

Black IPA

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **49**
- SRM **40**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **65 min**
- Evaporation rate **15 %/h**
- Boil size **32 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **21.4 liter(s)**
- Total mash volume **28.1 liter(s)**

Steps

- Temp **62 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **21.4 liter(s)** of strike water to **68.6C**
- Add grains
- Keep mash **60 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **32 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|------|
| Grain | Briess - Pale Ale Malt | 5.5 kg (82.1%) | 80 % | 7 |
| Grain | Strzegom Karmel 600 | 0.5 kg (7.5%) | 68 % | 601 |
| Grain | Carafa III | 0.4 kg (6%) | 70 % | 1034 |
| Grain | Strzegom pszenica prażona | 0.3 kg (4.5%) | 70 % | 1000 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|-----------|--------|----------|------------|
| Boil | Cascade | 20 g | 60 min | 8 % |
| Whirlpool | Cascade | 30 g | 30 min | 6 % |
| Whirlpool | El Dorado | 30 g | 30 min | 15 % |
| Whirlpool | ctz | 30 g | 30 min | 15.7 % |
| Dry Hop | El Dorado | 18 g | 2 day(s) | 15 % |
| Dry Hop | ctz | 28 g | 2 day(s) | 13.2 % |
| Dry Hop | Chinook | 30 g | 2 day(s) | 13 % |
| Whirlpool | Cascade | 20 g | 2 min | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-04 | Ale | Slant | 200 ml | Safale |