

Black IPA 3.0

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **63**
- SRM **34.9**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **12 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **15.6 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **19.4 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15.5 liter(s)** of strike water to **69.5C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **4 liter(s)** of **76C** water or to achieve **15.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|--------------------------|----------------|-------|------|
| Grain | Strzegom Pilzneński | 2.5 kg (61.3%) | 80 % | 4 |
| Grain | Pszeniczny | 0.3 kg (7.4%) | 85 % | 4 |
| Grain | Słód owsiany Fawcett | 0.25 kg (6.1%) | 61 % | 5 |
| Sugar | Brown Sugar, Light | 0.2 kg (4.9%) | 100 % | 16 |
| Grain | Fawcett - Pale Chocolate | 0.17 kg (4.2%) | 71 % | 600 |
| Grain | Carafa II | 0.26 kg (6.4%) | 70 % | 1100 |
| Grain | Płatki owsiane | 0.4 kg (9.8%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil | lunga | 15 g | 60 min | 10 % |
| Boil | Simcoe | 15 g | 45 min | 14.5 % |
| Whirlpool | Simcoe | 15 g | 5 min | 14.5 % |
| Whirlpool | Amarillo | 15 g | 5 min | 8.3 % |
| Dry Hop | Simcoe | 30 g | 3 day(s) | 14.5 % |
| Dry Hop | Mosaic | 30 g | 3 day(s) | 12.6 % |

| | | | | |
|---------|--------|------|----------|-------|
| Dry Hop | HBC472 | 15 g | 3 day(s) | 9.5 % |
|---------|--------|------|----------|-------|

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|-------|--------|------------------|
| FM52 Amerykański Sen | Ale | Slant | 100 ml | Fermentum Mobile |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|--------------|--------|---------|-------|
| Water Agent | Kwas mlekowy | 1 g | Mash | 1 min |