

Black IPA

- Gravity **17.3 BLG**
- ABV **7.4 %**
- IBU **47**
- SRM **30.9**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **23.4 liter(s)**

Steps

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

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|------|
| Grain | Pilzneński | 5 kg (78.7%) | 90 % | 4 |
| Grain | Karmelowy żytni Strzegom | 0.1 kg (1.6%) | 75 % | 220 |
| Grain | Carafa II | 0.5 kg (7.9%) | 70 % | 1150 |
| Grain | Biscuit Malt | 0.25 kg (3.9%) | 79 % | 50 |
| Sugar | Cukier kandyzowany | 0.5 kg (7.9%) | 100 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|----------|------------|
| Boil | Centennial | 30 g | 60 min | 8.5 % |
| Boil | Cascade PL | 30 g | 45 min | 7.6 % |
| Boil | Willamette | 30 g | 15 min | 4.8 % |
| Dry Hop | Cascade | 60 g | 7 day(s) | 7.6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|--------|-------------------|------|------|--------|
| Flavor | Skórka Pomarańczy | 70 g | Boil | 30 min |
|--------|-------------------|------|------|--------|