

## 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 %      |

|         |         |      |          |      |
|---------|---------|------|----------|------|
| Dry Hop | Citra   | 50 g | 7 day(s) | 12 % |
| Dry Hop | Cascade | 25 g | 7 day(s) | 6 %  |

### Yeasts

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