

Pośród Zulusów - African Pale Ale

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **36**
- SRM **4.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **5 min** at **78C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Colorado Pale Base Malt	5 kg (100%)	80 %	6

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Southern star	12 g	50 min	15.8 %
Boil	African Queen	12 g	50 min	13.5 %
Aroma (end of boil)	Southern star	38 g	0 min	15.8 %
Aroma (end of boil)	African Queen	38 g	0 min	13.5 %
Dry Hop	Southern star	100 g	7 day(s)	15.8 %
Dry Hop	African Queen	100 g	7 day(s)	13.5 %

Yeasts

Name	Type	Form	Amount	Laboratory
Danstar - Nottingham	Ale	Dry	11 g	Danstar

Extras

Type	Name	Amount	Use for	Time
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Herb	Honeybush	100 g	Secondary	5 day(s)
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Notes

- Fermentacja:
Burzliwa (7-8 dni w 18-20 st. C)
Cicha (7 dni w 18-20 st. C)

Butelkowanie:

Syrop cukrowy na refermentację (100 g cukru w 400 ml wody)

Dojrzewanie piwa:

3 tygodnie w temperaturze 10-18 st. C.

(Koszt surowców w TB 103,5 zł)

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