

Black IPA

- Gravity **16.9 BLG**
- ABV ---
- IBU **82**
- SRM **40**
- 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 **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

Steps

- Temp **63 C**, Time **15 min**
- Temp **67 C**, Time **30 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **16.8 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **15 min** at **63C**
- Keep mash **30 min** at **67C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|---------------|-------|------|
| Grain | Strzegom Pilzneński | 4 kg (71.4%) | 80 % | 4 |
| Grain | Strzegom Monachijski typ II | 1 kg (17.9%) | 79 % | 22 |
| Grain | Strzegom Karmel 150 | 0.2 kg (3.6%) | 75 % | 150 |
| Grain | Strzegom Czekoladowy 1200 | 0.2 kg (3.6%) | 68 % | 1202 |
| Grain | Strzegom Barwiący | 0.2 kg (3.6%) | 68 % | 1300 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|----------|------------|
| Boil | Magnum | 35 g | 60 min | 11.8 % |
| Boil | Columbus/Tomahawk/Zeus | 25 g | 15 min | 14 % |
| Boil | Centennial | 25 g | 5 min | 11 % |
| Dry Hop | Simcoe | 75 g | 7 day(s) | 13 % |
| Dry Hop | Centennial | 25 g | 7 day(s) | 11 % |
| Boil | Simcoe | 25 g | 15 min | 13 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|-------|--------|------------|
| Safale S-05 | Ale | Slant | 100 ml | Safale |