

## SH#4 ZULA

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **46**
- SRM **5.8**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.6 liter(s) / kg**
- Mash size **7.8 liter(s)**
- Total mash volume **10.8 liter(s)**

### Steps

- Temp **55 C**, Time **10 min**
- Temp **64 C**, Time **25 min**
- Temp **72 C**, Time **25 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **7.8 liter(s)** of strike water to **61.7C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **25 min** at **64C**
- Keep mash **25 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **10.4 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.5 kg (83.3%)	81 %	4
Grain	Pszeniczny	0.25 kg (8.3%)	85 %	4
Grain	Weyermann - Caraamber	0.25 kg (8.3%)	75 %	65

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Zula	10 g	60 min	8.3 %
Boil	Zula	10 g	30 min	8.3 %
Boil	Zula	20 g	15 min	8.3 %
Aroma (end of boil)	Zula	30 g	2 min	8.3 %
Dry Hop	Zula	30 g	5 day(s)	8.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis