

## 3 na 3 +

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- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **40**
- SRM **10.9**
- Style **English IPA**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **13.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.9 liter(s)**
- Total mash volume **14.6 liter(s)**

### Steps

- Temp **40 C**, Time **10 min**
- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **20 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **10.9 liter(s)** of strike water to **43.3C**
- Add grains
- Keep mash **10 min** at **40C**
- Keep mash **10 min** at **52C**
- Keep mash **20 min** at **62C**
- Keep mash **20 min** at **72C**
- Sparge using **8.1 liter(s)** of **76C** water or to achieve **15.3 liter(s)** of wort

### Fermentables

| Type    | Name                       | Amount         | Yield  | EBC |
|---------|----------------------------|----------------|--------|-----|
| Grain   | BESTMALZ - Best Wheat Malt | 1 kg (26.3%)   | 82 %   | 4   |
| Grain   | Briess - Rye Malt          | 1 kg (26.3%)   | 80 %   | 7   |
| Grain   | BESTMALZ - Best Minich     | 1 kg (26.3%)   | 80.5 % | 16  |
| Grain   | BEST Caramel® Munich II    | 0.4 kg (10.5%) | 75 %   | 120 |
| Adjunct | Oats, Flaked               | 0.15 kg (3.9%) | 80 %   | 2   |
| Grain   | Kasza Gryczana             | 0.25 kg (6.6%) | 70 %   | --- |

### Hops

| Use for | Name                  | Amount | Time   | Alpha acid |
|---------|-----------------------|--------|--------|------------|
| Boil    | Saaz (Czech Republic) | 15 g   | 60 min | 4.5 %      |
| Boil    | Saaz (Czech Republic) | 12 g   | 45 min | 4.5 %      |
| Boil    | Amarillo              | 12 g   | 10 min | 9.5 %      |
| Boil    | Chinook               | 14 g   | 10 min | 13 %       |

|                     |         |      |          |        |
|---------------------|---------|------|----------|--------|
| Aroma (end of boil) | Chinook | 10 g | 5 min    | 13 %   |
| Dry Hop             | Mosaic  | 20 g | 3 day(s) | 10 %   |
| Dry Hop             | Simcoe  | 20 g | 3 day(s) | 13.2 % |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 50 g   | ---        |