

# robert

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- Gravity **18.7 BLG**
- ABV ---
- IBU **30**
- SRM **32.6**
- Style **Robust Porter**

## Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.1 liter(s)**
- Total mash volume **13.5 liter(s)**

## Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

## Mash step by step

- Heat up **10.1 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **7.5 liter(s)** of **76C** water or to achieve **14 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	0.89 kg (24%)	80 %	4
Grain	Carafa II	0.09 kg (2.4%)	70 %	812
Grain	Caraaroma	0.3 kg (8.1%)	78 %	400
Grain	Viking Pale Ale malt	2 kg (54%)	80 %	5
Grain	Strzegom Czekoladowy ciemny	0.1 kg (2.7%)	68 %	1200
Dry Extract	gozdawa jasny	0.127 kg (3.4%)	--- %	---
Grain	Płatki pszeniczne	0.2 kg (5.4%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Aurora	20 g	40 min	8.5 %
Boil	Aurora	15 g	5 min	8.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Slant	90 ml	Safale