

## Black IPA 4

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **45**
- SRM **22.3**
- 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 **24.6 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.1 liter(s)**
- Total mash volume **22.8 liter(s)**

### Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **17.1 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **13.2 liter(s)** of **76C** water or to achieve **24.6 liter(s)** of wort

### Fermentables

| Type  | Name                   | Amount         | Yield | EBC |
|-------|------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt   | 4.8 kg (84.2%) | 80 %  | 5   |
| Grain | Karmelowy Jasny 30EBC  | 0.5 kg (8.8%)  | 75 %  | 30  |
| Grain | Czekoladowy Special II | 0.4 kg (7%)    | 60 %  | 788 |

### Hops

| Use for | Name                   | Amount | Time     | Alpha acid |
|---------|------------------------|--------|----------|------------|
| Boil    | Columbus/Tomahawk/Zeus | 10 g   | 60 min   | 15.5 %     |
| Boil    | Centennial             | 25 g   | 30 min   | 10.5 %     |
| Boil    | Simcoe                 | 25 g   | 5 min    | 13.2 %     |
| Dry Hop | Centennial             | 25 g   | 4 day(s) | 10.5 %     |
| Dry Hop | Simcoe                 | 50 g   | 4 day(s) | 13.2 %     |

### Yeasts

| Name  | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale  | Dry  | 11 g   | ---        |

### Notes

Recipe has been printed via **BREWNESS.com** - a complex online solution for homebrewers to track brewing process easily.

- Ferm. burzliwa 21 dni w temp. 18-20C.  
Ferm. cicha 4 dni w temp 18-20C.  
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