

# Czarna Krew

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- Gravity **12.1 BLG**
- ABV ---
- IBU **37**
- SRM **50.9**
- Style **Dry Stout**

## Batch size

- Expected quantity of finished beer **40 liter(s)**
- Trub loss **5 %**
- Size with trub loss **42 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **50.6 liter(s)**

## Mash information

- Mash efficiency **60 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **34.5 liter(s)**
- Total mash volume **46 liter(s)**

## Steps

- Temp **67 C**, Time **90 min**
- Temp **72 C**, Time **10 min**

## Mash step by step

- Heat up **34.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **10 min** at **72C**
- Sparge using **27.6 liter(s)** of **76C** water or to achieve **50.6 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	7 kg (60.9%)	80 %	5
Grain	Monachijski	3 kg (26.1%)	80 %	16
Grain	Jęczmień palony	0.8 kg (7%)	55 %	985
Grain	Czekoladowy	0.7 kg (6.1%)	60 %	788

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	60 g	60 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	23 g	Safale

## Notes

- Do jednej połowy brzeczeki ok. 200 g kawy, do drugiej ok. 0.8 kg laktozy. Słody palone od początku zacierania jeśli chcemy paloność, jak tylko kolor to na ostatnie 10 min  
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