

Black Ipa

- Gravity **15.7 BLG**
- ABV ---
- IBU **71**
- SRM **40**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

Steps

- Temp **67 C**, Time **90 min**
- Temp **67 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **16.5 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **15 min** at **67C**
- Keep mash **90 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **14.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------------|----------------|-------|------|
| Grain | Strzegom Pale Ale | 4.6 kg (83.6%) | 79 % | 6 |
| Grain | Simpsons - Crystal Extra Dark | 0.4 kg (7.3%) | 74 % | 315 |
| Grain | Strzegom Czekoladowy ciemny | 0.3 kg (5.5%) | 68 % | 1200 |
| Grain | Strzegom Barwiący | 0.2 kg (3.6%) | 68 % | 1300 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|----------|------------|
| Boil | Bravo | 25 g | 60 min | 13.7 % |
| Boil | Dr Rudi | 25 g | 20 min | 11.8 % |
| Boil | Simcoe | 20 g | 15 min | 11.4 % |
| Boil | Cascade | 15 g | 10 min | 6 % |
| Boil | Cascade | 15 g | 5 min | 7.7 % |
| Boil | Cascade | 20 g | 1 min | 7.7 % |
| Dry Hop | Cascade | 30 g | 7 day(s) | 7.7 % |
| Dry Hop | Amarillo | 20 g | 5 day(s) | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------------------------|------|------|--------|-----------------|
| Mangrove Jack's M44 US West Coast | Ale | Dry | 10 g | Mangrove Jack's |