

Black Leśna IPA

- Gravity **16.1 BLG**
- ABV ---
- IBU **72**
- SRM **37.6**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **23.4 liter(s)**

Steps

- Temp **66 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **17.5 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **45 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **26.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|----------------|--------|------|
| Grain | Weyermann - Pale Ale Malt | 4 kg (68.4%) | 85 % | 7 |
| Grain | Caraaroma | 0.3 kg (5.1%) | 78 % | 400 |
| Grain | Carahell | 0.3 kg (5.1%) | 77 % | 26 |
| Grain | Strzegom Barwiący | 0.3 kg (5.1%) | 68 % | 1400 |
| Grain | Chocolate Malt (UK) | 0.1 kg (1.7%) | 73 % | 1200 |
| Grain | Rye, Flaked | 0.4 kg (6.8%) | 78.3 % | 4 |
| Grain | Oats, Flaked | 0.4 kg (6.8%) | 80 % | 2 |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.05 kg (0.9%) | 73 % | 1000 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------------------|--------|--------|------------|
| Boil | Columbus/Tomahawk/Zeus | 20 g | 60 min | 15.5 % |
| Boil | Chinook | 10 g | 60 min | 13 % |
| Boil | Chinook | 10 g | 15 min | 13 % |
| Boil | Citra | 20 g | 15 min | 12 % |

| | | | | |
|------|----------|------|-------|--------|
| Boil | Amarillo | 20 g | 3 min | 9.5 % |
| Boil | Mosaic | 20 g | 3 min | 10 % |
| Boil | Equinox | 20 g | 3 min | 13.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|-------|--------|------------|
| us-05 | Ale | Slant | 100 ml | fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|----------------|--------|---------|--------|
| Water Agent | gips | 5 g | Mash | 60 min |
| Fining | Mech Irlandzki | 5 g | Boil | 15 min |