

Królowa Zula II

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **29**
- SRM **5**
- Style **Extra Special/Strong Bitter (English 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 **3.8 liter(s) / kg**
- Mash size **20.5 liter(s)**
- Total mash volume **25.9 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **20.5 liter(s)** of strike water to **72.1C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **11.4 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 (83.3%)	80 %	5
Grain	Carahell	0.5 kg (9.3%)	77 %	26
Grain	Briess - Barley Flakes	0.4 kg (7.4%)	70 %	3

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zula	20 g	60 min	8.3 %
Boil	Zula	10 g	10 min	8.3 %
Boil	Zula	10 g	5 min	8.3 %
Aroma (end of boil)	Zula	10 g	0 min	8.3 %
Whirlpool	Zula	30 g	20 min	8.3 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	120 ml	Fermentis