

Black ipa

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **64**
- SRM **28.5**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **11.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.9 liter(s)**
- Total mash volume **14.5 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **10.9 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **76C**
- Sparge using **7.9 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|-----------------|--------|-----|
| Grain | Viking Pale Ale malt | 3 kg (79.5%) | 80 % | 5 |
| Grain | Caraaroma | 0.125 kg (3.3%) | 78 % | 400 |
| Grain | Biscuit Malt | 0.2 kg (5.3%) | 79 % | 45 |
| Grain | Carafa II | 0.3 kg (7.9%) | 70 % | 820 |
| Sugar | Candi Sugar, Clear | 0.15 kg (4%) | 78.3 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|---------|--------|----------|------------|
| Boil | Citra | 15 g | 60 min | 13.5 % |
| Boil | Cascade | 20 g | 30 min | 6 % |
| Boil | Cascade | 20 g | 15 min | 6 % |
| Boil | Citra | 20 g | 5 min | 13.5 % |
| Whirlpool | Citra | 15 g | 10 min | 13.5 % |
| Whirlpool | Cascade | 15 g | 10 min | 6 % |
| Dry Hop | Citra | 30 g | 5 day(s) | 13.5 % |
| Dry Hop | Cascade | 30 g | 5 day(s) | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|-------------|-------------|---------------|-------------------|
| US-05 | Ale | Dry | 11 g | Fermentis |