

Black Rye IPA #2

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **50**
- SRM **34.8**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.1 liter(s)**
- Total mash volume **26.8 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **68 C**, Time **30 min**
- Temp **78 C**, Time **15 min**

Mash step by step

- Heat up **20.1 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **68C**
- Keep mash **15 min** at **78C**
- Sparge using **14.4 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-----------------------------|---------------------------------|---------------|-------|------|
| Grain | Viking Pale Ale malt | 4 kg (59.7%) | 80 % | 5 |
| Grain | Żytni | 2 kg (29.9%) | 85 % | 8 |
| Grain | Weyermann - Dehusked Carafa III | 0.5 kg (7.5%) | 70 % | 1024 |
| Carafa na ostatnie 15 minut | | | | |
| Grain | Strzegom Czekoladowy ciemny | 0.2 kg (3%) | 68 % | 1200 |
| Na ostatnie 15 minut | | | | |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|--------|--------|--------|------------|
| Boil | Citra | 15 g | 60 min | 12 % |
| Boil | Mosaic | 15 g | 60 min | 10 % |
| Boil | Citra | 10 g | 30 min | 12 % |
| Boil | Mosaic | 10 g | 30 min | 10 % |
| Aroma (end of boil) | Citra | 10 g | 10 min | 12 % |
| Aroma (end of boil) | Mosaic | 10 g | 10 min | 10 % |
| Aroma (end of boil) | Citra | 15 g | 0 min | 12 % |

| | | | | |
|---------------------|--------|------|-------|------|
| Aroma (end of boil) | Mosaic | 15 g | 0 min | 10 % |
|---------------------|--------|------|-------|------|

Yeasts

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