

Czarna żytnia IPA

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **63**
- SRM **29.8**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **20.1 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **19.6 liter(s)**

Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

Mash step by step

- Heat up **14.7 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **10.3 liter(s)** of **76C** water or to achieve **20.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|------|
| Grain | Weyermann - Pale Ale Malt | 3 kg (61.2%) | 85 % | 7 |
| Grain | Żytni | 1 kg (20.4%) | 85 % | 8 |
| Grain | Weyermann pszeniczny jasny | 0.5 kg (10.2%) | 80 % | 6 |
| Grain | Carafa III | 0.4 kg (8.2%) | 70 % | 1034 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil | Magnum | 20 g | 60 min | 10.9 % |
| Boil | Magnum | 15 g | 50 min | 10.9 % |
| Aroma (end of boil) | Simcoe | 20 g | 15 min | 12.4 % |
| Whirlpool | Simcoe | 20 g | 0 min | 12.4 % |
| Dry Hop | Simcoe | 50 g | 5 day(s) | 12.4 % |
| Dry Hop | Amarillo | 30 g | 5 day(s) | 7.7 % |
| Dry Hop | Citra | 30 g | 2 day(s) | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------------------|-------------|-------------|---------------|-------------------|
| FM54 Gorączka kalifornijska | Ale | Slant | 100 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------|---------------|----------------|-------------|
| Fining | whirlflock | 1.25 g | Boil | 10 min |