

# Black IPA #1

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **38**
- SRM **28.4**
- 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 **60 min**
- Evaporation rate **10 %/h**
- Boil size **30 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.8 liter(s) / kg**
- Mash size **23.2 liter(s)**
- Total mash volume **29.3 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**

## Mash step by step

- Heat up **23.2 liter(s)** of strike water to **74.3C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **30 liter(s)** of wort

## Fermentables

| Type  | Name                | Amount         | Yield | EBC  |
|-------|---------------------|----------------|-------|------|
| Grain | Pilzneński          | 5 kg (82%)     | 81 %  | 4    |
| Grain | Pszeniczny          | 0.5 kg (8.2%)  | 85 %  | 4    |
| Grain | Black (Patent) Malt | 0.25 kg (4.1%) | 55 %  | 985  |
| Grain | Carafa III          | 0.35 kg (5.7%) | 70 %  | 1034 |

## Hops

| Use for             | Name    | Amount | Time     | Alpha acid |
|---------------------|---------|--------|----------|------------|
| Boil                | Cascade | 20 g   | 60 min   | 6 %        |
| Aroma (end of boil) | Cascade | 20 g   | 10 min   | 6 %        |
| Aroma (end of boil) | Calypso | 20 g   | 10 min   | 13.5 %     |
| Whirlpool           | Cascade | 20 g   | 20 min   | 6 %        |
| Whirlpool           | Calypso | 30 g   | 20 min   | 13.5 %     |
| Dry Hop             | Cascade | 40 g   | 4 day(s) | 6 %        |
| Dry Hop             | Calypso | 35 g   | 2 day(s) | 13.5 %     |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 11.5 g | Fermentis  |