

CDA

- Gravity **16.8 BLG**
- ABV ---
- IBU **57**
- SRM **40**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **16 %**
- Size with trub loss **24.4 liter(s)**
- Boil time **80 min**
- Evaporation rate **17 %/h**
- Boil size **29.9 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.3 liter(s) / kg**
- Mash size **22.4 liter(s)**
- Total mash volume **29.2 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **22.4 liter(s)** of strike water to **73C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **29.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|----------------|-------|------|
| Grain | Pilsner (2 Row) Ger | 5.5 kg (80.9%) | 81 % | 4 |
| Grain | Biscuit Malt | 0.2 kg (2.9%) | 79 % | 45 |
| Grain | Carahell | 0.5 kg (7.4%) | 74 % | 50 |
| Grain | Weyermann - Carafa II | 0.5 kg (7.4%) | 70 % | 1100 |
| Grain | Czekoladowy | 0.1 kg (1.5%) | 60 % | 788 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|-------------|--------|----------|------------|
| Boil | Chinook | 30 g | 60 min | 11.2 % |
| Boil | Sorachi Ace | 30 g | 30 min | 10 % |
| Boil | Willamette | 30 g | 15 min | 5 % |
| Whirlpool | Amarillo | 25 g | 0 min | 8.9 % |
| Dry Hop | Mosaic | 10 g | 7 day(s) | 10 % |
| Dry Hop | Centennial | 28 g | 7 day(s) | 10.5 % |
| Dry Hop | Simcoe | 33 g | 7 day(s) | 13 % |
| Dry Hop | Citra | 15 g | 4 day(s) | 12 % |

| | | | | |
|---------|---------|------|----------|--------|
| Dry Hop | Equinox | 15 g | 4 day(s) | 13.1 % |
|---------|---------|------|----------|--------|

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|--------|--------|------------|
| Safale S-05 | Ale | Liquid | 250 ml | Safale |