

Czarny Las (Black IPA)

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **34**
- SRM **32.7**
- Style **Black IPA**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18.3 liter(s)**
- Total mash volume **24.4 liter(s)**

Steps

- Temp **65 C**, Time **60 min**
- Temp **76 C**, Time **0 min**

Mash step by step

- Heat up **18.3 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **0 min** at **76C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	4.5 kg (73.8%)	81 %	4
Grain	Monachijski	1 kg (16.4%)	80 %	16
Grain	Carafa III	0.6 kg (9.8%)	70 %	1034

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	10 g	45 min	13 %
Boil	Centennial	15 g	30 min	10.5 %
Boil	Simcoe	15 g	15 min	13.2 %