4 kg (9.1%)	73 %	887

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	East Kent Goldings	40 g	60 min	5.6 %
Aroma (end of boil)	East Kent Goldings	10 g	15 min	5.6 %
Aroma (end of boil)	Hallertau	10 g	15 min	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	20 g	Fermentis