

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