

## IPA #3

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **99**
- SRM **4.2**
- 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 **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

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

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **20.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Malteurop Pale Ale	5.5 kg (100%)	80 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	20 g	60 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	30 g	30 min	15.5 %
Boil	Mosaic	20 g	15 min	10 %
Boil	Equinox	20 g	15 min	13.1 %
Aroma (end of boil)	Simcoe	20 g	15 min	13.2 %
Aroma (end of boil)	Amarillo	20 g	15 min	9.5 %
Dry Hop	Columbus/Tomahawk/Zeus	30 g	7 day(s)	15.5 %
Dry Hop	Simcoe	30 g	7 day(s)	13.2 %
Dry Hop	Amarillo	30 g	7 day(s)	9.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	10 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
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Water Agent	gips	4 g	Boil	60 min
Water Agent	chlorek wapnia	4 g	Boil	60 min