

Black Rye IPA (Żytorillo klon)

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **45**
- SRM **28.7**
- Style **Rye IPA**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.6 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

Steps

- Temp **68 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **80 C**, Time **0 min**

Mash step by step

- Heat up **24 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **40 min** at **68C**
- Keep mash **20 min** at **72C**
- Keep mash **0 min** at **80C**
- Sparge using **13.6 liter(s)** of **76C** water or to achieve **29.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------------|----------------|--------|------|
| Grain | Strzegom Pilzneński | 4.5 kg (56.3%) | 80 % | 4 |
| Grain | Żytni | 1 kg (12.5%) | 85 % | 8 |
| Grain | Strzegom Monachijski typ II | 1 kg (12.5%) | 79 % | 22 |
| Grain | WeWyer mann - Carafa Specjal II | 0.5 kg (6.3%) | 5 % | 1150 |
| Grain | Rye, Flaked | 0.5 kg (6.3%) | 78.3 % | 4 |
| Grain | Słód owsiany Fawcett | 0.5 kg (6.3%) | 61 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|--------------|----------|--------|-----------|------------|
| Boil | Amarillo | 25 g | 15 min | 15 % |
| Whirlpool | Amarillo | 50 g | 0 min | 9.5 % |
| 30min w 80°C | | | | |
| Dry Hop | Amarillo | 25 g | 14 day(s) | 9.5 % |
| Dry Hop | Amarillo | 50 g | 3 day(s) | 9.5 % |
| Boil | lunga | 30 g | 60 min | 11 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|----------------|--------|-----------|----------|
| Fining | Whirlfloc | 2.5 g | Boil | 10 min |
| Water Agent | chlerek wapnia | 3 g | Mash | 0 min |
| Water Agent | Witamina C | 3 g | Secondary | 3 day(s) |
| Water Agent | Sol Epsom | 5 g | Mash | 0 min |