

## SMaSH zula

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **39**
- SRM **3.3**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **18.9 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **14.7 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **14.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.2 kg (100%)	81 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	zula	35 g	60 min	8.3 %
Aroma (end of boil)	zula	35 g	5 min	8.3 %
Dry Hop	zula	30 g	3 day(s)	8.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
fm52	Ale	Slant	160200 ml	fm