

## Black IPA

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **94**
- SRM **28.5**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **5 %/h**
- Boil size **25.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.3 liter(s)**
- Total mash volume **24.4 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **60 min**

### Mash step by step

- Heat up **18.3 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **60 min** at **72C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **25.5 liter(s)** of wort

### Fermentables

| Type  | Name                           | Amount         | Yield  | EBC |
|-------|--------------------------------|----------------|--------|-----|
| Grain | Strzegom Pilzneński            | 5 kg (78.1%)   | 80 %   | 4   |
| Grain | Weyermann - Dehusked Carafa II | 0.5 kg (7.8%)  | 70 %   | 837 |
| Grain | Abbey Castle                   | 0.15 kg (2.3%) | 80 %   | 45  |
| Grain | Carahell                       | 0.2 kg (3.1%)  | 77 %   | 26  |
| Sugar | Brown Sugar, Dark              | 0.3 kg (4.7%)  | 100 %  | 99  |
| Grain | Special B Malt                 | 0.25 kg (3.9%) | 65.2 % | 315 |

### Hops

| Use for             | Name       | Amount | Time   | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil                | Simcoe     | 25 g   | 60 min | 12.9 %     |
| Boil                | Centennial | 25 g   | 45 min | 9.5 %      |
| Aroma (end of boil) | Admiral    | 25 g   | 30 min | 13.3 %     |
| Aroma (end of boil) | Equinox    | 37 g   | 12 min | 13.1 %     |
| Whirlpool           | Centennial | 50 g   | 0 min  | 9.5 %      |

### Yeasts

| Name         | Type | Form  | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale  | Slant | 500 ml | Fermentis  |