

# Królowa Zula

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **31**
- SRM **4.9**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **0 min**

## Mash step by step

- Heat up **17.5 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **0 min** at **76C**
- Sparge using **14 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (90%)	80 %	5
Grain	Carahell	0.5 kg (10%)	77 %	26

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zula	25 g	60 min	8.3 %
Boil	Zula	20 g	10 min	8.3 %
Boil	Zula	15 g	5 min	8.3 %
Aroma (end of boil)	Zula	20 g	0 min	8.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

## Notes

- Fermentacja burzliwa 17>20st.  
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