

Black IPA

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **61**
- SRM **26.2**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **24 liter(s)**
- Trub loss **5 %**
- Size with trub loss **25.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.8 liter(s)**

Mash information

- Mash efficiency **83 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.2 liter(s)**
- Total mash volume **25.6 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **19.2 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **10 min** at **78C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **29.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 4.4 kg (68.8%) | 80 % | 4 |
| Grain | Strzegom Karmel 30 | 0.5 kg (7.8%) | 75 % | 30 |
| Grain | Strzegom Czekoladowy ciemny | 0.4 kg (6.3%) | 68 % | 1200 |
| Grain | Strzegom Pilzneński | 1 kg (15.6%) | 80 % | 4 |
| Grain | Caraaroma | 0.1 kg (1.6%) | 78 % | 400 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 10 g | 60 min | 15.5 % |
| Boil | Rakau (NZ) | 20 g | 60 min | 10.5 % |
| Boil | Centennial | 15 g | 20 min | 10.5 % |
| Boil | Simcoe | 15 g | 20 min | 13.2 % |
| Boil | Rakau (NZ) | 20 g | 20 min | 10.5 % |
| Whirlpool | Centennial | 15 g | 0 min | 10.5 % |
| Whirlpool | Simcoe | 15 g | 0 min | 13.2 % |
| Whirlpool | Rakau (NZ) | 20 g | 0 min | 10.5 % |
| Dry Hop | Centennial | 20 g | 4 day(s) | 10.5 % |

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|---------|--------|------|----------|--------|
| Dry Hop | Simcoe | 20 g | 4 day(s) | 13.2 % |
|---------|--------|------|----------|--------|