

## Black IPA z pędami sosny

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **55**
- SRM **25.5**
- Style **Black IPA**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **4 liter(s) / kg**
- Mash size **28.2 liter(s)**
- Total mash volume **35.2 liter(s)**

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	6 kg (82.3%)	80 %	4
Grain	Strzegom Karmel 150	0.18 kg (2.5%)	75 %	150
Grain	Biscuit Malt	0.36 kg (4.9%)	79 %	45
Grain	Carafa II	0.5 kg (6.9%)	70 %	812
Sugar	cukier brązowy	0.25 kg (3.4%)	--- %	---

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Izabella	54 g	60 min	5.1 %
Boil	Simcoe	40 g	15 min	12.7 %
Boil	Simcoe	20 g	5 min	12.7 %
Aroma (end of boil)	Simcoe	40 g	1 min	12.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
US-05	Ale	Dry	11.5 g	---

### Extras

Type	Name	Amount	Use for	Time
Flavor	pędy sosny	250 g	Boil	15 min
Flavor	pędy sosny	200 g	Boil	1 min