

# All Black

- Gravity **17.2 BLG**
- ABV ---
- IBU **88**
- SRM ---
- Style **Robust Porter**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **12.7 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size --- **liter(s)**
- Total mash volume --- **liter(s)**

## Steps

- Temp **65 C**, Time **30 min**

## Mash step by step

- Heat up **liter(s)** of strike water to **C**
- Add grains
- Keep mash **30 min** at **65C**
- Sparge using **liter(s)** of **C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Liquid Extract	Ekstrakt płynny WES Ciemny	1.7 kg (68%)	--- %	---
Dry Extract	Ekstrakt suchy WES jasny	0.8 kg (32%)	--- %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	EKG	40 g	60 min	11.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	7 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Spice	Kawa	150 g	Bottling	---