

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 |