

## Black IPA 5.0

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- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **20**
- SRM **36.4**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **25 %/h**
- Boil size **16.5 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **16 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **16 liter(s)** of strike water to **72.9C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **4.5 liter(s)** of **76C** water or to achieve **16.5 liter(s)** of wort

### Fermentables

| Type                      | Name                     | Amount         | Yield | EBC  |
|---------------------------|--------------------------|----------------|-------|------|
| Grain                     | Viking Pale Ale malt     | 2.4 kg (60%)   | 80 %  | 5    |
| Soufflet                  |                          |                |       |      |
| Grain                     | Płatki owsiane           | 1.2 kg (30%)   | 60 %  | 3    |
| W tym 200g błyskawicznych |                          |                |       |      |
| Grain                     | Jęczmień palony          | 0.15 kg (3.8%) | 55 %  | 1150 |
| Grain                     | Carafa III               | 0.15 kg (3.8%) | 70 %  | 1400 |
| Grain                     | Viking Czekoladowy jasny | 0.1 kg (2.5%)  | 68 %  | 400  |

### Hops

| Use for   | Name   | Amount | Time   | Alpha acid |
|-----------|--------|--------|--------|------------|
| Boil      | Simcoe | 10 g   | 45 min | 11.3 %     |
| Whirlpool | Simcoe | 40 g   | 1 min  | 11.3 %     |

### Yeasts

| Name                        | Type | Form   | Amount | Laboratory       |
|-----------------------------|------|--------|--------|------------------|
| FM54 Gorączka kalifornijska | Ale  | Liquid | 120 ml | Fermentum Mobile |

## Extras

| Type                            | Name           | Amount | Use for | Time   |
|---------------------------------|----------------|--------|---------|--------|
| Water Agent                     | Łuska ryżowa   | 100 g  | Mash    | 90 min |
| Water Agent                     | Kreda          | 3 g    | Mash    | 90 min |
| Water Agent                     | Chlorek wapnia | 2.5 g  | Mash    | 90 min |
| Water Agent                     | Kwas fosforowy | 3 g    | Mash    | 90 min |
| 1 ml zacieranie/2ml wysładzanie |                |        |         |        |

## Notes

- Słody palone wrzucone przy wysładzaniu  
*Feb 10, 2023, 6:01 PM*