

zappa smash

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **40**
- SRM **3.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **7.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **7.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **9.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.75 liter(s) / kg**
- Mash size **7.5 liter(s)**
- Total mash volume **9.5 liter(s)**

Steps

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

Mash step by step

- Heat up **7.5 liter(s)** of strike water to **74.4C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **4 liter(s)** of **76C** water or to achieve **9.5 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	2 kg (100%)	82 %	4

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	zappa	25 g	60 min	4.2 %
Boil	zappa	25 g	10 min	4.2 %
Whirlpool	zappa	50 g	0 min	4.2 %

Yeasts

Name	Type	Form	Amount	Laboratory
mangrove jack's m66	Ale	Dry	10 g	---