

## Black IPA nr 2

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **63**
- SRM **28.1**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

### Steps

- Temp **58 C**, Time **10 min**
- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **16.5 liter(s)** of strike water to **64.3C**
- Add grains
- Keep mash **10 min** at **58C**
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **15.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

### Fermentables

| Type    | Name                       | Amount         | Yield | EBC |
|---------|----------------------------|----------------|-------|-----|
| Grain   | Viking Pale Ale malt       | 4.6 kg (80.7%) | 80 %  | 5   |
| Grain   | Strzegom Karmel 600        | 0.4 kg (7%)    | 68 %  | 601 |
| Grain   | Strzegom Czekoladowy jasny | 0.3 kg (5.3%)  | 68 %  | 400 |
| Grain   | Carafa II                  | 0.2 kg (3.5%)  | 70 %  | 812 |
| Adjunct | Rice Hulls                 | 0.2 kg (3.5%)  | 1 %   | 0   |

### Hops

| Use for   | Name     | Amount | Time     | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil      | Bravo    | 20 g   | 60 min   | 15.5 %     |
| Boil      | Eldorado | 20 g   | 15 min   | 12.4 %     |
| Whirlpool | Sabro    | 30 g   | 30 min   | 15 %       |
| Dry Hop   | Sabro    | 50 g   | 3 day(s) | 15 %       |