

## 2017 IPA

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- Gravity **16.8 BLG**
- ABV ---
- IBU **93**
- SRM **16.2**
- Style **American Pale Ale**

### 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 **21 liter(s)**
- Total mash volume **28 liter(s)**

### Steps

- Temp **63.5 C**, Time **60 min**
- Temp **77 C**, Time **5 min**

### Mash step by step

- Heat up **21 liter(s)** of strike water to **70.8C**
- Add grains
- Keep mash **60 min** at **63.5C**
- Keep mash **5 min** at **77C**
- Sparge using **17.7 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (52.6%)	80 %	5
Grain	Viking Pilsner malt	1 kg (13.2%)	82 %	4
Grain	Caramel/Crystal Malt - 20L	1 kg (13.2%)	75 %	39
Adjunct	Briess - Oat Flakes	0.6 kg (7.9%)	80 %	5
Grain	Briess - Rye Malt	0.4 kg (5.3%)	80 %	7
Grain	Caramel/Crystal Malt - 120L	0.4 kg (5.3%)	72 %	236
Grain	Carahell	0.2 kg (2.6%)	77 %	26

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	40 g	60 min	10 %
Boil	Mosaic	22 g	60 min	12.8 %
Boil	Simcoe	15 g	60 min	13.2 %
Aroma (end of boil)	Simcoe	25 g	30 min	13.2 %
Whirlpool	Mosaic	33 g	5 min	12.8 %
Whirlpool	Simcoe	28 g	20 min	13.2 %
Whirlpool	Cascade	30 g	20 min	4.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
US-04	Ale	Dry	15 g	---