

# Black IPA

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU **70**
- SRM **38.9**
- Style **Black IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **23.1 liter(s)**
- Total mash volume **29.7 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **23.1 liter(s)** of strike water to **71.4C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **8.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

| Type     | Name                        | Amount         | Yield | EBC  |
|----------|-----------------------------|----------------|-------|------|
| Grain    | Viking Pilsner malt         | 4.5 kg (68.2%) | 82 %  | 4    |
| Grain    | Weyermann - Pale Ale Malt   | 1 kg (15.2%)   | 85 %  | 7    |
| Grain    | Carafa II                   | 0.3 kg (4.5%)  | 70 %  | 812  |
| Grain    | Strzegom Czekoladowy ciemny | 0.3 kg (4.5%)  | 68 %  | 1200 |
| Grain    | Jęczmień palony             | 0.2 kg (3%)    | 55 %  | 985  |
| Do 72 st |                             |                |       |      |
| Grain    | Karmelowy Czerwony          | 0.3 kg (4.5%)  | 75 %  | 59   |

## Hops

| Use for             | Name              | Amount | Time   | Alpha acid |
|---------------------|-------------------|--------|--------|------------|
| Boil                | Simcoe            | 30 g   | 50 min | 14.5 %     |
| Boil                | Amarillo          | 20 g   | 25 min | 9.8 %      |
| Aroma (end of boil) | Ahtanum           | 20 g   | 15 min | 3.6 %      |
| Aroma (end of boil) | Citra             | 20 g   | 5 min  | 13.1 %     |
| Aroma (end of boil) | Falconer's Flight | 20 g   | 5 min  | 10.3 %     |

|           |                   |      |          |        |
|-----------|-------------------|------|----------|--------|
| Whirlpool | Falconer's Flight | 20 g | 20 min   | 10.3 % |
| Dry Hop   | Simcoe            | 40 g | 4 day(s) | 14.5 % |

## Yeasts

| Name                 | Type | Form  | Amount | Laboratory       |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale  | Slant | 200 ml | Fermentum Mobile |