

Black IPA

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **63**
- SRM **33**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.1 liter(s)**
- Total mash volume **24.1 liter(s)**

Steps

- Temp **66 C**, Time **45 min**
- Temp **66 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **18.1 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **15 min** at **66C**
- Keep mash **45 min** at **66C**
- Keep mash **5 min** at **78C**
- Sparge using **14.7 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|----------------|-------|------|
| Grain | Pale Malt (2 Row) US | 5 kg (79.7%) | 79 % | 10 |
| Grain | Weyermann Caramunich 3 | 0.1 kg (1.6%) | 76 % | 150 |
| Grain | Weyermann - Carapils | 0.1 kg (1.6%) | 78 % | 4 |
| Grain | Biscuit Malt | 0.25 kg (4%) | 79 % | 45 |
| Grain | Carafa II | 0.57 kg (9.1%) | 70 % | 1100 |
| Sugar | Brown Sugar | 0.25 kg (4%) | 100 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------------------|--------|--------|------------|
| Boil | Magnum | 30 g | 60 min | 13.5 % |
| Boil | Cascade | 15 g | 30 min | 6 % |
| Boil | Cascade | 15 g | 15 min | 6 % |
| Boil | Falconer's Flight | 30 g | 15 min | 9.5 % |
| Boil | Cascade | 20 g | 0 min | 6 % |
| Dry Hop | Cascade | 30 g | --- | 6 % |
| Dry Hop | Falconer's Flight | 30 g | --- | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-------------------|--------|---------|--------|
| Flavor | Skórka pomarańczy | 150 g | Boil | 15 min |