

## MS3

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- Gravity **17.7 BLG**
- ABV ---
- IBU **75**
- SRM **7.4**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **23.4 liter(s)**
- Total mash volume **31.2 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **23.4 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **75C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	7.5 kg (96.2%)	85 %	7
Grain	Weyermann - Carapils	0.3 kg (3.8%)	78 %	4

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Citra	20 g	60 min	12 %
Boil	Amarillo	20 g	60 min	9.5 %
Boil	Cascade	20 g	60 min	6 %
Boil	Citra	10 g	10 min	12 %
Boil	Amarillo	10 g	10 min	9.5 %
Boil	Cascade	10 g	10 min	6 %
Dry Hop	Citra	10 g	3 day(s)	12 %
Dry Hop	Amarillo	10 g	3 day(s)	9.5 %
Dry Hop	Cascade	10 g	3 day(s)	6 %
Boil	Marynka	30 g	60 min	10 %
Whirlpool	Amarillo	10 g	10 min	9.5 %
Whirlpool	Citra	10 g	10 min	12 %

Whirlpool	Cascade	10 g	10 min	6 %
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## Yeasts

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